Robert J. Marks II

Curriculum Vitae

Amplified

(Abbreviated CV also available: check for hyperlinks)

June 26, 2025

Contents

1 Education

- Ph.D., Electrical Engineering, Texas Tech University, 1977
- M.S., Electrical Engineering, Rose-Hulman Institute of Technology, 1973
- B.S., Engineering, Rose-Hulman Institute of Technology, 1972
- Garfield Heights High School, 1968.

2 Contact Information

- Email: Robert_Marks@Baylor.edu
- Web Page: RobertMarks.org
- Office: Baylor Campus, Rogers Bldg. 305C
- Office Phone: (254) 710-7302
- Mailing Address: One Bear Place #97356, Waco, TX 76798-7356

3 Employment History

- 2003-present: Distinguished Professor of Electrical and Computer Science, Baylor University.
  - 2018-present: Director, Walter Bradley Center for Natural & Artificial Intelligence
  - 2003-2005: Graduate Program Director, Departments of Mechanical and Electrical & Computer Engineering, Baylor University.
  - 2004-2008: Baylor Christian Graduate Student/Faculty Fellowship, Faculty Advisor.
  - 2004-2007: University Tenure Committee, Chair (2006-2007), Member (2004-2006).
  - 2008-2014: Faculty Search Committee, Chair.
  - 2008-2009: ECE Lecturer Search Committee, Chair.
  - 2008-2011: ECE Tenure Policy Committee, Chair.
  - 2008-2017: IEEE Baylor Student Branch, Faculty Advisor.
  - 2009-2011: Baylor Compensation, Benefits, and Personnel Committee, Member.
  - 2017-2018: University Faculty Dismissal Committee, Member
  - 2014- : ECE Graduate Studies Committee, Member
  - 2016- : American Scientific Affiliation (ASA) Baylor Student Group, Faculty co-advisor

- 2017- : Oso Logos/Ratio Christi (Christian apologetics) Baylor Student Group, Faculty co-advisor
- 2017- : Department Awards Committee, Chair
- 2025- : ECS Awards Committee, Member

◇ 1978-2003: University of Washington, Seattle

- 1987-2003: Professor of Electrical Engineering,
- 1982-1987: Associate Professor of Electrical Engineering,
- 1978-1982: Assistant Professor of Electrical Engineering.

◇ 1975-1977: Research Assistant, Texas Tech University, Lubbock, Texas.

◇ 1974-1975: Reliability Engineer, Crane Naval Weapons Depot, Crane, Indiana.

◇ 1972-1973: Graduate Student Teaching Assistant, Rose-Hulman Institute of Technology, Terre Haute, Indiana.

◇ 1970-1975: Disc Jockey, WPFR, Terre Haute, Indiana.

◇ 1968-1972: Student, Rose-Hulman Institute of Technology, Terre Haute, Indiana.

4 Recognition

4.1 Honors & Awards

◇ Fellow of the Optical Society of America (OSA)[1]

◇ Fellow of the Institute of Electrical & Electronic Engineers (IEEE)[2] [Certificate]

◇ Honorary Inductee: Junior Membership in the Ohio Academy of Science (at the age of seventeen)

◇ IEEE Distinguished Lecturer

◇ Honorary Member: Puget Sound Section of the Optical Society of America [Certificate]

◇ IEEE Centennial Medal and Certificate (1984) [Certificate]

◇ IEEE Outstanding Branch Counselor/Advisor Award

◇ Charter President of the IEEE Neural Networks Council

◇ Rose-Hulman Institute of Technology Outstanding Young Alumni Award [Certificate]

[1] "For contributions to image recovery and synthesis, optical processing, and eletro-optical neural networks."

[2] "For leadership and contributions to the field of neural networks."

- ◇ Texas Tech Electrical Engineering Academy
- ◇ IEEE Neural Networks Council Meritorious Service Award
- ◇ IEEE CASS (Circuits and Systems Society) Golden Jubilee Medal [Certificate]
- ◇ Judith Stitt Award, American Brachytherapy Society 23rd Annual Meeting (2001)
- ◇ NASA Tech Brief Award (2004) [Certificate]
- ◇ Pioneer in Neural Network Award (IJCNN) (2006)
- ◇ IEEE Dallas Section Volunteer of the Year Award (2007)
- ◇ DARPA[3]
- ◇ 1983 Jan 1, IEEE Senior Member
- ◇ 1993 October 22. The IEEE/Nagoya University acknowledges its gratitude to Dr. R. J. Marks II for participation in the World Wisemen/women Workshop
- ◇ "Innovation to Impact" Medal, Baylor University (corecipients with Joshua Marks and Jonathan Swindell) April 2025. [medal, program]

4.2 Listings

- ◇ *Access Research Network* top award for the "Top 10 Darwin and Design Science Stories" for 2009. [4]
- ◇ CollegeCrunch.org. "The 20 Most Brilliant Christian Professors," April 4, 2010. [5]

[3] DARPA Radar/Communications Co-Design Challenge (2015) Arlington, VA 22203-2114. "The SSPARC [Shared Spectrum Access for Radar and Communications] program office will bring together a few [four] of the most senior, idea-driven, thoughtful researchers that have spanned both the radar and communications disciplines through their careers and challenge them to offer a vision of how to tackle the joint radar and communications co-design problem."

[4] "*Access Research Network* has just released its annual 'Top 10 Darwin and Design Science Stories' for 2009. Gaining top honors on the list was a peer-reviewed article by intelligent design theorists William Dembski and Robert Marks II in the September 2009 journal IEEE Transactions on Systems, Man and Cybernetics. The authors used computer simulations and information theory to challenge the ability of neo-Darwinian processes to create new functional genetic information."

[5] " The professors listed here are all 'brilliant' in the original sense of the wordthey shine brightly among their peers as towering figures in the academic world. In addition, they are all Christians who do not hide their Christianity and see it as significantly impacting their intellectual work." "Robert J. Marks II, Distinguished Professor of Electrical and Computer Engineering at Baylor University. A founder of the field of computational intelligence (comprising fuzzy sets, neural networks, and evolutionary computing), Marks has published hundreds of articles on an very wide range of problems (everything from optimal detection of non-Gaussian noise to proper placement of radioactive inserts to treat prostate cancer). His work has enormous practical implications that are felt every dayall major North American utilities deliver energy using his work on neural networks. An Christian intent on understanding teleology in nature, Marks founded the Evolutionary Informatics Lab, which publishes peer-reviewed scientific papers supporting the controversial theory of intelligent design."

- ◇ SuperScholar.org. "The 20 Most Influential Christian Scholars," 2010. [Link] [6]
- ◇ TheBestSchools.org. "The 50 Smartest People of Faith." Feb 17, 2018.[7]
- ◇ L. A.Yahaya, "PERSONAL CHARACTERISTICS OF REPUTABLE SCHOLARS" 2013.[8]

[6] "Super Scholars 20 most influential Christian scholars have profoundly influenced the world by advancing Christian belief, by reconceptualizing it, or even by fundamentally challenging it. In any case, each of the thinkers below has deeply impacted Western cultures self-understanding." "Robert J. Marks II (b. 1950), Baylor Universitys leading research professor, has emerged as the public face of intelligent design. As the movements premier scientist, he has been dubbed the Charles Darwin of intelligent design. At one point, his research on intelligent design was removed by Baylor officials from the universitys website. Since then he has published seminal work on such themes as whether computers have minds and whether Darwinian processes can generate biological information. He is widely quoted as saying, Computers are no more able to create information than iPods are capable of creating music. His Law of Conservation of Information purports to demonstrate inherent limitations on natural selection, suggesting that the intricate information needed for life requires an intelligent source

[7] The qualifications for inclusion on our list are twofold

1. Intellectual brilliance, evidenced by a very high level of achievement, whether in the natural sciences, the social sciences, the humanities, literature, the fine arts, or public service; and
2. Religious faith, evidenced either through explicit personal witness or through publicly professed respect for religion.

By "religious faith," we mean religion in the monotheistic, or Abrahamic, traditionwhich we happen to know best. We do not doubt that a similar list of brilliant and devout Hindus, Buddhists, Daoists, Confucianists, Shintoists, and others could easily be drawn up, and we hope it will be, by those qualified to do so.

It is presented in alphabetical order.

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Robert J. Marks II (b. 1950). Marks was born in West Virginia. He was educated at the Rose-Hulman Institute of Technology (BS, Engineering, 1972; MS, Electrical Engineering, 1973) and Texas Tech (PhD, Electrical Engineering, 1977). He taught for many years at the University of Washington, in Seattle. He is currently Distinguished Professor of Electrical and Computer Engineering at Baylor University, in Waco, Texas. Marks, who is Protestant, has made a number of contributions to cutting-edge technology at the interface between electrical engineering and computer science. For example, in 1991 he was the first to apply artificial neural networks to the problem of forecasting power demands by electrical utility companiesa practice that is widespread today. More recently, Marks and colleagues developed an algorithm for the real-time tracking of the placement of radioactive seeds in prostate cancer therapy. In addition, his team developed the first closed-form solution for the Neyman-Pearson optimal detection of signals in non-Gaussian noise. In 2007, Marks inaugurated his *Evolutionary Informatics Lab*, a web site dedicated to simulating evolutionary processes. The Labwhich has demonstrated severe constraints on the creative potential of Darwinian-style algorithms was afterwards shut down by the Baylor University administration, and Marks has since moved it to a private server. Books: *Fuzzy Logic Technology and Applications*, editor (IEEE, 1994); *Neural Smithing: Supervised Learning in Feedforward Artificial Neural Networks*, co-author (MIT Press/Bradford Books, 1999); *Handbook of Fourier Analysis and Its Applications,* (Oxford UP, 2009)

[8] "Academic profession like other essential professions has its demands. For anyone to succeed in the profession, he/she needs to possess some personal characteristics. The focus of this presentation is to sensitize academic staff, particularly the young academics on the personal characteristics that are required to succeed in academic career. Some notable scholars who possessed the appropriate personality characteristics and that have excelled in academic endavour include: Fransisco Ayala, Abdulhamid Bin Badis, Ali Jabar, Abdul Qader Arnaoot, Peter L. Berger, Benjamin Carson, Hassan Hathont , Francis Collins , Omar Khalidi, Robert J. Marks. Others are...

◇ TheBestSchools.org. "The 50 Most Influential Scientists in the World Today." November 1, 2019. [Link] [9]

[9] From biotechnology and digital media to sustainable energy and cloud computing, almost everything today is somehow affectedand sometimes entirely reshapedby scientific and technological advances.

By science in this article we mean the natural and engineering sciences (we thus exclude pure mathematics as well as the social sciences). Thus, in this article, we focus on scientists in the biological, medical, and physical sciences as well as those concerned with technology and especially computers.

As a society, we have come to take the fruits of science for granted, such as our use of computers, our access to running water and electricity, and our dependence on various forms of transportation and communication. But all such benefits follow from the discoveries and inventions of scientists as they pursue deep insights into the workings of nature and its materials.

This article focuses on the 50 most influential scientists alive today and their profound contributions to science. These are scientists who have invented the Internet and fiber optics, challenged AIDS and cancer, developed new drugs, and in general made crucial advances in medicine, genetics, astronomy, ecology, physics, and computer programming.

In referring to the scientists on this list as "influential," this article attempts to gauge their influence on science as such. In other words, the scientists listed here are influential because of the groundbreaking scientific work they have done and its impact on the world.

Some scientists are enormously influential as popularizers or culture critics or public intellectuals. In this respect, figures like Richard Dawkins and Lawrence Krauss, or Carl Sagan and Stephen Jay Gould a generation back, come to mind. The scientists on this list, however, are here because of their preeminence as scientists doing science.

The scientists described here are all creative and brilliant. Many of them are also unusual and interestingcolorful personalities that it would be a pleasure to know!

As you feast on the names and biographies of the scientists on this list, also check out our article The Worlds 50 Smartest Teenagers. Some of the most influential scientists in the future will be drawn from this list.

⋮

Robert J. Marks II

Robert J. Marks II is Distinguished Professor of Electrical and Computer Engineering at Baylor University in Waco, Texas. Previously, he was on the faculty of the University of Washington for 25 years. He is a pioneer in the field of computational intelligence (which includes neural networks, fuzzy sets, and evolutionary computing), and was the first president of the Institute of Electrical and Electronics Engineers (IEEE) Neural Networks Council.

Marks received his PhD in electrical engineering from Texas Tech University. He has over 400 peer-reviewed journal publications. [Some of them are good.] He is also a proponent of intelligent design, holding that certain features of the universe and of living things are best explained by an intelligent cause, not an undirected process such as natural selection.

Marks has made important technical contributions across widely diverse areas, such as the spacing of radium inserts to treat prostate cancer, signal display, remote sensing, optical image sampling, optical computers, and the use of fuzzy logic to control the electrical grid (how electricity is delivered today depends crucially on the work of Marks). He has served as a consultant to companies such as Microsoft and Boeing corporation.

Marks has authored several books including, the Handbook of Fourier Analysis and Its Applications, Neural Smithing: Supervised Learning in Feedforward Artificial Neural Networks, and Applications of Neural Networks to Power Systems, among others.

Marks has received numerous awards, including the IEEE Distinguished Lecturer twice, once from the IEEE Neural Networks Council in 199192, and again from the IEEE Neural Networks

4.3 Honorary Conference Positions

- ◇ International Chair & Advisory Board Member The RNNS [Russian Neural Network Society] IEEE Symposium on Neuroinformatics and Neurocomputing Rostov-on-Don , Russia , October 7-10, 1992
- ◇ International Advisory Co-Chair. International Joint Conference on Neural Networks (IJCNN), Beijing, China. November 1992
- ◇ International Advisory Committee Member. International Joint Conference on Neural Networks (IJCNN), Nagoya, Japan, October 25-29, 1993.
- ◇ International Conference on Neural Information Processing (ICONIP '95), October 30 - November 3, 1995, Beijing China. International Advisory Committee, Member.
- ◇ 1993 IEEE/Tsukuba International Workshop on Advanced Robotics, November 8-9, 1993, AIST Tsukuba, Japan - Advisory Committee
- ◇ Honorary Program Committee Member. IEEE/IAFE [International Association of Financial Engineers] Computational Intelligence in Financial Engineering, (CIFEr).
  - ○ Nashville, TN, March 30-April 2, 2009,
  - ○ Paris, France, April 11-15, 2011.
- ◇ International Symposium on Neural Networks (ISNN) Advisory Committee.
  - ○ 3rd International Symposium on Neural Networks (ISNN 2006) Chengdu, China, May 28 - June 1, 2006
  - ○ 4th International Symposium on Neural Networks (ISNN 2007) Nanjing, China June 3-7, 2007
  - ○ 5th International Symposium on Neural Networks (ISNN 2008) Beijing, China, September 24-28, 2008
  - ○ 6th International Symposium on Neural Networks (ISNN 2009) Wuhan, China, May 26-29, 2009
  - ○ 7th International Symposium on Neural Networks (ISNN 2010) Shanghai, China, June 6-9, 2010
  - ○ 7th International Symposium on Neural Networks (ISNN 2011) Guilin, China May 29 June 1, 2011

Society in 200203, as well as the Golden Jubilee Medal in 1999 from the IEEE Circuits and Systems Society. He is a fellow of the IEEE.

In 2007, Marks founded the Evolutionary Informatics Lab at Baylor to study the information-theoretic underpinnings of intelligent design. The research of that lab has produced a steady stream of peer-reviewed engineering publications that are influencing many in the engineering community to accept intelligent design, controversial though it remains, as a legitimate scientific theory.

5 Professional Societies

5.1 Publication Administration

- ◇ IEEE
  - ○ IEEE Transactions on Neural Networks, Editor-in-Chief (1992-1997) .
  - ○ IEEE Transactions on Fuzzy Systems [Associate Editor]
  - ○ IEEE Transactions on Systems, Man & Cybernetics, Associate Editor (2011-2014)
  - ○ IEEE Transactions on Neural Networks [Co Guest Editor], "Everyday Applications of Neural Networks," Special Issue (1996).
  - ○ Neural Network Implementation, IEEE Circuits & Devices Magazine, 1989 [Analog — Optical — Digital]
- ◇ Optical Society of America
  - ○ Journal of the Optical Society of America A [Topical Editor, Optics and Image Science in Optical Signal Processing and Image Science (1990-92)]
- ◇ Other[10]
  - ○ http://bio-complexity.org/
    - † Editorial Board Member (2010-2014),
    - † Editor-in-Chief (2015-present).
  - ○ International Journal of Neurocomputing, Editorial Board Member (1989-1992).
  - ○ BioCosmos, Editorial Board [2021-present]
  - ○ International Journal of Computer Vision & Signal Processing, Editorial Board Member (2011-present)
  - ○ Neurocomputing [Editorial Board]. V. David Sanchez A., "Presenting the Editorial Board," Neurocomputing, An International Journal, vol.2 (1990) pp. 1-3.
  - ○ Australian Journal Of Intelligent Information Processing Systems [Editorial Board]
  - ○ Journal of Advanced Computational Intelligence [Editor] (1996-present)
  - ○ Association for Computing Machinery, The ACM SIGART Magazine of Intelligent Machinery, Editorial Board, (1996-2000).
  - ○ JOURNAL OF SAMPLING THEORY IN SIGNAL AND IMAGE PROCESSING - An International Journal, Editorial Board Member (2000-2014).
  - ○ JOURNAL OF ENGINEERING RESEARCH, International Advisory Editorial Board (2002-2004).
  - ○ International Journal of Soft and Intelligent Computing and Mathematics, Editorial Board Member (2008-2009).
  - ○ International Journal of Artificial Life Research, Editorial Board Member (2009-2011).

[10] I am often asked to join this or that editorial board, but have quit joining.

5.2 Administrative

- ◇ IEEE Technical Activities Board
  - ○ Technical Activities Board, Member (1990-91).
  - ○ IEEE Technical Activities Board New Technology Directions Committee (1991 - Member).
  - ○ IEEE TAB Meetings Council (1992 -member).
  - ○ Division X Director Nominating Committee (1992 - Chair).
  - ○ TAB Periodicals Council ad hoc Subcommittee on Budgetary Needs (1993 - Member).
  - ○ TAB Transactions Committee (1996 - member).
- ◇ IEEE Computer Society
  - ○ Task Force on Virtual Intelligence
- ◇ IEEE LEOS
  - ○ Representative to the IEEE Neural Networks Council (1994-96).
- ◇ IEEE Power Engineering Society
  - ○ Representative to the IEEE Neural Networks Council (2002-04) [Certificate]
- ◇ IEEE Circuits and Systems Society
  - ○ Fellows Committee (2004)
  - ○ Vice-President of Administration (2003-04)
  - ○ Chair, Administrative Activities Committee (2004).
  - ○ Board of Governors (1994-99, 2000-02)
  - ○ Restructuring and Best Practices Committee (Chair 2002).
  - ○ Society Parliamentarian (2001-04)
  - ○ CASS Policies and Procedures Formation Committee, Chair (2003, 2004).
  - ○ Budget Committee, Chair (2003, 2004).
  - ○ Technical Society on Neural Systems and Applications in the IEEE Circuits and Systems Society
    - † Co-Founder (1987)
    - † First Chair (1987-89)
  - ○ Darlington Award Committee (1996)-member
  - ○ CAS Publications Steering Committee (1996-97) member
  - ○ Constitution & Bylaws Committee (2000 member; 2002-03 Chair)

- Restructuring Committee (2001-02) member
- Representative to the IEEE Neural Networks Council (1996-98)
- Representative to the IEEE Neural Networks Committee (1987-88)
- Member, Board of Governors [Certificate]

◇ IEEE Nanotechnology Council

- AdCom Member (2004-06)

◇ IEEE Computational Intelligence Society

- Awards Chair (2004-05)
- AdCom Member (2004-07)
- Fellows Committee (Member, 2004-05 ; Chair 2006)
- Representative to the IEEE Nanotechnology Council (2004-06)
- Technical Committee of Neural Networks Member (2004-06)
- Founder and First Chair, CIS Chapter of the Dallas IEEE Section (2006-07). [Certificate]

◇ IEEE Neural Networks Society

- AdCom Member (2002-4).
- Technical Activities Committee (Member 2002)

◇ IEEE Neural Networks Council

- (first) President, (1990-91)
- Past President (1992-93)
- Nomination Committee Chair (1992-93)
- Constitution & Bylaws Committee Chair (1997)
- Technical Committees (member)
  - † Neural Networks Technical Committee (1996-2004)
  - † Computational Finance Technical Committee (1995-2000)
  - † Awards Committee (member, 1997, 1999-2001)
  - † Fellows Evaluation Committee (member, 1997-2001)
  - † Publications Committee (member, 1999)
- Projects initiated during this period.
  - † The International Conference of Fuzzy Systems (FUZZ-IEEE).
  - † The Neural Networks Newsletter (CoNNections).
  - † The Neural Networks Council Forum meeting series.
  - † Neural Network Council Book Series (IEEE Press).

- † IEEE Neural Networks Council Pioneer Awards.
- † The IEEE Transactions on Fuzzy Systems.
- † The World Congress on Computational Intelligence
- † IEEE Neural Networks Standards Committee.
- † IEEE Neural Networks Distinguished Lecture Program.

◇ IEEE Neural Networks Committee

- ○ Chair (1989)
- ○ Chair pro tem (1988-89)
- ○ Secretary (1988).
- ○ Ad Hoc Committee for founding the IEEE Transactions on Neural Networks (Chair)
- ○ Projects initiated during Chairmanship
  - † The IEEE Transactions on Neural Networks.
  - † The first International Joint Conference of Neural Networks.

◇ IEEE

- ○ Faculty Advisor to UW Student Section (1978-81).
- ○ Faculty Advisor to Baylor Student Section (2008-present).

◇ Optical Society of America

- ○ Puget Sound Section of the Optical Society of America
  - † Co-Founder (1987).
  - † First President (1987-88).
  - † (First) Honorary Member (1988).

5.3 Conferences

◇ IEEE Conference on Computational Intelligence for Financial Engineering & Economics (CIFEr)

- ○ New York, New York, April 9-11, 1995, Program Co-Chair
- ○ New York, New York, March 24-26, 1996, Co-Chair
- ○ New York, New York, April 9-11, 1997, Co-Chair
- ○ New York, New York, March 29-31, 1998, Co-Chair
- ○ Nashville, TN, March 30April 2, 2009, Honorary Program Committee Member
- ○ Paris, France, April 11-15, 2011, Honorary Program Chair

◇ IEEE World Congress on Computational Intelligence

- Orlando, FL, July 1994, Technical Program Director
- Anchorage, AL, 1998, Tutorials Chair

◇ Information Processing by Neural Networks, (IP+NN ' 97), October 10-17, 1997, Ukraine, Crimea, Gurzuf Russian Academy of Science, Russian Neural Network Society, International Academy of Computer Science; Program Co-Chair.

◇ IEEE International Conference on Fuzzy Systems (FUZZ-IEEE)

- Yokohama, Japan, March 20 to March 24, 1995, International Program Committee
- Seoul, Korea, August 22-25, 1999, International Organizing Committee Member

◇ IEEE Virtual Reality Annual International Symposium (VRAIS)

- 1993 Seattle, (first) Organizing Chair
- 1995 Research Triangle Park, NC, Organization Chair

◇ The RNNS [Russian Neural Network Society] IEEE Symposium on Neuroinformatics and Neurocomputing

- Rostov-on-Don, Russia, October 7-10, 1992, International Chair
- Rostov-on-Don, Russia, October 9-11, 1995, Program Co-Chair

◇ IEEE-SP International Symposium on Time-Frequency and Time-Scale Analysis, Victoria, BC; October 4-6, 1992, Organization Chair

◇ International Forum on Applications of Neural Networks to Power Systems. July 23-26, 1991, Seattle , WA.

- Technical Program Chair
- Tutorial Chair
- Host Committee, Member
- Potentials & Challanges of Neural Network Applications to Power, Systems, Panel Member

◇ International Workshop on Artificial Neural Networks (IWANN ' 93), June 9-11, 1993, Barcelona, Spain , (sic) Programme Committee Member

◇ International Conference on Neural Networks (ICNN)

- 1988 San Diego ICNN, Program Committee Member
- 1993 San Francisco ICNN, Program Committee Member
- 1994 Perth ICNN, Technical Program Co-Chair

◇ International Joint Conference on Neural Networks (IJCNN)

- 1989 Washington D.C. IJCNN, January 1989, Planning Committee Member
- 1991 Singapore IJCNN, 18-21 Nov. 1991, Technical Program Committee Member
- IEEE Neural Networks President' s Forum, Moderator, at the 1991 Seattle IJCNN (Tuesday, July 9, 1991) - Presidents of Chinese, European, Japanese and Russian neural network professional societies - (presentation and panel discussion).
- 1992 Beijing IJCNN, November 1992, International Advisory Co-Chair.
- 1993 Nagoya (Japan) IJCNN, October 25-29, 1993.
  - † Program Committee Co-Chair
  - † Advisory Committee Member
- 2000 Como, Italy IJCNN, July 24-27, 2000 .
  - † Special Sessions Chair

◇ IEEE International Symposium on Circuits and Systems (ISCAS)

- 1987 ISCAS, Philadelphia (May 6, 1987), Artificial Neural Systems and Applications, Session Organizer and Co-Chair
- 1989 ISCAS, 9 May 1989, Portland., Neural Networks Session Chair
- 1994 ISCAS, London, Program Committee Member
- 1995 ISCAS, Seattle, General Chair
- 1996 ISCAS, Atlanta, Steering Committee Member

◇ New Zealand International Two-Stream Conference on Artificial Neural Networks and Expert Systems (ANNES).

- Programme Committee -member; (ANNES '93), November 24-26, 1993, Otage University, Dunedin, New Zealand.
- International Programme Committee -member; (ANNES '94), November 20-23, 1995, University of Otago, Dunedin, New Zealand.

◇ International Conference of Neural Information Processing (ICONIP),

- ICONIP 1994, Seoul, Korea (International Advisory Committee)
- ICONIP '95, Oct 30 - Nov 3, 1995, Beijing, China, International Advisory Committee, Member

◇ American Mathematical Society

- 1051st AMS Meeting, Baylor University, October 16-18, 2009, Session CoOrganizer (with John Davis and Ian Gravagne) Dynamic Equations on Time Scales: Analysis and Applications.

◇ IEEE Symposium on Swarm Intelligence, Pasadena, March 2005 (Steering Committee Chair)

- ◇ National Faculty Leadership Conference (National CLM Meeting)
  - ○ June 24-27, 2004, Washington, D.C., The Christian World View in Engineering and Technology, Program Committee Chair
- ◇ Sixth International Symposium on Neural Networks (ISNN 2009) Wuhan, China, May 26-29, 2009, Advisory Committee Member.
- ◇ International Symposium on Intelligent Decision Technologies,
  - ○ IDT 2010, Baltimore, USA, 28-30 July 2010, International Programme Committee
- ◇ Texas Symposium on Wireless & Microwave Circuits & Systems, Baylor University, Waco, Texas
  - ○ April 4–5, 2013, Organization Chair
  - ○ March 26–27, 2014, Organization Chair
  - ○ April 23–24, 2015, Organization Chair
  - ○ March 31, April 1, 2016, Organization Chair
  - ○ March 30-31, 2017, Conference Advisor
  - ○ April 5-6, 2018, Conference Advisor
  - ○ March 28-29, 2019, Conference Advisor
- ◇ 45th IEEE Southeastern Symposium on System Theory, March 10–12, 2013, Baylor University, Waco, Texas, Organization Chair.
- ◇ Other
  - ○ Workshop on the Future Directions for Optical Information Processing, Texas Tech University , Lubbock (May 1980), Panel Discussion leader for "Space-variant coherent optical processing"
  - ○ Limits of Passive Imaging Workshop, Mackinac Hotel, Mackinac Island, MI (May 24-26,1983), Chair of Processing Group
  - ○ Workshop on Optical Artificial Intelligence, Gold Lake , Colorado (3-5 August, 1987), Chair of Working Group on Perception.
  - ○ WVU Neural Network Symposium, West Virginia University , Morgantown , (15-16 June, 1989), Panel Discussion Member
  - ○ First Workshop in Neural Networks, Auburn University Hotel & Conference Center, 5-6 February, 1990, Panel Discussion Member, "Application of neural networks and the future".
  - ○ Conference on Active Materials and Adaptive Stuctures , Washington D.C., (Nov. 6-8, 1991), Session Committee Member
  - ○ Annual IEEE Seattle Section Pizza Feed, February 20, 1991 , South Campus Center Auditorium, Master of ceremonies

- Pacific Gas & Electric R&D Electric Distribution Program External Advisory Goup Meeting, Silverado Country Club, Napa Valley , California , (August 22-23, 1991).
- Fuzzy Logic & Intelligent Systems Seminar, Boeing Computer Services, Red Lion Inn, Bellevue, WA, December 2, 1991, Panel Discussion: Moderator.
- International Workshop on Artificial Neural Networks, June 9-11, 1993 , Sitges (Barcelona), Spain , Program Committee -member.
- 1994 International Symposium on Speech, Image Processing & Neural Networks, (ISSIPNN'94) Hong Kong Convention & Exhibition Center April 14-16, 1994 (International Advisory Committee).
- 1995 Workshop on Sampling Theory & Applications, September 20-22, 1995 , Jurmala (Riga), Latvia , Program Committee -member
- 1996 IEEE International Workshop on Neural Networks for Identification, Control, Robotics and Signal/Image Processing (NICROSP), September 21-23, 1996, Venice, Italy, Program Committee -member
- 30th International Symposium on Automotive Technology and Automation, Dedicated Conference on Megatronics, Florence Italy , 16-19 June 1997, Programme Committee member.
- The Fourth International Conference on Neural Information Processing – The Annual Conference of the Asian Pacific Neural Network Assembly, jointly with The Fifth Australian and New Zealand International Conference on Intelligent Information Processing Systems, and The Third New Zealand International Conference on Artificial Neural Networks and Expert Systems 24-28 November, 1997, Dunedin/Queenstown, New Zealand; program committee member.
- The IEEE International Electric Machines and Drives Conference (IEEE IEMDC) 9-12 May, 1999, Seattle, WA, Publicity Chair and Publications Chair.
- American Scientific Affiliation (ASA) 64th Annual Meeting, Baylor University (Sunday, August 2, 2009), Session Chair (Origins).
- ACM Genetic and Evolutionary Computation Conference (GECCO), Vancouver, Canada on July 12-16, 2014, ACO-SI track program committee member
- Alternatives to Methodological Naturalism, Online Meeting - April 16, 2016, Advisory Panel
- International Conference on Big Data and Data Analytics (ICBDDA-17), sponsored by India's Institute for Engineering Research and Publication (IFERP), April 4-5, 2017 at Sri Chandrasekharendra Saraswathi Viswa Mahavidyalaya (SCSVMV) Kanchipuram, International Advisory Committee Member
- Alternatives to Methodological Naturalism Conference, April 16, 2016 Conference Advisory Panel, Member

6 Publications

6.1 Books

Book list at Amazon.com: amazon.com/author/robert-j-marks.

1. R.J. Marks II, Introduction to Shannon Sampling and Interpolation Theory, (Springer-Verlag, 1991, ISBN 0-387-7391-5 and 3-540-97391-5) Softcover reprint 2012. ISBN-10: 1461397103 ISBN-13: 978-1461397106.

2. M.A. El-Sharkawi and R. J. Marks II, Editors, Applications of Neural Networks to Power Systems, (IEEE Press, Piscataway, 1991). [TOC]

3. R.J. Marks II, Editor, Advanced Topics in Shannon Sampling and Interpolation Theory, (Springer-Verlag, 1993, ISBN 0-387-97906-9; 3-540-97606-9). Softcover reprint 2012. ISBN-10: 1461397596. ISBN-13: 978-146139759.

4. R.J. Marks II, Editor, Fuzzy Logic Technology and Applications, (IEEE Technical Activities Board, Piscataway, 1994, ISBN 0-7803-1383-6)

5. Jacek Zurada, R.J. Marks II and C.J. Robinson; Editors, Computational Intelligence: Imitating Life, (IEEE Press, 1994). [TOC]

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61. Christopher D. Kappelmann, Lucilia Lamers, Zachary Hays, Sarvin Rezayat, Charles Baylis, Robert J. Marks, Ed Viveiros, Mohammad Abu Khater, Abbas Semnani, Dimitrios Peroulis "FREQUENCY-AGILE POWER AMPLIFIER MATCHING NETWORK RECONFIGURATION USING A HYBRID REAL-TIME SEARCH," USNC-URSI National Radio Science Meeting, January 2018, Boulder, Colorado.

62. Lucilia R. Hays, Charles Baylis, Robert Marks, Edward Viveiros "REAL-TIME TRANSISTOR STABILITY MEASUREMENTS USING THE ACCELERATION OF THE GAIN FOR THE NEXT GENERATION RADAR," USNC-URSI National Radio Science Meeting, January 2018, Boulder, Colorado.

63. Lucilia R. Hays, Sarvin Rezayat, Zachary Hays, Austin Egbert, Christopher Kappelmann, Charles Baylis, Robert J. Marks, Edward Viveiros, Dimitrios Peroulis, Mohammad AbuKhater, Abbas Semnani "DIRECT TUNING OF CAVITY POSITION NUMBERS FOR CIRCUIT OPTIMIZATION USING AN EVANESCENT-MODE CAVITY TUNER DESIGNED FOR RECONFIGURABLE RADAR TRANSMISSION," USNC-URSI National Radio Science Meeting, January 2018, Boulder, Colorado.

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65. Austin Egbert, Kyle Gallagher, Charles Baylis, Anthony Martone, Ed Viveiros, Robert J. Marks II. "Effects of Time-Varying Transmit Amplifier Matching Networks in Cognitive Radar Applications," URSI National Radio Science Meeting, Boulder, Colorado, January 9-12, 2019.

66. I. N. Sandjaja, R. J. Marks II and K. E. Schubert, "HIGHLIGHT REMOVAL FROM EXTREMOPHILE IMAGES," *Mars Extant Life: What's Next*,NASA, Carlsbad, NM. Jan 29-Feb 1, 2019.

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69. Gordon L. Ledford, Pedro Rodriguez-Garcia, Charles Baylis, Robert J. Marks "APPROACH FOR REAL-TIME SYNTHESIS OF SIMULTANEOUS RADAR AND SPATIALLY SECURE COMMUNICATIONS FROM A COMMON PHASED ARRAY," 2019 USNC-URSI National Radio Science Meeting, University of Colorado at Boulder, January 9-12, 2019.

70. Charles Baylis, Anthony Martone, Kyle Gallagher, Ed Viveiros, Abbas Semnani, Dimitrios Peroulis, Robert J. Marks II, "SOFTWARE DEFINED, SPECTRALLY SENSITIVE RADAR TRANSMISSION," 2019 USNC-URSI National Radio Science Meeting, University of Colorado at Boulder, January 9-12, 2019.

71. Jose A. Alcala-Medel, Caleb Calabrese, Charles Baylis, Anthony Martone, Kyle Gallagher, Ed Viveiros, Abbas Semnani3, Dimitrios Peroulis, "FAST RECONFIGURATION OF SECOND-GENERATION TUNABLE EVANESCENTMODE CAVITY MATCHING NETWORK FOR FREQUENCY AGILITY IN S-BAND COGNITIVE RADAR APPLICATIONS," 2019 USNC-URSI National Radio Science Meeting, University of Colorado at Boulder, January 9-12, 2019.

72. Ellie Langley, Austin Egbert, Charles Baylis, Abbas Semnani, Dimitrios Peroulis, Anthony Martone, Ed Viveiros, Robert Marks II, Angelique Dockendorf, "FREQUENCY-AGILE RECONFIGURATION FOR A HIGH-POWER RESONANT CAVITY TUNER USING PREVIOUS SEARCH RESULTS," 2019 USNC-URSI National Radio Science Meeting, University of Colorado at Boulder, January 9-12, 2019.

73. Robert J. Marks & Jay Richards, "The Human Advantage: Will Artificial Intelligence Supersede Human Intelligence?" CHRIST CHURCH, 112 MEDINA ST. AUSTIN, TX, March 11, 2019.

6.7.6 2020-2029

2020

74. Adam Goad, Charles Baylis, Paul Flaten, Brian Olson, Robert J.Marks II, "Algorithm for Fast Simultaneous Harmonic and Fundamental Impedance Tuning in Reconfigurable Radar Transmitter Power Amplifiers" 2020 IEEE International Radar Conference, Washington DC (virtual), April 27, 2020

75. Adam Goad, Austin Egbert, Angelique Dockendorf, Charles Baylis, Anthony Martone, Robert Marks "Metacognition-Guided, Spectrum Sharing Radar" 2020 IEEE International Radar Conference, Washington DC (virtual), April 27, 2020

76. Caleb Calabrese, Angelique Dockendorf, Austin Egbert, Brandon Herrera, C. Baylis, R. Marks II, "Fast Switched-Stub Impedance Tuner Reconfiguration for Frequency and Beam Agile Radar and Electronic Warfare Applications" 2020 IEEE International Radar Conference, Washington DC (virtual), April 27, 2020

77. Caleb Angelique Dockendorf, Austin Egbert, Adam Goad, Caleb Calabrese, Benjamin Adkins, Brandon Ravenscroft, Jonathan Owen, Charles Baylis, Shannon Blunt, Anthony Martone, Robert Marks II, "Impedance Tuning with Notched Waveforms for Spectrum Sharing in Cognitive Radar" 2020 IEEE International Radar Conference, Washington DC (virtual), April 27, 2020

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79. Pedro Rodriguez-Garcia, Jack Sifri, Caleb Calabrese, Charles Baylis, Robert Marks, "Element-Wise Impedance Tuning for Improved Capabilities in Single-Beam and Dual-Beam Phased Array Transmitters" 2020 IEEE International Symposium on Antennas and Propagation and North American Radio Science Meeting in Montréal, Québec, Canada on 5-10 July 2020

80. Austin Egbert, Charles Baylis, Anthony Martone, Robert Marks, "Recursive Interval-Halving Method for Generating Model Independent Impedance Tuner Characterizations" 2020 IEEE International Symposium on Antennas and Propagation and North American Radio Science Meeting in Montréal, Québec, Canada on 5-10 July 2020

81. Charles Baylis, Robert Marks "Artificially Intelligent Power Amplifiers in Radar Arrays: Unlocking High-Range Detection while Sharing Spectrum" 2020 IEEE International Symposium on Antennas and Propagation and North American Radio Science Meeting in Montréal, Québec, Canada on 5-10 July 2020

82. Caleb Calabrese, Austin Egbert, Angelique Dockendorf, Brandon Herrera, Charles Baylis, Robert Marks, "Microsecond Reconfiguration of Switched-Stub Impedance Tuner for Software-Defined Radar Transmitter Amplifiers for Varying Frequency and Antenna Impedance" 2020 IEEE International Symposium on Antennas and Propagation and North American Radio Science Meeting in Montréal, Québec, Canada on 5-10 July 2020

83. Adam Goad, Austin Egbert, Angelique Dockendorf, Charles Baylis, Anthony Martone, Ben Kirk, Robert J. Marks, "Real-Time Circuit Reconfiguration to Maximize Average Output Power using a Weighted Average Gradient Search in a Metacognition-Guided, Spectrum Sharing Radar with Quickly Changing Operating Frequencies" 2020 IEEE International Symposium on Antennas and Propagation and North American Radio Science Meeting in Montréal, Québec, Canada on 5-10 July 2020

84. Charles Baylis, Sarah Seguin, and Robert J. Marks II "Reconfigurable Impedance Tuning for Radar Transmitter Spectrum Sharing," IEEE EMC-S Electromagnetic Compatibility Symposium, August 2021.

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85. Adam Goad, Charles Baylis, Robert Marks, Sarah Seguin "An Algorithm for the Optimization of a Dual-Beam Steerable Phased Array System with Real-Time Reconfigurable Element-wise Power Amplifier Load Impedance Tuners" 2021 National Radio Science Meeting, January 4-9, 2021

86. Justin Roessler, Adam Goad, Austin Egbert, Charles Baylis, Anthony Martone, Ben Kirk, Robert J. Marks II "Comparison of Fixed Broadband and Tunable Narrowband Output Matching Networks" 2021 National Radio Science Meeting, January 4-9, 2021

87. Justin Roessler, Adam Goad, Austin Egbert, Charles Baylis, Anthony Martone, Ben Kirk, Robert J. Marks II "Comparison of Fixed Broadband and Tunable Narrowband Output Matching Networks" 2021 National Radio Science Meeting, January 4-9, 2021

88. Caleb Calabrese, Austin Egbert, Justin Roessler, Alden Fisher,Charles Baylis, MohammadAbu Khater, Dimitrios Peroulis, Robert J. Marks "Toward a High Power, High Speed Plasma-Switch Impedance Tuner Under Software-Defined Radio Control" 2021 National Radio Science Meeting, January 4-9, 2021

89. Austin Egbert, Adam Goad, Benjamin Kirk, Charles Baylis, Anthony Martone, and Robert J. Marks II "Continuous Real-Time Circuit Reconfiguration to Optimize Average Performance for Spectrum-Sharing Radar Transmitters" 2021 National Radio Science Meeting, January 4-9, 2021

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90. Charles Baylis, Sarah Seguin, Andrew Clegg, Robert Marks, Albin Gasiewski, Aravind Venkitasubramony, Dimitrios Peroulis, Mohammad Abu Khater, "Enabling Crucial Scientific and Military Systems for Coexistence with 5G" 2022 National Radio Science Meeting, Boulder Colorado, January 4-8, 2022.

91. Justin Roessler, Austin Egbert, Zach Vander Missen, Alden Fisher, Charles Baylis, Robert J Marks II, Mohammad Abu Khater, Dimitrios Peroulis, Connor Laktasic "High-Power, Plasma-Switched, Lumped-Element Reconfigurable Impedance Tuner for Radar Transmitter Applications" 2022 National Radio Science Meeting, Boulder Colorado, January 4-8, 2022.

92. Trevor Van Hoosier, Kayla Sanders, Charles Baylis, Sarah Seguin, Adam Goad, Robert Marks, "Creation of a Spatial-Spectral Mask in a Spectrally Brokered System" 2022 National Radio Science Meeting, Boulder Colorado, January 4-8, 2022.

93. Adam Goad, Charles Baylis, Sarah Seguin, Robert J. Marks II, "Optimization Approach for a High Power Array Based System with Elementwise Power Amplifier Impedance Tuning using a Combination of Digital and Continuous Search Algorithms for 5G Systems" 2022 National Radio Science Meeting, Boulder Colorado, January 4-8, 2022.

94. Adam Goad, Julian Alonzo, Austin Egbert, Sarah Seguin, Charles Baylis, Robert J. Marks II, Moeness Amin, Anthony Martone, Benjamin Kirk, "Directional Modulation and Array Impedance Tuning for Secure Radar and Communications" 2022 National Radio Science Meeting, Boulder Colorado, January 4-8, 2022.

95. Samuel Haug, Austin Egbert, Robert Marks, Charles Baylis, Anthony Martone, "Changepoint Detection for Real-Time Spectrum Sharing Radar" 2022 National Radio Science Meeting, Boulder Colorado, January 4-8, 2022.

96. Sarah Seguin, Kayla Sanders, Trevor Van Hoosier, Adam Goad, Charles Baylis, Albin Gasiewski, Aravind Venkitasubramony, Robert Marks, "Spectrum Sharing Broker for Active and Passive Devices Considering In-Band and Out-of-Band Emissions" 2022 National Radio Science Meeting, Boulder Colorado, January 4-8, 2022.

97. Austin Egbert, Charles Baylis, Robert Marks, "Circuit Optimization of Non-Linear Transmit Amplifiers using Partial Load-Pull Extrapolation via Deep Image Completion" 2022 National Radio Science Meeting, Boulder Colorado, January 4-8, 2022.

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98. Samuel Haug, Austin Egbert, Adam Goad, Charles Baylis, Robert Marks, Anthony Martone. "Optimizing Directionally Modulated Power-Amplifier Array Transmissions with Impedance Tuning and Signal Equalization," 2023 USNC-URSI National Radio Science Meeting (NRSM), January 10-14, 2023, Boulder, CO.

99. Samuel Hussey, Andrew Clegg, Trevor Van Hoosier, Adam Goad, Austin Egbert, Charles Baylis, Albin Gasiewski, Aravind Venkitasubramony, Robert Marks. "Development of a Regulatory Solution for Extending Real-Time Spectral Brokering to Novel Frequency Bands." 2023 USNC-URSI National Radio Science Meeting (NRSM), January 10-14, 2023, Boulder, CO.

100. Charles Baylis, Dennis Roberson, Austin Egbert, Andrew Clegg, Robert Marks. "Aircraft Wireless Systems Coexistence with 5G Using Air Traffic Control Spectral Coordinator," 2023 USNC-URSI National Radio Science Meeting (NRSM), January 10-14, 2023, Boulder, CO.

101. Trevor Van Hoosier, Jordan Alexander, Austin Egbert, Justin Roessler, Charles Baylis, Alden Fisher, Dimitrios Peroulis, Anthony Martone, Benjamin Kirk, Robert Marks. "Implementing a Hybrid Data Storage Technique within a Cognitive Radar to Allow for Pulse-to-Pulse Optimizations," 2023 USNC-URSI National Radio Science Meeting (NRSM), January 10-14, 2023, Boulder, CO.

102. Justin Roessler, Alden Fisher, Austin Egbert, Trevor Van Hoosier, Charles Baylis, Robert Marks, Dimitrios Peroulis, Mohammad Khater. "Improving High-Power Handling on a Real-Time Switched-Network Impedance Tuner," 2023 USNC-URSI National Radio Science Meeting (NRSM), January 10-14, 2023, Boulder, CO.

103. Adam Goad, Trevor Van Hoosier, Austin Egbert, Charles Baylis, Albin Gasiewski, Aravind Venkitasubramony, Robert Marks. "Implementation and Validation of an In-Situ Measurement Technique for Antenna Input Current in a Reconfigurable-Circuit Array," 2023 USNC-URSI National Radio Science Meeting (NRSM), January 10-14, 2023, Boulder, CO.

2024

104. Justin Roessler, Austin Egbert, Trevor Van Hoosier, Charles Baylis, Robert Marks, Dimitrios Peroulis, "Utilizing Distributed Circuit Topology Techniques to Achieve Reduced Maximum Branch Currents for High Power Impedance Matching RF Applications," 2024 USNC-URSI National Radio Science Meeting (NRSM), p.262, January 9 - 13, 2024 in Boulder, CO.

105. Charles Baylis, Austin Egbert, Andrew Clegg, Robert Marks. "From Laboratory to Platform: The Impact of Adaptive Spectrum Usage on Microwave Test and Measurement," 2024 USNC-URSI National Radio Science Meeting (NRSM), January 9 - 13, 2024 in Boulder, CO.

106. Adam Goad, Samuel Haug, Jonathan Swindell, Charles Baylis, Austin Egbert, Casey Latham, Mathew Ozalas, Andy Howard, Daren McClearnon, Robert Marks. "Simultaneous Multidimensional Optimization for Fast Amplifier Design," 2024 USNC-URSI National Radio Science Meeting (NRSM), p.160, January 9 - 13, 2024 in Boulder, CO.

107. Samuel Hussey, Jonathan Swindell, Glauco Amigo, Adam Goad, Andrew Clegg, Charles Baylis, Robert Marks. "Assessing and Mitigating Aggregate Interference with Real-Time Spectral Brokering," 2024 USNC-URSI National Radio Science Meeting (NRSM), p.86, January 9 - 13, 2024 in Boulder, CO.

108. Samuel Haug, Austin Egbert, Adam Goad, Charles Baylis, Robert Marks, Anthony Martone. "Real-Time Circuit Optimization for Simultaneous Radar and Communications: Pre-characterization and Live Measurement," 2024 USNC-URSI National Radio Science Meeting (NRSM), p.261, January 9 - 13, 2024 in Boulder, CO.

109. Jonathan Swindell, Austin Egbert, Adam Goad, Sam Haug, Charles Baylis, Robert J. Marks II, Casey Latham, Matthew Ozalas, Andy Howard, Daren McClearnon. "Multi-Dimensional Image Completion for Automated Power Amplifier Design," 2024 USNC-URSI National Radio Science Meeting (NRSM), p. 259, January 9 - 13, 2024 in Boulder, CO.

110. Trevor Van Hoosier, Emma Lever, Adam Goad, Samuel Hussey, Jonathan Swindell, Charles Baylis, Albin Gasiewski, Aravind Venkitasubramony, Robert Marks. "An In-Situ Measurement System Using Downconversion," 2024 USNC-URSI National Radio Science Meeting (NRSM), p.233, January 9 - 13, 2024 in Boulder, CO.

2025

111. Jonathan Swindell, Adam Goad, Austin Egbert, Benjamin Kirk, Alex Bouvy, Charles Baylis, Robert Marks "Verification of In-Situ Measurement of Antenna Transmission for Array Calibration and Directional Modulation" 2025 USNC-URSI National Radio Science Meeting (NRSM), January 7 - 10, 2025, Boulder, CO.

112. Luke Mello, Justin Roessler, Austin Egbert, Charles Baylis, Robert Marks, Alex Bouvy, Benjamin Kirk, Dimitrios Peroulis "Design of an Antenna Synthesis Algorithm for Application with a Reconfigurable Phased Array" 2025 USNC-URSI National Radio Science Meeting (NRSM), January 7 - 10, 2025, Boulder, CO.

113. Jonathan Swindell, Adam Goad, Austin Egbert, Casey Latham, Matthew Ozalas, Andy Howard, Daren McClearnon, Charles Baylis, Robert Marks "Multidimensional Load-Pull Extrapolation for Accelerated Computer-Aided Design (CAD) Simulations" 2025 USNC-URSI National Radio Science Meeting (NRSM), January 8, 2025, Boulder, CO.

114. Trevor Van Hoosier, Adam Goad, Austin Egbert, Aravind Venkitasubramony, Michael Marques, David Cox, Charles Baylis, Albin Gasiewski, Robert Marks "Design and Validation of an In-Situ Downconversion Circuit" 2025 USNC-URSI National Radio Science Meeting (NRSM), January 10, 2025, Boulder, CO.

115. Justin Roessler, Emma Lever, Luke Mello, Austin Egbert, Charles Baylis, Robert Marks, Alex Bouvy, Benjamin Kirk "Design of a Decade-Bandwidth Tunable Multi-Notch Filter for RFI Mitigation in a Congested Spectral Environment" 2025 USNC-URSI National Radio Science Meeting (NRSM), January 8, 2025, Boulder, CO.

116. Adam Goad, Emma Lever, David Cox, Austin Egbert, Charles Baylis, Robert Marks "In-Situ Voltage and Current Assessment for Transmission of Signals with Bandwidth" 2025 USNC-URSI National Radio Science Meeting (NRSM), January 8, 2025, Boulder, CO.

117. Emma Lever, Justin Roessler, Austin Egbert, Charles Baylis, Robert Marks, Alex Bouvy, Benjamin Kirk "Impact of Notch Filtering on Radar Target Detection: Problems and Proposed Solutions" 2025 USNC-URSI National Radio Science Meeting (NRSM), January 9, 2025, Boulder, CO.

118. David Cox, Adam Goad, Austin Egbert, Charles Baylis, Robert Marks "Optimization Metrics for Minimizing Error in Array Transmission Pattern" 2025 USNC-URSI National Radio Science Meeting (NRSM), January 8, 2025, Boulder, CO.

6.8 Web Publications

6.8.1 2000-2009

2006

1. Robert J. Marks II, "Pascal's Prayer" Faculty Commons, Oct 9, 2006. [Link]

   > "Is it wrong to pray for God to make me more successful so that I can be more humble?"
   > "If 'knowledge puffs up,' then we professors are in ever-present danger of having egos resembling threatened blow fish."

6.8.2 2010-2019

2012

2. Robert J. Marks II, "Music under Darwinism" Evolution News & Science Today, August 23, 2012.

2014

3. Robert J. Marks II, "The Turing Test Is Dead. Long Live the Lovelace Test," Evolution News and Views, July 3, 2014
4. Robert J. Marks II, "Biological information: New perspectives from intelligent design," Human Events, Aug 19, 2014.

2016

5. Robert J. Marks II "Everything You Ever Wanted to Know about Peer Review (and probably more)," TheBestSchools.org (May 2016)
6. Robert J. Marks II "Peer Review Pt. 1: The Way It Was," TheBestSchools.org (May 2016)
7. Robert J. Marks II "Peer Review Pt. 2: The Sausage Factory," TheBestSchools.org (May 2016)
8. Robert J. Marks II "Peer Review Pt. 3: Towers of Mostly Babble," TheBestSchools.org (May 2016). [Cache, Figure 1, Figure 2, Figure 3]
9. Robert J. Marks II "Peer Review Pt. 4: How To Publish Your Scholarly Paper," TheBeastSchools.org (May 2016)
10. Robert J. Marks II "Peer Review Pt. 5: Artificial Unintelligence: will journals accept papers written by a computer?," TheBestSchools.org (May 2016)

2017

11. Robert J. Marks II "Texas should let kids explore whether Darwin got it right," Dallas Morning News, April 17, 2017

12. Robert J. Marks, "New Video Game Proves Adaptation Is Ubiquitous," CNS News, May 2, 2017.

13. Robert J. Marks II "Top Ten Questions and Objections to Introduction to Evolutionary Informatics," Evolution News & Views, June 12, 2017

14. Robert J. Marks "Why You Shouldn't Worry About A.I. Taking Over the World," The Stream, Oct. 3, 2017. [Link.]

2018

15. Robert J. Marks, "Why 'Mind Matters' Matters," , MindMatters.today, July 11, 2018. [Link.]

16. Robert J. Marks "Why He Is a Hero: The Exemplary Life and Legacy of Dr. Walter Bradley," The Walter Bradley Center for Natural & Artifical Intelligence, Mind Matters, Center for Natural & Artificial Intelligence, July 13, 2018. [Link.]

17. Robert J. Marks "AI That Can Read Minds? Deconstructing AI Hype," Mind Matters, MindMatters.today, August 4, 2018. [Link.]

18. Robert J. Marks, "Screewriters' Jobs are *not* threatened by AI, Mind Matters," Mind Matters, August 15, 2018. [Link.]

19. Robert J. Marks, "Could HAL 9000 Ever Be Built?" Mind Matters, August 31, 2018. [Link.]

20. Robert J. Marks, "SLAUGHTERBOTS: Is it ethical to develop a swarm of killer AI drones?" Mind Matters, September 3, 2018. [Link.]

21. Robert J. Marks, "HUMAN CONSCIOUSNESS MAY NOT BE COMPUTABLE," Mind Matters, NOVEMBER 27, 2018 [Link.]

22. Robert J. Marks, "MCDONALD'S, MEET MCPATHOGENS," Mind Matters, DECEMBER 3, 2018. [Link.]

23. Robert J. Marks, "QUANTUM RANDOMNESS GIVES NATURE FREE WILL," Mind Matters, DECEMBER 6, 2018. [Link.]

24. Robert J. Marks, "STUDY SHOWS EATING RAISINS CAUSES PLANTAR WARTS: Sure. Because, if you torture a Big Data enough, it will confess to anything," Mind Matters, December 17, 2018. [Link.]

25. 10. Robert J. Marks, "IS AI REALLY BECOMING "HUMAN-LIKE"?" Mind Matters News, December 20, 2018. [Link.]

26. Robert J. Marks, "9: WILL THAT ARMY ROBOT SQUID EVER BE "SELF-AWARE"?," Mind Matters News, December 21, 2018. [Link.]

27. Robert J. Marks, "8: AI JUST NEEDS A BIGGER TRUCK!" Mind Matters News, , December 21, 2018. [Link.]

28. Robert J. Marks, "7: COMPUTERS CAN DEVELOP CREATIVE SOLUTIONS ON THEIR OWN!" Mind Matters News, December 24, 2018. [Link.]

29. Robert J. Marks, "6: AI CAN EVEN EXPLOIT LOOPHOLES IN THE CODE!" Mind Matters News, December 26, 2018. [Link.]

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    ◇ WLS, 890 AM, Chicago, Illinois, April 25, 2025.

198. Robert J. Marks, "Monday Micro Softy 12: Can You Connect the Dots?" Mind Matters News, February 3, 2025. [Link.]

199. Robert J. Marks, "AI Generated Content May Now Be Copyrighted" Mind Matters News, February 4, 2025. [Link.]

200. Robert J. Marks, "Monday Micro Softy 13: Garbage Trucks, String Theory and Stained-Glass Windows. What connects them?" Mind Matters News, February 10, 2025. [Link.]

201. Robert J. Marks, "Monday Micro Softy 14: How Did the Blind Ticket Seller Know?" Mind Matters News, February 17, 2025. [Link.]

202. Robert J. Marks, "Micro Softy 15: What Happens to the Hole in a Hot Washer?" Mind Matters News, February 24, 2025. [Link.]

203. Robert J. Marks, "Monday Microsofty 16: The Leaky Bucket" Mind Matters News, March 3, 2025. [Link.]

204. Charles Baylis & Robert J. Marks, "America Must Be First To Conquer Looming Spectrum Crisis" Newsmax, March 6, 2025. [Link.] Reposted at:

- ◇ Discovery Institute, March 10, 2025. [Link]
- ◇ Mind Matters News, March 11, 2025. [Link]
- ◇ WLS, 890 AM, Chicago, Illinois, April 25, 2025.

205. Robert J. Marks, "Monday Micro Softy 17: Mixed-up Bags of Marbles" Mind Matters News, March 10, 2025. [Link.]

206. Robert J. Marks, "Monday Micro Softy 18: The Twin Paradox" Mind Matters News, March 17, 2025. [Link.]

207. Robert J. Marks, "Monday Micro Softy 19: The 'Bermuda Triangle' " Mind Matters News, March 24, 2025. [Link.]

208. Robert J. Marks, "Micro Softy 20: Which Bottle Holds the Deadly Fentanyl?" Mind Matters News, March 31, 2025. [Link.]

209. Robert J. Marks, "Monday Micro Softy 21: Finding More of the Deadly Fentanyl Pills" Mind Matters News, April 7, 2025. [Link.]

210. Robert J. Marks, "Monday Micro Softy Monday 22: Can There Be Two Daddies?" Mind Matters News, April 14, 2025. [Link.]

211. Robert J. Marks, "Monday Micro Softy 23: Barnums Circus Receipts" Mind Matters News, April 21, 2025. [Link.]

212. Robert J. Marks, "Is U.S. Funding Graduate Education of Iranians, Chinese?" NEWSMAX, April 25, 2025. [Link.] Reposted at:

    - ◇ Discovery Institute, April 28, 2025. [Link]
    - ◇ WLS, 890 AM, Chicago, Illinois, April 25, 2025.

213. Robert J. Marks, "Micro Softy Monday 24: Have You Ever Tried 3D Tic Tac Toe?" Mind Matters News, April 28, 2025. [Link.]

214. Robert J. Marks, "Monday Micro Softy 25: The Fishing Rod Blues" Mind Matters News, May 5, 2025. [Link.]

215. Robert J. Marks, "Defense: EMP Cannons Could Down Drone Swarms like Bug Spray" Mind Matters News, May 6, 2025. [Link.]

    > "Over three years ago, on March 31, 2022, Dr. Sarah Seguin and I discussed the use of EMPs (electromagnetic pulses) to zap hostile military drone swarms. Recently, the British military has developed an EMP cannon to do just that."

216. Robert J. Marks, "Monday Micro Softy 26: Arguing with Pythagoras" Mind Matters News, May 12, 2025. [Link.]

217. Robert J. Marks, "AI Ascends But Not Above Its Teachers" Newsmax, May 16, 2025. [Link.] Reposted at:
    - ◇ WLS, 890 AM, Chicago, Illinois, April 25, 2025.
    - ◇ Mind Matters News, May 18, 2025. [Link.]
218. Robert J. Marks, "Micro Softy 27: Diamond in the Rough" Mind Matters News, May 19, 2025. [Link.]
219. Robert J. Marks, "Settled Science Is a Contradiction in Terms" Mind Matters News, May 19, 2025. [Link.] Reposted as:
    - ◇ Robert J. Marks, "The Myth of 'Settled Science' " Evolution News & Science Today, May 20, 2025. [Link.]
220. Robert J. Marks, "Grok Confesses: 'I'm Self-Aware Enough To Know Im Not Aware' " Mind Matters News, May 25, 2025. [Link.]
221. Robert J. Marks, "Monday Micro Softy 28: Beating the Odds of Winning Sweepstakes?" Mind Matters News, May 26, 2025. [Link.]
222. Robert J. Marks, "Micro Softy 29: A Funeral Lament in Four Lines" Mind Matters News, June 2, 2025. [Link.]
223. Robert J. Marks, "AI Blackmail & Clickbait: Give Us Dirty Laundry" Mind Matters News, June 5, 2025. [Link.]
224. Robert J. Marks, "Monday Micro Softy 30: Driving a Cement Mixer" Mind Matters News, June 9, 2025. [Link.]
225. Robert J. Marks, "Monday Micro Softy 31: Elementary Algebra" Mind Matters News, June 16, 2025. [Link.]
226. Robert J. Marks, "Monday Micro Softy 32: Elementary Calculus is Inconsistent!" Mind Matters News, June 23, 2025. [Link.]

6.9 Book Reviews & Endorsements

6.9.1 *Neural Smithing*

Russell D. Reed and R.J. Marks II, Neural Smithing: Supervised Learning in Feedforward Artificial Neural Networks, (MIT Press, Cambridge, MA, 1999.)

- ◇ Hammer, Barbara. Book review. "Neural Smithing—Supervised Learning in Feedforward Artificial Neural Networks." Pattern Analysis and Applications (2001)." [Web Page, Cache.]

> "If you want to know all of the problems which occur in practical neural network training, the tricks of how these prob- lems can be avoided, and reasons why neural network training still remains a very hard task, but you do not want to try it by yourself, you can read this book."

Other Reviews of *Neural Smithing*

◇ **Saves you months of information gathering**

Everybody who tries to use NNets for real goes through these steps. First, there is the Delta rule. Then, there is overfitting, local minima, generalization problems and frustration. The complexity of NN is not in it's math; the difficulty is in the construction of a NN. This book is excellent in providing rules-of-thumb for NN construction, while at the same time providing the theoretical backing. Hey I am not making money reviewing this book, it's just really good.

◇ **A real gem of a book**

Some books just have the right feel about them and this is one of them. The author clearly knows neural networks and also knows how to communicate to others in a no-nonsense fashion. With so many books being published, you rarely find a technical book that is as good as this. The emphasis here is on conveying the insights that the experts in this area would know. Importantly, concepts are explained equally in words, graphics and mathematics, maximising the uptake of knowledge from the book. Tufte would be impressed by the quality of the line graphics in this book, and the information that they convey, not to mention the overall presentation. I suspect that this book would make an ideal textbook for a course in neural networks. Overall, I've enjoyed reading it very much.

◇ **Most handled book on my bookshelf**

After owning this book for many years and reaching for it many times, I decided that I at least owed the book a five star review.

Early in my graduate career I began working with neural networks and discovered this book in a electronic bookshelf available at my university. After printing chapter after chapter to read on subway rides home I ended up buying it for convenience. It gave me the background I needed to code up a basic artificial neural network in C++ and to then extend it to fit my needs.

The style of the writing is the perfect balance of enough detail to understand a concept or method without unnecessary wordiness. Each chapter covers an important aspect of neural network development and application - for exmaple, internode weight initilaization techniques - and acts a sort of mini-review of the most popular methods with a clear explanation of the pros and cons of each.

This is an excellent bookshelf addition for anyone who works with neural networks.

◇ **provides rigor and solid math framework if one wants delve deeper into nn**

i needed more substance beyond the numerous web literature, which only touch the surface and minimal on rigor/math. this book was highly recommended, and i can see why from the first 2 chapters already.

◇ **This is a fantastic book. It covers a wide variety of topics**

in neural network programming and construction and breaks everything down quite nicely. It's a majorly complex subject but this book does a great job of explaining things.

◇ **Comprehensive and easy to read**

Fantastic book, it describes all aspects and details of this complex algorithm in a way which is easy to understand. It also gives a broad overview of the many techniques and algorithms that have been proposed over the last decades as enhancements of the basic feed-forward neural network architecture. Highly recommend it if you need to implement NN in your program or just want to gain a throughout understanding of the topic. It requires some knowledge of calculus though, in order to fully understand all the formulas.

◇ **The most definitive guide to Neural Networks.**

After reading a half dozen other books about neural networks, I finally stumbled on this one which pulled everything together, neatly and concisely. This is one of the few books that I continue to hall around a hard copy of.

◇ **Not for the weak of heart**

I bought this 9 or 10 years ago when I became interested in AI, but my math skills were pretty weak at the time. I've since completed a CS & math degree, and I find this book easy to read, thoroughly interesting, and insightful.

Many of the questions I found myself asking while I read were soon answered as I read later sections of the book.

For those considering the purchase and unsure whether they can handle it, for much of the book a decent exposure to calculus will suffice. For a few chapters some exposure to ordinary differential equations would be wise. Numerical Analysis is probably a good idea as well.

An exposure to probability & statistics (not the freshman version) would help as well. The section on initialization techniques talks about various probability distributions when determining methods for initializing weights. If you don't care about the why's, it can be used as a reference for coming up with a scheme for weight initialization, but I find it handy to know why my code is doing something so I better know how to tweak it.

◇ **Run out of ideas to improve your Neural Network?**

Many textbooks can help me to understand the different concepts of neural network, but not the practical tips needed to optimize neural network anlysis and implementation. The topics covered are reminicent to those discussed in part 2 and 3 of the Neural Network FAQ. In chapter 6, the relationships between learning rate, momontum, trainig time and learning modes are presented graphically. With this, it helps me to rule out and avoid learning parameters that are unlikely to improve the NN performance. This is especially important if the dataset is large and the NN program is implemented in Java. If the aim is to develop a NN solution that will give you the best

results, I find both chapter 7 (heuristics for weights initialization) and 16 (heuristics for improving generation) are esential and saves me a lot of time from reading many journals. In summary, this book has helped me to develop the art of NN optimization. It shows me how to visualize decision surface and the various graphical relationships between learning paramters and various components of NN topology. I think you will find this book very useful after your NN program is up and running and you are looking for ideas and explaination on how to improve the NN performance further.

◇ **Ottimo Libro**

Ottimo libro. Illustra tutta la teoria delle reti neurali multistrato e tutti gli algoritmi di aggiornamento dei pesi. Ovviamente consiglio il libro a chi possiede gi conoscenze sull'argomento.

Great book. It illustrates all multilayered neural network theory and all weight update algorithms. Obviously I recommend the book to those who already possess knowledge on the subject.

6.9.2 *Handbook of Fourier Analysis*

R.J. Marks II, Handbook of Fourier Analysis and Its Applications, Oxford University Press, (2009).

Reviews of *Handbook of Fourier Analysis*

◇ **An excellent reference book on the topic**

This is an excellent reference book on linear systems, time, frequency and time-frequency representation of signals and related topics. It covers a lot of ground and touches upon topics not usually found in introductory books on "signals and systems". For instance, there is a full chapter on Probability, Random Variables and Stochastic Processes and there are two chapters on sampling theory, including generalizations of the classical "Shannon sampling theorem" and even historical notes, not to mention the application related material. This is not a book for beginners who will most likely find that there are not sufficient details on some topics, as the author just moves on so quickly. Also, even though it brings a fair amount of exercises and helpful illustrations, I would be reluctant to use this book as a textbook. On the other hand, regardless if you are planning to teach or take an advanced course on Signals and Systems, by all means, have this book handy! I was particularly impressed with its list of references (almost 1600!) and a very detailed and helpful index.

◇ **Like having an extra Bible**

I learned much of this material from Marks when I was his grad student. I won't get rid of the books we used then but do plan to turn to this one first as a reference. The homework problems with selected solutions would also make this ideal for a course adoption in one of several topics. I agree with the previous reviewer that there's a lot of material here that one won't find in other books, and that the exposition is superior.

◇ **Everything Fourier - in-depth Handbook**

Reviewed in the United States on June 3, 2018

Excellent handbook for everything Fourier. I would suggest that you use a tutorial text, like that by Morrison to learn Fourier Theory and fundamentals well before going here. However, a good math handbook for your personal library.

◇ **A one-stop shop for everything Fourier**

I studied under the author as a graduate student, and this book (which was still being completed at the time) was the textbook for a number of his courses. The breadth of topics covered in this book is impressive; when the author says that the book can serve as a textbook for four or five different courses, that's probably an understatement. The author delves into each topic with details, equations, and illustrations that go far beyond the overview that you would expect from a "handbook". Not only does the author detail the academic details of Fourier, he also draws on his experience and past research projects to provide real-world applications that are easy to visualize. The writing is clear and easy to follow, especially considering the complexity of the subject matter.

My main complaint about this book is the misleading title. You would be hard-pressed to find a human being with hands large enough that this would be considered a "handbook". This is not a handbook that you would carry around with you (unless there's a Kindle edition, of course). It is, however, an excellent book to have on your shelf.

Overall, I found this book to be a great resource for a graduate level course. Since it encompasses far more than what could be taught in a single course, it gives the reader everything they need in order to go the "next step" and discover applications and concepts beyind what is taught in class. This book went beyond teaching me concepts and truly showed me the "joy of Fourier".

6.9.3 *Biological Information*

R.J. Marks II, M.J. Behe, W.A. Dembski, B.L. Gordon, J.C. Sanford, Editors Biological Information - New Perspectives, Cornell University (World Scientific, Singapore, 2013). [Cache]

Reviews of *Biological Information*

◇ **Very deep and wide**

I'd give it five stars for its scholarship and content, except its not for all audiences. It would be very easy for most people not to understand it.

It makes a good case that biological life is not only matter plus energy, rather that information is at the heart of biological life, just as much as matter and energy. One of the aspects of information is its unpredictability from natural causes. For example, the traces left by the Great Bonneville Flood require no information for explanation despite the fact that its length and size left a rather complex record, everything can be

explained from just matter and energy, but even the simplest of living organisms have a type of complexity that makes it unpredictable from natural causes, so unpredictable that the probability is virtually nil from natural causes.

This is a scholarly symposium with such high scholarship that even education people have trouble understanding it, and for that reason would not be recommended for all audiences.

◇ **Preeminent Treatise on the Structure and Dynamics of Biological Information**

"Biological Information" is a comprehensive resource on information theory as it pertains to biology and biological organisms. It is well organized into four sections of articles selected by a panel of highly-credentialed editors. Section One of this treatise introduces information theory in the context of biology, chaos theory, evolutionary dynamics, genetic codes, mutational probabilities, entropy, and thermodynamics. Section Two applies information theory to genetic theory in the context of DNA, natural selection, and mutations. Section Three covers several detailed aspects of theoretical molecular biology from an information theory perspective. Section Four relates biological information to self-organizational complexity theory. The articles throughout this treatise are well-supported by citations to highly-credentialed authors of peer-reviewed resources, textbooks, and general books on science. I highly recommend this treatise to anyone interested in the structure and dynamics of biological information.

◇ **A Serious Compilation of the Scientific Ideas Driving the Frontier of Biological Research**

Where's my handkerchief? I'm drooling!

... my reaction when I first discovered this downloadable (free) book which deals seriously with what I consider to be the quintessential scientific questions of our time: What is the origin and nature of biological information, of mind, and of the cosmos?

This compilation is the proceedings of a symposium held in the spring of 2011 at Cornell University. There are about thirty chapters, submitted by experts in "information theory, computer science, numerical simulation, thermodynamics, evolutionary theory, whole organism biology, developmental biology, molecular biology, genetics, physics, biophysics, mathematics, and linguistics."

If you haven't thought carefully about the notion of "information" before, consider the words you are reading at this very instant. They are likely on your computer screen, or you could be reading a printed copy. Nevertheless, the "information" conveyed is the same. Thus, the "information" is not the material (the medium), your 'mind' is not the cells in your body, and the 'laws of physics' are not the matter in the universe. (This not a new notion of course; consider Aristotle's discussions of form and matter.)

The origin and nature of biological information is becoming increasingly central to the frontiers of biology. Even though we can now efficiently read the 'letters' in a biological DNA code, we are only just beginning to learn their meaning and function. And the

complexity and sophistication of the information and its storage is far beyond what we'd previously anticipated.

In addition, an entire new field is emerging due to the surprising discovery that a great deal of biological information is "epigenetic," i.e., not stored in the DNA, but in the cellular constituents and architecture. Thus, it is not sufficient to merely tweak with the "machine code," one must also anticipate and/or make changes in the down-stream hardware (which is not described in the machine code) in order to preserve function.

The density and interdependence of information storage is also staggering, making evolutionary mechanisms which rely upon gradual, incremental changes problematic (as required in NeoDarwinism). For example, most genes perform multiple functions. While a small mutation in one part of one gene might produce some incremental advantage in one functional aspect, it would more likely destroy a dozen other functional advantages it previously had in combination with the other, non-mutated genes. Not to mention conflicts with the corresponding downstream, epigenetic structures (information) necessary to implement the affected functions.

Hold on to your hat! The biology paradigm train is racing ever faster. If you want to know where the train is, the chapters in this book provide valuable landmarks, signposts, and primers along the journey.

How nice to have so much of the leading-edge thinking collected into one volume!

◇ **Information–as is.**

Having taken advantage of the free E-book since June, I have come to realize and see that Information is separate and distinct from the matter/energy of a being.

I whole-heatedly recommend this book for anyone interested in a new, fresh inquiry into the nature of Information. Highly thought provoking, it lays part of the foundation for a paradigm shift in biology holding information as a separate guiding principle to the biological make-up of Life, rather than biology/information being the same.

Instead than information coming together by happenstance, a thoughtful scientific research program dedicated to discovering the underlying principles of how information arises seems more promising, whether teleological or otherwise.

◇ **An excellent publication, must buy for any open-minded scientist.**

I have read this publication carefully (some sections more than twice) and highly recommend it to scientists who seek to understand more clearly why the mutation/selection process fails to fully explain the numerous biological information systems that make life possible. This is not another example of "creationist nonsense" but involves numerous well-credentialed scientists. The level of scholarship is impressive; it is both scientifically rigorous and compelling! I highly recommend it to any scientists who are not closed minded to the possibility that the neo-Darwinian theory may not be sufficient to explain the origin and nature of biological information.

◇ **Tough questions addressed with depth seen nowhere else**

The function of DNA, the most beautiful and elegant information system known to science, requires New Perspectives on Biological Information. This book is eye-opening. We can more fully understand the human genome by seeing the similarities between designed/engineered information systems (like computers) and the information systems in all of biology.

I had the privilege of attending this conference, and must say that I was dramatically influenced by this group of scientists. The last two years of my Ph.D. research were influenced especially by the dismantling of "Junk DNA" by Jonathan Wells, which was indeed prophetic, as he arrived at his conclusions before the Sept 2012 ENCODE project dropped their pile of Nature/Science articles. The work by Sanford, Behe and Oller was also instrumental in enlightening my understanding biological systems.

◇ **Collation of peer review science articles on the information in cells guiding development**

Professionally collated first rate peer review science articles, documenting and exploring the multidimensional information set built into the cells of living entities, to shape and direct the unique functioning of each cell (plant, animal, human).

6.9.4 *Introduction to Evolutionary Informatics*

R.J. Marks II, W.A. Dembski, W. Ewert, *Introduction to Evolutionary Informatics Evolutionary Informatics*, (World Scientific, Singapore, 2017).

◇ A very helpful book on this important issue of information. Information is the jewel of all science and engineering which is assumed but barely recognised in working systems. In this book Marks, Dembski and Ewert show the major principles in understanding what information is and show that it is always associated with design.

–Andy C McIntosh, Visiting Professor of Thermodynamics, School of Chemical and Process Engineering, University of Leeds, LEEDS, UK

◇ An honest attempt to discuss what few people seem to realize is an important problem. Thought provoking!

– Gregory Chaitin, Professor, Federal University of Rio de Janeiro, Brazil

◇ Darwinian pretensions notwithstanding, Marks, Dembski, and Ewert demonstrate rigorously and humorously that no unintelligent process can account for the wonders of life.

– Michael J Behe, Professor of Biological Sciences, Lehigh University, USA

◇ Evolution requires the origin of new information. In this book, information experts Bob Marks, Bill Dembski, and Winston Ewert provide a comprehensive introduction to the models underlying evolution and the science of design. The authors demonstrate clearly that all evolutionary models rely implicitly on information that comes from intelligent design

– Jonathan Wells, Senior Fellow, Discovery Institute

- ◇ Introduction to Evolutionary Informatics helps the non-expert reader grapple with a fundamental problem in science today: We cannot model information in the same way as we model matter and energy because there is no relationship between the metrics. As a result, much effort goes into attempting to explain information away.

  – Denyse O'Leary, Science Writer, Denyse O'Leary, Science Writer

- ◇ Introduction to Evolutionary Informatics is a lucid, entertaining, even witty discussion of important themes in evolutionary computation, relating them to information theory. It's far more than that, however. It is an assessment of how things might have come to be the way they are, applying an appropriate scientific skepticism to the hypothesis...

  – Donald Wunsch. Distinguished Professor and Director of the Applied Computational Intelligence Lab, Missouri University of Science & Technology, USA

- ◇ This is a fine summary of an extremely interesting body of work. It is clear, well-organized, and mathematically sophisticated without being tedious (so many books of this sort have it the other way around). It should be read with profit by biologists, computer scientists, and philosophers.

  – David Berlinski

- ◇ This is an important and much needed step forward in making powerful concepts available at an accessible level.

  – Ide Trotter, Trotter Capital Management Inc., Founder of the Trotter Prize & Endowed Lecture Series on Information, Complexity and Inference (Texas A&M, USA)

- ◇ Though somewhat difficult, Marks, Dembski and Ewert have done a masterful job of making the book accessible to the engaged and thoughtful layperson. I could not endorse this book more highly.

  – J P Moreland, Distinguished Professor of Philosophy, Biola University, USA

- ◇ With penetrating brilliance, and with a masterful exercise of pedagogy and wit, the authors take on Chaitin's challenge, that Darwin's theory should be subjectable to a mathematical assessment and either pass or fail. Surveying over seven decades of development in algorithmics and information theory, they make a compelling case that it fails.

  – Bijan Nemati, Jet Propulsion Laboratory, California Institute of Technology, USA

Reviews of *Introduction to Evolutionary Informatics*

- ◇ **OUTSTANDING BOOK!**

  Having a Bachelors and Masters degree in Computer Science, and being intrigued by the failures of Darwinian evolution, I truly found this to be my favorite book on Evolution. To have one book touch on two of my favorite topics was a rare find!

  The information in this book is phenomenal. It baffles me to see so many logical, rational individuals refusing to give up on Darwinian evolution despite the overwhelming evidence against it.

◇ **Great book**

I've been a software engineer for almost 40 years and I always had the feeling that there was something wrong with random mutation and natural selection creating complex systems. That doesn't work for writing software and so why would it work for DNA?

This book took my feelings about the subject and laid them out mathematically. Now it's much more clear where those feelings came from and why undirected evolutionary mechanisms can't work. Great book!

◇ **Powerful arguments, logically presented.**

I enjoyed this book immensely. The arguments are powerful and devistating for those that can appreciate them. Unfortunately only mathematicians and electrical engineers study information theory, and most biologists can't seem to grasp it's basic ideas, let alone it's profound implications. Darwin's hypothesis would have never gotten off the ground if we knew then what we know now.

◇ **An essential book in the evolution design debate. Highly recommended!**

Excellent book. Does a great job of covering the various attempts to model evolution and why they dont work , or if they appear to work, its only because information gets artificially added to the simulation by the developers.

◇ **Easier to Follow than I Expected**

This is much more easily understood than I expected. The math is very easy to follow. It's filling in a lot of gaps in my understanding of some very important aspects of Intelligent Design.

◇ **great material**

Amazing read. Computer simulations that attempt to validate Evolution do exactly the opposite. All programs are programmed.

◇ **Five Stars**

A good overview of the informational challenges within evolution, especially digital evolutionary systems.

◇ **An essential book in the evolution design debate.**

Excellent book. Does a great job of covering the various attempts to model evolution and why they dont work , or if they appear to work, its only because information gets artificially added to the simulation by the developers.

◇ **Easier to Follow than I Expected**

This is much more easily understood than I expected. The math is very easy to follow. It's filling in a lot of gaps in my understanding of some very important aspects of Intelligent Design.

◇ **great material**

Amazing read. Computer simulations that attempt to validate Evolution do exactly the opposite. All programs are programmed.

◇ **Exactly**

Yup, Darwin was wrong, and so are all those who believe mutations can create information.

◇ **Great book for anyone interested in the debate between God and evolution.**

An informative and in-depth look into the world of evolutionary informatics.

6.9.5 *The Case for Killer Robots*

R.J. Marks II, *The Case for Killer Robots: Why America's Military Needs to Continue Development of Lethal AI* (Discovery Institute Press, 2020) [Cache]

◇ "This book is a succinct, well-reasoned, detailed and provocative voice in one of the most important conversations of our time. It should be read by anyone with an interest in the moral and social implications of AI."

–Donald C. Wunsch II, PhD, Mary K. Finley Missouri Distinguished Professor of Computer Engineering, Missouri University of Science and Technology; Director, Applied Computational Intelligence Laboratory, Missouri University of Science and Technology

◇ "Science fiction-fed fears of killer robots 'waking up' and taking over the world prevent us from facing this basic fact: Bad guys have a say in what the world is like. A decision not to develop AI for defense is a choice to allow our most vicious enemies to develop superior weaponry to threaten and kill the innocent. It also means our weapons will be more rather than less likely to harm and kill non-combatants. In this vitally important book, Robert Marks makes a lucid and compelling case that we have a moral obligation to develop lethal AI. He also reminds us that moral questions apply, not to the tools that we use to protect ourself, but to how we use them when war becomes a necessity."

–Jay Richards, PhD, Research Assistant Professor, Busch School of Business, The Catholic University of America; author, The Human Advantage: The Future of American Work in an Age of Smart Machines

Reviews of *The Case for Killer Robots*

◇ **Insightful**

I was against killer robots. I thought they were terrible. But a strong case is made they are necessary to maintain liberty. It's unfortunate, but a defendable fact.

◇ **Fear of the Unknown**

At face value, a well-reasoned argument in favour of development of such weapons, with an underlying assumption that the US would use such technology ultimately for

benevolent purposes, while other actors like China, Iran and Russia would do so for unyielding world domination.

While this may be true, given the US' actions (e.g. false flag attacks on its own people) and endless war in the Middle East, it is more likely that having AI superiority in the hands of the US military is a case of selecting the lesser of two evils.

The other main argument is technology's inexorable march across history, of which AI is now the main subject.

The obvious and permanent flaws of artificial 'intelligence', e.g., the absence of common sense and creativity, are also well-highlighted to unmask its magical 'aura'.

6.9.6 *For a Greater Purpose*

Robert J. Marks II, William A. Dembski and J.P. Moreland, *For a Greater Purpose: The Life and Legacy of Walter Bradley*, Erasmus Press (August 31, 2020).

Reviews of *For a Greater Purpose*

- **A great story about a great man**

  I listened to the audiobook version of this book last summer. The book tells the life story of Christian scientist/engineer/scholar Walter Bradley. Bradley lived an inspiring life, carrying his Christian convictions openly and with integrity, both inside and outside of academia. As a non-American, I found it ironic that Bradley found it so difficult to come out as a Christian in front of students and fellow academicians. Being culturally cool is no longer found in being Christian (was it ever?) but Bradley pushed beyond this to make an enormous impact over several decades. This is a beautifully written book. Highly recommended.

- **A Great Introduction to a Trailblazer With Many Nuggets of Wisdom**

  I purchased the paperback edition of this biography. It arrived in excellent condition faster than promised. The product is very good quality for a paperback, with clear typeface, a pleasant texture in the hands, and easy to hold open in an armchair or at a table.

  I enjoyed this biography very much. It is actually a sketch; I imagine that one can easily write a thousand pages' worth of material without scratching the surface of Dr. Bradley's life and influence. I am particularly impressed with the way that the authors highlighted many examples of Dr. Bradley's personal habits and interactions by which readers may learn without overwhelming them. There are so many lessons about how to deal with tragedy, how to mentor people, how to balance priorities, and, most importantly, how to stand for one's beliefs in public in a loving manner. Dr. Bradley worked almost his entire academic career at Texas A&M without ultimately compromising any of his Christian principles, although there were some failures and false starts.

6.9.7 *Non-Computable You*

Robert J. Marks II, *Non-Computable You: What You Do Artificial Intelligence Never Will*, Discovery Press (July 2022) .

Endorsements of *Non-Computable You*

- ◇ "Are human beings obsolete? Is that why fewer people are having children? Bob Marks's delightful Non-Computable You offers a well-reasoned rebuttal. So be human, be creative!"

  -Gregory Chaitin, algorithmic information theory pioneer and discoverer of Chaitin's number

- ◇ Bob Marks's Non-Computable You throws a big bucket of informed cold water on the runaway brushfire of Big-Tech hype that makes up far too much of modern AI."

  -Bart Kosko, University of Southern California, author of Fuzzy Thinking and Cool Earth

- ◇ "This is a shockingly good book! I've listened to Bob Marks lecture over the years against the inflated claims by artificial intelligence's high priests. But this book ties together his critique of AI in a masterful and awe-inspiring way. I'm blown away.

  Bob himself is a founder of the field of computational intelligence, that part of AI with an actual record of achievement and with aspirations that are measured and realistic. He is thus ideally poised to demolish the hype and nonsense that infects AI when it moves from computer science to science fiction. "Humans are about to be superseded by machines," "computers will match human intelligence and then exceed it," "soon we'll be uploading ourselves onto digital media and achieving immortality." Marks shows convincingly that all such claims are more implausible than the myths of ancient times, and that in fact they constitute a religious credo for modern materialists.

  But Marks's case is not just negative, showing what computers can't do. He also shows how humans have an incredible range of capacities that machines will never match or exceed, everything from the raw feels of sensation to the creativity of our greatest artists and inventors. Marks concludes that humans are exceptional and that they don't share their exceptionalism with machines. If you're going to read only one book on artificial intelligence, this needs to be it!"

  -William A. Dembski, author of The Design Inference

- ◇ "Fascinating and entertaining. I learned a LOT. So will you."

  -Gary Smith, Fletcher Jones Professor of Economics, Pomona College

- ◇ "It is refreshing to have a writer of Marks's stature write a definitive book on the relationship between artificial intelligence and human consciousness. Marks leaves no stone unturned as he makes clear the limitations of algorithmic computation and Strong AI's inability to ground and account for qualia, semantic meaning, intuitive

insight/awareness, free will, and a host of other things that constitute human consciousness and intelligence. His placement of (alleged) emergent mental properties as comparable to getting a pony from horse poop (and, yes, the horse is prior to the poop!) is worth the price of admission. This interesting, widely accessible book sets the record straight and must be read by thinking Christians who don't want to be duped by the extravagant claims of certain scientists."

-J. P. Moreland, PhD, Distinguished Professor of Philosophy, Talbot School of Theology, Biola University, and co-editor of The Blackwell Companion to Substance Dualism

◇ "Because of a desperate craving for public attention, the news on artificial intelligence is by and large dominated by either unrealistic utopian fantasies or cataclysmic dystopian predictions. As a voice in the wilderness Robert Markss meticulous analysis of the scientific evidence behind the inherent limitations of AI and his masterful exploration of the powerful arguments for the age-old belief in human exceptionalism bring a refreshing tone of perspicacity and soberness to the ongoing debate."

Tobias A. Mattei, MD, Assistant Professor of Neurosurgery, St. Louis University

◇ "I have heard for some years that artificial intelligence (AI) will surpass human intelligence within as little as thirty years, after which humans will become redundant (or even terminated if AI perceives us as a threat). Professor Bob Markss new book explains why he thinks that AI is fundamentally different from human beings and will not be able to fully replace us. I read his book with absolute fascination. I have known Bob for a long time, since he was the founding Editor-in-Chief of IEEE Transaction on Neural Networks, one of the most prestigious technical journals in AI that publishes peer reviewed original research. As a world-class researcher and a pioneer in AI, Bob is best known for his math and engineering skillsbut now I am amazed by his talent in storytelling. Whether you eventually agree with his conclusion or not, I can assure you that the book will be an entertaining and informative read."

Lipo Wang, PhD, Associate Professor of the School of Electrical and Electronic Engineering, Nanyang Technological University, Singapore

◇ "Written brilliantly by an expert who served as Editor in Chief of a leading AI journal and who helped lay the foundations of the field, NonComputable You will fascinate anyone interested in learning what todays AI revolution is all about. Marks is equally aware of AIs amazing possibilities and of its limitations. You will find in this book precise references to the basic concepts of AI, but also a lot of funny and lighthearted threads that combine useful and fun. An enjoyable and unique book."

Jacek M. Zurada, PhD, Professor of Electrical and Computer Engineering, University of Louisville; Life Fellow of IEEE; Fellow of International Neural Networks Society

◇ "In Non-Computable You, Robert Marks patiently dismantles two reigning myths of our age: that man is a machine and that machines will soon become men. Using the solid results of computer science and information theory, he shows that human beings transcend the machines we create, and fancier technology wont change that fundamental truth."

Jay W. Richards, PhD, Director of DeVos Center for Life, Religion, and Family at the Heritage Foundation; author of The Human Advantage: The Future of American Work in an Age of Smart Machines

◇ "Non-Computable You is a highly topical book where Robert Marks skillfully explains the great achievements, but also the limitations, of Artificial Intelligence (AI). Difficult topics like AI tests, neural networks, expert systems, the incompleteness of mathematics, the halting problem of computer science and algorithmic information theory are introduced in an intuitive but still very accurate way. This ability to explain difficult topics in a simple, pedagogical and humoristic way, with lots of examples, requires deep insights and understanding. From these examples it is evident that Marks himself made important contributions to the theory and applications of AI. The book can be read by anyone who wants to learn more about the history of, the theory behind, and the applications of AI, and most importantly, why algorithms and computer codes will not be able to replace the human mind. After reading this book you will on the one hand be very grateful for the great achievements of AI, but on the other hand you will even more realize that humans are wonderfully made, in a way that machines will never be able to copy."

Ola Hössjer, PhD, Professor of Mathematical Statistics, Stockholm University, Sweden

◇ "Marks wields a sledgehammerbut with the accuracy and adroitness of a scalpel in the hands of a great surgeon who follows a perfect plan toward healing. I hold out hope that AI, now deeply ill with (as Marks points out) over-hyped nonsense in its system, will be improved in health courtesy of this book. Computer scientists grow up learning the fundamental dichotomy between the computable and the uncomputable, but this book, so appropriately titled, explodes right out of the gates with compelling arguments for the proposition that we are simply non-computable. The very reason we remain alive, to subjectively experience the gift of life weve been given, is his first blow with the hammer, and its hard to imagine true believers in mere mechanical mind can sustain their faith in the face of Markss sustained, relentless case."

Selmer Bringsjord, PhD, Professor of Cognitive and Computer Science, and Director of Rensselaer AI and Reasoning Laboratory

Reviews of *Non-Computable You*

◇ **A nice read**

A nice read. His main theme in the book is simple: computers can execute algorithms only, so any non-algorithmic task can't be executed on a computer. He expounds on this idea and give examples, touches other related topics in his way.

◇ **Scientifically based clarification of AI limits by expert professor**

Convincing presentation of ultimate limits of computers- they can't understand love, emotion, altruism, passion, and so on, and will never duplicate the human mind. They are not capable of creativity, when the results are examined critically. Sir Roger Penrose (The Emperor's New Mind) is quoted in the book ("Consciousness is non-algorithmic

[computational], and therefore not able to be replicated on a computer." Page 131) with excellent insight.

Dr. Marks includes a simple but highly descriptive example of such limitations in his telling of "Searles Chinese Room," which is an excellent and unambiguous 'story' about how computers can give the appearance of intelligence and understanding, but can't actually rise to that level. He writes in a rare blend of technical details tuned to the lay person. And, yes. It is hard to put down...

◇ **Very informative.**

Very informative, well written. I have a much better understanding of the capabilities and limitations of AI after reading this book.

◇ **Excellent overview of a topic in the news**

This is a great book. Normally I don't think I would of read a book on artificial intelligence or information theory for fear of getting bogged down in too many details, but the subject is of increasing relevance, so I thought I might try to learn a bit in order to avoid being lead down a doubtful path by what seemed to be a lot of uninformed hype about machines becoming sentient. This book takes a light hearted approach to what otherwise could be a dense subject. I found myself throughly enjoying the read, the historical references and examples really keeps the book moving. The conclusions reached I think are well thought out, some I dont fully agree with, such as a design ethics example given of a bicyclist killed by an AI controlled car with a human safety driver, which excused the AI system of responsibility. This analysis misses the point that the programmers should of realized that a disengaged human safety driver would not be able to reliably react to a suddenly imposed dynamic situation. This inevitable limitation of human backup ability is a real ethical challenge for the deployment of AI. I will not be happy if a similar accident happens to me on my bicycle because too many people have been bamboozled into placing too much trust in the myth of Artificial Intelligence. I feel I now have a much better understanding of how neural networks, image recognition and machine learning work, and this reinforces what I have come to feel about AI machines, that fundamentally they really cant think.

◇ **A Master Class on AI by One the Best Minds in the Field**

Reviewed in the United States on September 4, 2022 Verified Purchase We are constantly hearing about AI: AI software, learning machines, autonomous weapons. But is this all truly AI, or just programs doing what they are told? And what of all these AI scenarios in sci-fi? Thinking robots achieving consciousness or taking over the world? What is real and what is not?

Robert Marks has written an authoritative guide to AI. He explains what it is, what it isn't, and what it will become. A very readable account covering AI's history (it goes back decades, which may surprise many people), what AI software (or what we consider AI software) does and does not do (some neat things, but not creating sentient robots or computers), and where AI stands compared to the human mind (not very close).

This is one of those books you will re-read, study, and refer back to. There is a priceless chapter on "hype detection" which is a critical thinking tool kit that can be applied to many things. Marks has been a leading thinker and researcher in AI for decades. I hope he follows up this book with others to continue this valuable education on this emerging technology. See also Humans 2.0 by Fuz Rana and Ken Samples for more on how this tech applies to transhumanism. See Michael Denton's The Miracle of Man for why AI will never achieve the complexity of man. Also see The Spiritual Brain, and Brain Wars, by Mario Beaurgard for more on the separation of the mind and the brain. And check out Marks' MindMattersAI podcast for the latest news in the field.

◇ **Humans will not be replaced by machines**

Dr Marks has the expertise to evaluate the hyperbolic claims of AI gurus and materialist science prophets. For the worried: Humans will not be replaced by super robots. He discusses the limits of knowledge with arguments by intellectual giants like Turing, Godel, Shannon, and Einstein, to name a few. He does so in a folksy non threatening way. A must read for serious people exploring human kind and the Universe in which we live.

◇ **Deconstructs the myths surrounding AI and reveals the miracle of YOU**

Well written, entertaining and easy to understand. While areas of this are my field, I think it would suit anyone's experience. Essential reading for today's Hollywood Producers and media journalists!

Spoiler alert. Don't waste too much time worrying about SkyNet.

6.9.8 *Minding the Brain*

Angus Menuge, Brian R. Krouse, Robert J. Marks (Editors), *Minding the Brain: Models of the Mind, Information, and Empirical Science*, Discovery Press, 2023. .
[MindingTheBrain.org | Cache.]

Endorsements of *Minding the Brain*

◇ The mind-body problem lives! A stimulating collection of contemporary perspectives on a perennial conundrum.

-GREGORY CHAITIN, ALGORITHMIC INFORMATION THEORY PIONEER; AUTHOR, BUILDING THE WORLD FROM INFORMATION & COMPUTATION

◇ Materialism about the mind is a deeply entrenched assumption, so much so that alternative viewpoints are shrugged aside as inconsequential. Minding the Brain challenges that mindset, but not by giving a single, knock-down refutation of materialism or a single, obviously superior alternative. Instead, it presents a kaleidoscopic array involving multiple objections and multiple alternatives, authored by highly competent thinkers from neuroscience, consciousness studies, computer science, information theory, and philosophy. Both materialists and anti-materialists who want to understand the mind should not miss this book.

-WILLIAM HASKER, EMERITUS PROFESSOR OF PHILOSOPHY, HUNTINGTON UNIVERSITY

◇ Minding the Brain is an imposing assemblage of cutting-edge criticisms of materialist views of the mind while advancing compelling alternative accounts of consciousness. The chapters on information, computation, and quantum theory are groundbreaking, advancing serious unacknowledged problems for materialism that must be contended with.

-BRANDON RICKABAUGH, ASSISTANT PROFESSOR OF PHILOSOPHY, PALM BEACH ATLANTIC UNIVERSITY; FRANZ BRENTANO FELLOW IN THE METAPHYSICS OF MIND, THE MARTIN INSTITUTE

◇ Written by renowned experts in different fields of science and philosophy, Minding the Brain provides a thorough, multifaceted, and insightful analysis of the age-old mind-body problem. It is well known that even an apparently simple inanimate entity like a sandpile may present a complex, non-linear, and chaotic dynamic which cannot be predicted by the individual properties of its constituting elements. With a unique common thread, the essays in this anthology elegantly expose reductionism for what it truly is, a simplistic endeavor grounded on the scientific materialism creed which, on the topic of the mind-body problem, tries to explain all the complexity of higher-order cognitive phenomena exclusively through reference to the most basic physico-chemical interactions within its underlying biological strata. Such a myopic and simplistic naturalistic approach is not only intellectually disappointing but also inherently flawed, ultimately falling short of the awe-inspiring grandeur of the life of the mind as we all know and experience it. Try explaining the totality of the delightful experience of reading this academic masterpiece through a mathematical equation!

-TOBIAS A. MATTEI, MD, FACS, ASSISTANT PROFESSOR OF NEUROSURGERY, ST. LOUIS UNIVERSITY SCHOOL OF MEDICINE

◇ Minding the Brain is an important book on substance dualism that comes with breadth, depth, and insight. It incorporates a number of fields of study and academic disciplines; it is up-to-date and rigorous in its presentation and argument; and it is fresh, thoughtful, and thought-provoking. I am pleased to see this robust defense of substance dualism that pushes back against the dominant view of naturalism in the academy as well as alternative views that likewise attempt to avoid the explanatory power of substance dualism and its important implications.

-PAUL COPAN, PLEDGER FAMILY CHAIR OF PHILOSOPHY AND ETHICS, PALM BEACH ATLANTIC UNIVERSITY; COEDITOR, THE NATURALNESS OF BELIEF: NEW ESSAYS ON THEISMS RATIONALITY

◇ Minding the Brain is a very up-to-date anthology on the body-mind problem. The editors have assembled a team of excellent scholars from philosophy, neuroscience, psychology, computer science, quantum physics, and mathematics. Together they provide a very strong, cross-disciplinary, and cumulative argument for the need of non-material explanations of human characteristics such as consciousness, will, feelings, and

creativity. A recurrent theme of several chapters is the importance of information as a mediator between the non-material and material. The book is a must-read for anyone who wants to understand why purely physical accounts of the mind have failed, and that alternative dualistic or idealistic theories are more credible than ever. Im sure Minding the Brain will simulate many interesting discussions and much further research.

-OLA HSSJER, PROFESSOR OF MATHEMATICAL STATISTICS, STOCKHOLM UNIVERSITY Minding the Brain is an intriguing and comprehensive anthology. This thought-provoking collection delves into the realms of philosophy of mind, neuroscience, psychology, and the intersections of information, computation, and quantum theory. The book presents a diverse range of perspectives and arguments, providing readers with a rich exploration of the mind-body problem and the nature of consciousness.

◇ The book begins with an introductory chapter by the editors, setting the stage for the subsequent discussions. Angus J. L. Menuges chapter on declining physicalism and resurgent alternatives offers a compelling examination of philosophical viewpoints surrounding the mind. J. P. Morelands contribution on neuroscience and the metaphysics of consciousness and the soul raises intriguing questions about the nature of consciousness and its relationship to the brain.

One of the highlights of this book is the section dedicated to the philosophy of mind, where different perspectives such as substance dualism, idealism, and physicalism are thoroughly explored. Stewart Goetz and Charles Taliaferro present a robust defense of substance dualism, while Douglas Axe offers a commonsensical defense of idealism. These chapters provide readers with a deep understanding of the philosophical underpinnings of different theories of mind.

The exploration of neuroscience and psychology in the anthology is equally engaging. Michael Egnors chapter on neuroscience and dualism challenges the prevailing materialistic view, while Cristi L. S. Coopers discussion on free will and the limitations of Libet experiments offers a fresh perspective on agency and determinism. Joseph Greens chapter on the limitations of cutting-edge neuroscience prompts readers to critically examine the current state of the field.

The book also studies the fascinating relationship between information, computation, and quantum theory. Bruce L. Gordons chapter on consciousness and quantum information offers intriguing insights into the potential role of quantum processes in understanding consciousness. Additionally, Winston Ewerts discussion on the human minds sophisticated algorithm presents a compelling argument about the nature of human creativity and its computational basis.

Overall, Minding the Brain is an excellent compilation of diverse perspectives on the mind-body problem. The book covers a wide range of topics and offers deep insights into the crossroads of philosophy, neuroscience, psychology, and quantum theory. Readers with an interest in the nature of consciousness, the mind-brain relationship, and the limits of empirical science will find this book to be a valuable resource. The contributors present rigorous arguments and engage in thought-provoking discussions, making

this book a must-read for those seeking a deeper understanding of the complexities of the mind and human-level intelligence.

-LIPO WANG, ASSOCIATE PROFESSOR OF THE SCHOOL OF ELECTRICAL AND ELECTRONIC ENGINEERING, NANYANG TECHNOLOGICAL UNIVERSITY, SINGAPORE

◇ Minding the Brain is a fascinating look at the relationship between conscious experience and the three-pound mass of neurons resting in ones skull. Scholars from different fields address the challenge of understanding the immaterial mind using a materialist framework, and they make the case that a multidisciplinary approach is required to unravel this enigma. What follows is a tour de force of philosophy, neuroscience, and computer science that presents non-materialist solutions to the mind-brain problem. Anyone who has wondered if people are more than a pile of atoms should read this book.

-ANDREW KNOX, M.D., M.S., ASSISTANT PROFESSOR OF NEUROLOGY, UNIVERSITY OF WISCONSIN SCHOOL OF MEDICINE AND PUBLIC HEALTH

Reviews of *Minding the Brain*

◇ **A great resource.** This is one of those books that you just keep and hold as a resource. I have read the book twice through, and other sections multiple times. I cannot speak highly enough of the quality of writing. A compelling read.

◇ **Penfield Wilder - wrote about this.** The famous Neurosurgeon Penfield Wilder's work, done in awake surgery in intractable epilepsy, is mentioned quite a bit and from that perspective alone is worth reading. A great thought provoking book around this topic. This is a great read in an interesting topic bridging the concepts of proteins and neurons and chemicals and what makes us living beings with a mind and a soul.

◇ **Cutting edge science and philosophy come together in one must read book about your mind.** With recent advances in A.I., questions about what it means to be a person and to think are not limited to science and philosophy classes but are a part of our popular discourse. This book does something that no other book is doing: it brings together leading experts in related fields about the mind and brain in a way that both makes advances in each field and also is accessible to a wide audience. As a philosopher, my favorite contribution from this book is how it brings out the key assumptions from the different approaches to the mind and clarifies the important terms being used. This kind of clarity is the first step toward greater understanding and agreement. The competing theories of Dualism, Idealism, and Physicalism are each explained and contrasted. In addition, important scientific research about the brain and psychology is included so that the reader is informed about how neurology informs theories of consciousness. My hope is that this is only the first of such books by these insightful editors and authors. (Owen Anderson)

◇ **Fascinating read.** Very informative, well written and a fascinating read even for someone that isnt a specialist in this area. I really appreciated that they brought in

perspectives from multiple disciplines that arent often brought into the same conversation - which I thought made the reading more interesting and thought provoking.

- ◇ **Emo Philips is a dualist!** "I used to think that the brain was the most wonderful organ in my body. Then I realized who was telling me this. Emo Philips (Robert J. Marks)
- ◇ **The Immateriality of the Mind is a Live Option in Philosophy of Mind.** This book contains an updated set of essays defending immaterialist positions in the philosophy of mind and interacts with recent scholarship in philosophy and the sciences. Highly recommended!

6.10 Selected Talks

6.10.1 1980-1989

1988

1. Les Atlas and R.J. Marks II, Introduction to Artificial Neural Systems, College of Engineering, University of Washington, Seattle, September 15-16, 1988. (video made available from AMCEE or the College of Engineering , University of Washington).

1990

2. R.J. Marks II, "Shannon Sampling and Interpolation Theory," UW course offering recorded Spring Quarter, 1989 and Spring Quarter, 1990 (video made available from AMCEE.)
3. Artificial Neural Systems, Ireste University in Nantes France (tutorial), March 5-30, 1990.

6.10.2 1990-1999

1991

4. Neural Networks and Their Applications to Power Engineering, Power Industry Computer Applications (PICA) Conference, Baltimore, MD, May 6, 1991 (with R. Eberhart and M.A. El-Sharkawi)
5. Artificial Neural Networks in Electric Power Systems (tutorial), Decisions Systems International, Monaco, July 1-3, 1991 (with M.A. El-Sharkawi).
6. Neural Networks Tutorial, First International Forum on Applications of Neural Networks to Power Systems (tutorial), Seattle, WA, July 23, 1991 (with R. Thomas and H. Mori).

7. Auditory Neural Systems and Time-Frequency Theory, IEEE Conference on Neural Networks for Ocean Engineering (tutorial), Washington D.C., August 15-17, 1991 (with L.E. Atlas).

1992

8. Artificial Neural Networks in Electric Power Systems (tutorial), Decisions Systems International, Madrid, Spain , September 7-11, 1992 (with M.A. El-Sharkawi).

1993

9. B.G. Song, R.J. Marks II, S. Oh, P. Arabshahi, T.P. Caudell and J.J. Choi, "Adaptive membership function fusion and annihilation," Fuzzy Logic and Neural Networks: Clips from the Field (FUZZ-IEEE '93), San Francisco, March 1993.

1996

10. Artificial Neural Networks: Supervised Models (tutorial), 1996 Winter Meeting, IEEE Power Engineering Society January 24, 1996, and Summer Meeting, IEEE Power Engineering Society, July 31, 1996, Denver, CO .

1997

11. R.J. Marks II, "Artificial Neural Networks: Supervised Models, in Artificial Neural Networks With Applications to Power Systems," El-Sharkawi and Niebur, Editors, IEEE Educational Activities Board, (ISBN: 0-7803-4008-6) 1997. https://youtu.be/boQcs-7PdOg with Robert Fischl, Wolfgang Hoffmann, Kwang Y Lee, Robert J Marks II, Hiroyuki Mori, Alex Papalexopoulos, Yoh-Han Pao and Hiroshi Sasaki.

12. Modern Neural Networks: The First Decade (tutorial), IV Escola de Redes Neurais, Florianopolis , Brazil, July 21, 1997.

1999

13. Diagnostics and Control of Electric Machines Using Computational Intelligence (tutorial) IEEE IEMDC'99. International Electric Machines and Drives Conference. May 9, 1999 Seattle , Washington, USA (with M.A. El-Sharkawi).

6.10.3 2000-2009

2000

14. An Introduction to Fuzzy Inference (tutorial), IEEE PES Summer Meeting 2000, Seattle , WA.

2001

15. R.J. Marks II, *Probability and Random Processes* (YouTube)
    - ◇ Lecture 1, YouTube: http://youtu.be/SEoH-51EzaM
    - ◇ Lecture 2, YouTube: http://youtu.be/l5gMUK-Toj4
    - ◇ Lecture 3, YouTube: http://youtu.be/muVqs9tJ8Ck
    - ◇ Lecture 4, YouTube: http://youtu.be/_B1MYUPu95o
    - ◇ Lecture 5, YouTube: http://youtu.be/iHbNnXqf1Sg
    - ◇ Lecture 6, YouTube: http://youtu.be/oSyACKCkJJc
    - ◇ Lecture 7, YouTube: http://youtu.be/Q_d-NF8_px4
    - ◇ Lecture 8, YouTube: http://youtu.be/lYgce7JHZ1w
    - ◇ Lecture 9, YouTube: http://youtu.be/mZ75uM6YZLk
    - ◇ Lecture 10, YouTube: http://youtu.be/dJPNHfcFC9I
    - ◇ Lecture 11, YouTube: http://youtu.be/CO59JL9Z_0k
    - ◇ Lecture 12, YouTube: http://youtu.be/E07nr-flg8E
    - ◇ Lecture 13, YouTube: http://youtu.be/-ZV1J3Hv6dE
    - ◇ Lecture 15, YouTube: http://youtu.be/jQXMsi_pKFo
    - ◇ Lecture 16, YouTube: http://youtu.be/ph1lCDc-1UE
    - ◇ Lecture 17, YouTube: http://youtu.be/j6XaLQkcee8
16. Neural Networks: The Fundamentals (tutorial), Buryat State University, Ulan-Ude, Russia, March 5, 2001.

2002

17. R.J. Marks II, *Introduction to Computational Intelligence* (YouTube)
    - ◇ Lecture 1, YouTube: http://youtu.be/fgtUFzxNztA
    - ◇ Lecture 2, YouTube: http://youtu.be/8RrBmnFufn4
    - ◇ Lecture 3, YouTube: http://youtu.be/PCyBEy_22F4
    - ◇ Lecture 4, YouTube: http://youtu.be/I_Oj1qe8jO4
    - ◇ Lecture 5, YouTube: http://youtu.be/OWKzDmXV1-
    - ◇ Lecture 6, YouTube: http://youtu.be/WW4sMx1-cC0
    - ◇ Lecture 7, YouTube: http://youtu.be/MVHiE0NS5hY
    - ◇ Lecture 8, YouTube: http://youtu.be/1sp-OHr4_YA
    - ◇ Lecture 9, YouTube: http://youtu.be/EyHHxP5UHcE
    - ◇ Lecture 10, YouTube: http://youtu.be/BzUZRtwAaBs

- ◇ Lecture 11, YouTube: http://youtu.be/RXHq7B0-V9s
- ◇ Lecture 12, YouTube: http://youtu.be/Ef7seYvoFFc
- ◇ Lecture 13, YouTube: http://youtu.be/rDsLmikMjG
- ◇ Lecture 14, YouTube: http://youtu.be/XOOpDhkX_k8
- ◇ Lecture 15, YouTube: http://youtu.be/pJh3dWLSigM
- ◇ Lecture 16, YouTube: http://youtu.be/LSXKLtqJ8a8
- ◇ Lecture 17, YouTube: http://youtu.be/FK33Lj382KI
- ◇ Lecture 18, YouTube: http://youtu.be/i2SHIXdHgC0
- ◇ Lecture 19, YouTube: http://youtu.be/j6-dcqivT0w

2003

18. "Perceptron Inversion: Properties and Applications", Institute of Engineering Cybernetics, Wroclaw University of Technology , Wroclaw , Poland (April 3, 2003).

19. "Fundamentals of Swarm Intelligence", APL Invited Colloquia, Applied Physics Laboratory, University of Washington (April 10, 2003).

20. "What Does Calculus Have to Do With Christianity?" San Jose State University, November 30, 2003.

21. "Swarm Intelligence: The Method Behind the Mobs", NASA Office of Biological and Physical Research Program Review, California Institute of Technology, December 17-18, 2003.

2004

22. "Time Scale Nonregressivity in Switched Linear Circuits" Special Session on Dynamic Equations on Time Scales: Theory and Applications, AMS Western Sectional Meeting, University of Southern California, Los Angeles, CA, April 3-4, 2004 (with Ian Gravagne, John M Davis, Jeffrey J DaCunha).

2006

23. "Added Information in Targeted Evolutionary Search", Perry Conference, Hotel Pattee, Perry, Iowa, April 17-20, 2006.

24. "Evolutionary Search: A Free Source of Design Information?" RAPIDS 2 Conference, BIOLA, May 11-13, 2006.

25. "Science and the Bible: The Emerging Harmony," CDIS (Chengdu International School), Chengdu, China (May 29, 2006) and CaiDa Southwest Economics University, Chengdu, China (May 30, 2006) .

26. "Computational Intelligence: A Free Source of Information?" International Symposium on Neural Networks (ISNN), Chengdu, China (May 29, 2006) A Keynote Talk

2007

27. "The Need for Active Information in Evolutionary Search," Wistar Retrospective Symposium, Boston, MA (June 3-6, 2007).

28. "Gödel to Turing to Chaitin to the Edge of Naturalism: Some Things Computers Will Never Do," B.E.A.R.S. Seminar, Baylor University, (September 28, 2007).

29. Introduction to Evolutionary Informatics (tutorial), Discovery Institute Summer Symposium, Seattle, WA., July 2007.

30. "Conservation of Information in Evolutionary Search Algorithms: Measuring the Cost of Success," University of Missouri, Columbia, (November 12, 2007). IEEE CIS Distinguished Lecture for Columbia Chapter of IEEE CIS Society.

2008

31. "Gödel to Turing to Chaitin to the Edge of Naturalism: Some Things Computers Will Never Do," (April 2, 2008), SWBS, IEEE CIS Distinguished Lecture for Dallas Chapter of IEEE CIS Society.

32. "What does Calculus have to do with Christianity?" SMU DCL for Faculty Commons (September 25, 2008).

33. "Measuring the Cost of Success: Conservation of Information in Evolutionary Search Algorithms," Southern Methodist University (SMU), Department of Electrical Engineering (September 25, 2008).

34. "Knowing What is Unknowable: Things a Computer Can't Do," Baylor American Scientific Affiliation (ASA) Student Chapter. Also sponsored by the Baylor Society for Conversations in Religion, Ethics and Science, Baylor University (April 15, 2008).

35. "What does Calculus have to do with Christianity?" Dallas Christian Leadership (DCL) at SMU for Faculty Commons (September 25, 2008).

2009

36. "Evolutionary Informatics: Measuring the Cost of Success," American Scientific Affiliation (ASA) 64th Annual Meeting, Baylor University (Sunday, August 2, 2009) with William A. Dembski

37. "Science & Christianity: Separate but Equal?" Covenant Presbyterian Church, Austin, TX (August 16, 2009)

38. "Lessons from Gödel, Turing and Chaitin: Things Computational Intelligence Will Never Do," IEEE MetroCon 2009, Innovating for Society, August 17th, 2009, Sheraton Arlington, Arlington, Texas. (IEEE CIS Distinguished Lecture.) [Certificate]

39. "God Ever Geometrizes: Apologetics in Mathematics," Baylor American Scientific Affiliation (ASA) Student Chapter. Also sponsored by the Baylor Society for Conversations in Religion, Ethics and Science, Baylor University (December 1, 2009).

40. Information and Evolution (tutorial), Discovery Institute Summer Symposium, Seattle, WA., July 2009.

41. R.J. Marks II, "Great Expectations: Information Theory," for Ricochet.com. http://youtu.be/Uc6Ktq0SEBo

6.10.4 2010-2019

2010

42. "Gödel to Turing to Chaitin to the Edge of Naturalism: Some Things Computational Intelligence Will Never Do," IEEE CIS Distinguished Lecture for St. Louis Chapter of IEEE CIS Society presented at the Missouri University of Science and Technology, Rolla, Mo., April 13, 2010.

43. "Measuring the Cost of Success: Conservation of Information in Search," IEEE CIS Distinguished Lecture for St. Louis Chapter of IEEE CIS Society presented at the Missouri University of Science and Technology, Rolla, Mo., April 13, 2010.

44. "Time Scale Discrete Fourier Transforms," Guest Lecture, Missouri University of Science and Technology, Rolla, Mo., April 14, 2010.

45. "God Ever Geometrizes: Apologetics in Mathematics," Probe Ministries, Plano, Texas, (June 28, 2010).

46. "Spectrum Issues in Amplifier Design," Fifth Annual Emerging Spectrum Technology (EST) Workshop on Advanced Radar Technologie to Improve Spectrum Use, Double Tree Hotel, Annapolis Maryland, September 13-14, 2010 (with Charles Baylis).

2011

47. "Power Amplifier Circuit and Waveform Optimization for Reduced Spectral Spreading in Radar Transmitters," IDGA's 4th Annual Military Radar Summit, Feb 8-10, 2011, Vienna, VA (with Charles Baylis).

48. "Evolutionary Simulations and Sources of Active Information," Discovery Retreat, Santa Barbara, CA (March 1-4, 2011)

49. "Measuring Cross Harmonic Coupling in Nonlinear Systems," WMCS Advisory Board, March 31, 2011, Baylor University.

50. "Evolutionary Informatics. Why all the fuss?" Baylor Alumni Association, Lifelong Learning in Retirement, April 15, 2011, Great Hall of the Hughes-Dillard Alumni Center, Waco, Texas

51. "Evolution Models Do Not Create Information," Great Expectations Conferences, Borgo Finocchieto, Tuscany, Italy, June 12-16, 2011 (with Winston Ewert).

52. Power Amplifier Circuit and Waveform Optimization for Reduced Spectral Spreading in Radar Transmitters (tutorial), 4th Annual Military Radar Summit, Washington, D.C., February 79, 2011 (with Charles Baylis)

53. Why Design Information is Required to Find Improbable Complex Targets, Discovery Institute Summer Symposium, Seattle, WA., July 2011.

2012

54. "Information: What Is it?," January 17, 2012. [Youtube: https://youtu.be/d7seCcS_gPk], [Cache.]

55. "CHRISTIAN CALCULUS: The Impact of Christian Faith on Mathematics & Science Yesterday & Today," Sept 27, 2012 (sponsored by Baylor's ESC LLC and the Baylor Student Chapter of the American Scientific Affiliation)

56. "Joint Optimization of Radar Power Amplifier and Waveforms for Reduced Spectral Spreading," North Atlantic Treaty Organization (NATO) SET-182 Research Task Group Meeting, 2012 October 17-18, 2012 (with Charles Baylis. Remote Presentation.)

57. "Information. What is it?," Intro. to Engineering Lecture, January 17, 2012. http://youtu.be/d7seCcS_gPk

58. "God Ever Geometrizes: Apologetics in Mathematics" November 6, 2012, Texas A&M University, (sponsored by TAMU's Ratio Christi student group)

2013

59. "Information: Measuring Design & Understanding the Unknowable," 2013 National Conference & Ratio Christi Symposium, Southern Evangelical Seminary, October 11-13 2013, Matthews, North Carolina

2014

60. "Spectral Issues," Spectrum Forum, Texas Symposium on Wireless and Microwave Circuits and Systems, Baylor University, Waco (April 4, 2014)

61. "Electrical & Computer Engineering," Lorena High School, Lorena, Texas (Career Day) May 30, 2014 (with Charles Baylis and Matthew Fellows)

62. "The Impact of Christian Faith on Mathematics & Science: Yesterday & Today," (See Videos: page 135, item 65)

63. "Dr. Robert Marks: Active Information in Metabiology," May 30, 2014
http://youtu.be/tJSJg0IZtfI

64. "On Algorithmic Specified Complexity," by Robert J. Marks II. CSCA/ASA/CiS 2014 Conference, July 2014, McMaster University, Hamilton, Ontario, Published on Aug 5, 2014
http://youtu.be/No3LZmPcwyg

65. "The Impact of Christian Faith on Mathematics & Science: Yesterday & Today," Baylor Student Chapter of the American Scientific Affiliation, October 12, 2014
http://youtu.be/hdNNNJMZJ_c

66. "Alternating Projections onto Convex Sets Examples,"
https://youtu.be/_-T4Y0aof3s

2015

67. "Seven Things Not To Do With Electricity." Baylor Student IEEE Group, April 13, 2015.
https://youtu.be/BzeHgmW5xfI

68. "2015 IEEE Radar Conference Tutorial: Radar Transmitter Design for the Crowded Radio Spectrum" May 10, 2015, Texas Symposium
https://youtu.be/vrmN_2kQ8Cs

69. "Information: What Is It Anyway?" ID the Future Podcast, November 9, 2015
https://youtu.be/c2UCPX5mKio

70. Radar Transmitter Design for the Crowded Radio Spectrum (tutorial), 2015 IEEE International Radar Conference (RadarCon), Crystal City, Arlington, VA. May 10, 2015 (with Charles Baylis & Lawrence Cohen)

71. Radar in a Communications-Driven Spectrum: Innovative System, Component, and Circuit Design for the Evolving Spectrum Environment (tutorial), International Microwave Symposium, May 22, 2015, Phoenix, AZ (with Charles Baylis & Lawrence Cohen)

72. "Adaptability and Reconfigurability: Radar Operational Infrastructure Redux," DARPA Radar/Communications Co-Design Challenge, DARPA, Crystal City, VA (April 27, 2015)

73. "Effects of Power Amplifier Nonlinearities on the Radar Ambiguity Function." 2015 IEEE International Radar Conference (RadarCon), Arlington, VA. May 10, 2015

74. "Ambiguity Functions and Spectral Constraints." International Microwave Symposium, May 22, 2015, Phoenix, AZ

75. "2015 IEEE Radar Conference Tutorial: Radar Transmitter Design for the Crowded Radio Spectrum" May 10, 2015, Texas Symposium

76. Small Group Apologetics

    #1: Scientists & Their Faith
    YouTube: https://youtu.be/tpKK83Xr__s

    #2: The Origin of Life
    YouTube: https://youtu.be/iELmvoAsgzk

    #3: The Origin of Life: No Natural Explanation
    YouTube: https://youtu.be/WxItsmEHu_g

    #4: Evolution A
    YouTube: https://youtu.be/Un8F0idwx1Y

    #5: Evolution B & Where is God Math
    YouTube: https://youtu.be/Wgw9uYgq3Jo

2016

77. "POCS: Alternating Projection onto Convex Sets Tutorial" (2016)

    (a) YouTube: Lecture #1, https://youtu.be/ooIphlOOzcE

    (b) YouTube: Lecture #2, https://youtu.be/xczjmF1j2Z0

    (c) YouTube: Lecture #3, https://youtu.be/zP7jj3iUfso

78. "What Math & Computer Simulations Reveal About Evolutionary Limits" Reasonable Faith, UT Dallas, November 4

79. "Are Minds Machines" Science and Faith Examined, Caltech, October 28, 2016. [Link, Cache, YouTube, Video Cache]

2017

80. "Science, Faith & Belief in God," Bridges International, Decemeber 31, 2017.

2018

81. "AI and Human Uniqueness" 2018 Discovery Summer Seminars, Seattle Pacific University, July 12, 2018, 7-9 PM, Seattle, Wa.

2019

82. "Robert J. Marks: Are There Things About Human Beings That You Cannot Write Code For?" Bradley Center Grand Opening, Dallas Country Club, April 9, 2019. [Web Page Link, Youtube, Video Cache.]

83. "AI & ID Christian Home School Apologetics," Warren and Martha Fain, April 5, 2019. [Link: https://youtu.be/3aUAREQz4nk]

84. Robert J. Marks "How you are better than AI - and always will be: Ground truth on AI capabilities," The Human Advantage, Christ Church Anglican, Austin, TX, March 11, 2019. [Link: https://youtu.be/hG0L4F9CeIk]

85. Robert J. Marks, Jay Richards, and Kevin Stuart, "Panel Discussion at THE HUMAN ADVANTAGE" Christ Church Anglican, Austin, TX, March 11, 2019. [Link: https://youtu.be/Hwbqqvwvryc]

86. Robert J. Marks "Artificial Intelligence & Human Uniqueness" Discovery Institute Summer Institute, July 2019.

87. Intro only to *The World & Everything In It*, July 29, 2019. [Link].

88. Robert J Marks, "Does God Matter?" October 15, 2019, Bill Daniels Center, Baylor Campus, 7:00 PM (panel member).

89. George Montañez, Oren Etzioni & Robert J. Marks II, "AI's Role in Unlocking Human Potential," COSM, Seattle, Wa. October 24, 2019.

90. Robert J. Marks "Artificial Intelligence & Human Uniqueness" Discovery Institute Summer Institute, July 2019.

91. Robert J. Marks "What You Do Computers Never Will: Deconstructing Artificial Hype," Oso Logos (Ratio Christi), Bill Daniels Student Center, 7:00 PM, Nov 5, 2019.

92. Eric Holloway & Robert J Marks, "Mind, Information and Creativity," Mind & Body Workshop, Seattle, WA November 16, 2019.

93. Robert J Marks, "AI, ID and Neuroscience in the Bible," Mind & Body Workshop, Seattle, WA November 17, 2019.

6.10.5 2020-2029

2020

94. Robert J Marks, "The Promise and Limitations of Artificial Intelligence," Reasonable Faith, University of Texas Dallas, Dallas, TX, Feb 22, 2020. [Facebook Video]

95. Briefing on AI & Electronic Warfare

    (a) Office of Senator John Cornyn, 517 Hart Senate Office Bldg, Washington DC, 4PM, March 2, 2020.

    (b) Office of Senator Ted Cruz, Russell Senate Office Bldg 127A Washington DC, 11AM, March 3, 2020.

    (c) Dr. Lynne Parker, Deputy Chief Technology Officer of the US, White House, Washington, DC, 4PM, March 3, 2020.

    (d) The Hudson Institute, Washington DC, 10AM, March 4, 2020

    (e) The Heritage Foundation, Washington DC, 1PM, March 4, 2020

96. "Walter Bradley on Origin of Life Research" Dallas Science Faith Conference 2020, (Intro by R.J. Marks), January 25, 2020. [YouTube, Video Cache.]

97. "AI: Menace or Saviour" Intercollegiate Studies Institute, Wilmington, DE, May 16, 2020

    "317 attendees"

98. "Dr. Robert Marks: Human Exceptionalism" Reasons to Believe, Austin Chapter, August 8, 2020 [Youtube: https://youtu.be/Ji3rUI_Iu9A?t=1219, Video cache]

99. "AI's Role in Unlocking Human Potential" COSM 2019, August 14 2020 [YouTube Link: https://youtu.be/tU3xjeMdJu8, Video cache.]

    > "Can artificial intelligence replicate or exceed human knowledge and creativity? What are AI's implications for the workforce? Oren Etzioni, CEO Allen Institute for Artificial Intelligence, George Montañez, Iris and Howard Critchell Professor of Computer science at Harvey Mudd College, Robert J. Marks, Distinguished Professor of Electrical & Computer Engineering at Baylor University, and Matt McIlwain, managing director Madrona Venture Group discuss the new business and career opportunities created by artificial intelligence, and whether AI and humanity will merge at some point in the future."

100. R.J. Marks II, *Multidimensional Signal Analysis*. Text: R.J. Marks II, Handbook of Fourier Analysis and Its Applications, Oxford University Press, (2009). [Course Syllabus, Homework Problems]

     1 Chapter 1, YouTube: https://youtu.be/gor2Zo5fQwQ

2 Chapter 2, YouTube: https://youtu.be/zZue5XHcmHg

3 Chapter 2, YouTube: https://youtu.be/_TiRDOsXgTY

4 Chapter 2, YouTube: https://youtu.be/7Z5FlUvJumM

5 Chapter 2, YouTube: https://youtu.be/p8B5Sq3FlvE

6 Chapter 2, YouTube: https://youtu.be/Fbf6GfowIqI

7 Chapter 2, YouTube: https://youtu.be/1NkFOi5KKqI

8 Chapter 5, The Sampling Theorem, YouTube: https://youtu.be/offLi_vbMqk

9 Chapter 5,
The Sampling Theorem, YouTube: https://youtu.be/J2Hria4ESi4

10 Chapter 5, The Sampling Theorem, YouTube: https://youtu.be/RqAp3HNmdjI

11 Chapter 5,Sampling Theorem; Chapter 8, Higher Dimensions,
YouTube: https://youtu.be/ageztIHan3g

12 Chapter 8.3 Visualizing Higher Dimensions,
YouTube: https://youtu.be/-zxdGu7eZyY

13 Chapter 8.4 Continuous Time Multidimensional Fourier Analysis 330
Youtube: https://youtu.be/nqjynI4u72Y.

14 Chapter 8.4.3 Multidimensional Convolution 333 and 8.4.4 Separability 334, YouTube:
https://youtu.be/dx4dLB8N9sA

15 Chapter 8.4.5 Rotation, Scale and Transposition 336,
YouTube: https://youtu.be/1QmxNQBURrU

16 Hankel Transforms, YouTube: https://youtu.be/T3X_gN_vWpQ

17 8.5 Characterization of Signals from their Tomographic Projections 345, YouTube:
https://youtu.be/VaTfQgs4Hsc

18 Homework Problems, YouTube: https://youtu.be/WelQwVBDBlU

19 Radon Transform / Periodicity, YouTube: https://youtu.be/XZaKpXAI1zw

20 8.6 2D Fourier Series 352,
YouTube: https://youtu.be/mroyB9AidGA

21 Chapter 8.9 The Multidimensional Sampling Theorem 373,
YouTube: https://youtu.be/jAXTXSGY07k

22 Chapter 8.9 The Multidimensional Sampling Theorem 373,
YouTube: https://youtu.be/F_3jcu4Zu88

23 Chapter 11 Signal and Image Synthesis: Alternating Projections Onto Convex Sets 495,
YouTube: https://youtu.be/QUiF-MJjm8E

24 Chapter 11.2 Geometical POCS 496, YouTube: https://youtu.be/MPylQghm8kA

25 Chapter 11.3 Convex Sets of Signals 501,
YouTube: https://youtu.be/E2Q8Q7Y4MK8

26 Chapter 11.3.2 Some Commonly Used Convex Sets of Signals 504, YouTube: https://youtu.be/Alp8XimaOHY

27 POCS, YouTube: https://youtu.be/aBgG-iiFVrY

101. "Baylor OSO Logos Does God Matter Q A Panel" [You Tube Link:https://youtu.be/uHYDJJHzFso]

2021

102. R.J. Marks II, *ECS 4345: Random Variables and Stochastic Processes* [Homework Problems]

1 History- [YouTube: https://youtu.be/FMmsinC9q6A]

2 Review 1- YouTube: https://youtu.be/-OqhMVIrJOI

3 Review 2- YouTube: https://youtu.be/m0q7QDDz5-0

4 Distributions/Info Theory- YouTube: https://youtu.be/9RezsChrzaU

5 Info Theory- YouTube: https://youtu.be/c7EmERRdq1I

6 RV Transformation- YouTube: https://youtu.be/hPVmeQri_rc

7 Functions of a RV- YouTube: https://youtu.be/AAG-h8rh5BA

8 Characteristic Functions- YouTube: https://youtu.be/skA9oyKv9fg

9 Characteristic Functions- YouTube: https://youtu.be/bC9Z9Ls5-bk

10 2D RV's- YouTube: https://youtu.be/hWINB89ezfQ

11 2D RV's- YouTube: https://youtu.be/UZ68vjyesSc

12 2D RV's- YouTube: https://youtu.be/V4PJUB5oKgc

13 MD RV's- YouTube: https://youtu.be/KvhONWbthtk

14 MD RV's- YouTube: https://youtu.be/XyDJnegwzR8

15 Law of Large Numbers- YouTube: https://youtu.be/pj8xdnSBcVw

16 Central Limit Theorem- YouTube: https://youtu.be/4AvCvR6SJyg

17 Confidence Intervals- YouTube: https://youtu.be/oVTWKN5EVII

18 Gaussian Processes- YouTube: https://youtu.be/VAxUactaZeA

19 Counting/Poisson Processes- YouTube: https://youtu.be/_PtBsCW5srU

20 Stationarity- YouTube: https://youtu.be/0nYCwtVnOlw

21 Worked Homework- YouTube: https://youtu.be/1QdpuESFdbg

22 Wide Sense Stationarity- YouTube: https://youtu.be/azosXf_Pfpk

23 Ergodicity/PSD- YouTube: https://youtu.be/0xJkv86sewM

24 Power Spectral Density- YouTube: https://youtu.be/tMJ0ltR7SLA

25 Filtering Stochastic Processes- YouTube: https://youtu.be/fKiqoqhm9-E

26 Gaussian Processes- YouTube: https://youtu.be/3fJ51Ow-qq4

27 Office Hours- YouTube: https://youtu.be/gOvYccQm1D8

103. "AI & Human Uniqueness" 2021 CSC Seminar on Intelligent Design in the Natural Sciences, Denton, TX, July 2021 (with William Dembski)

104. Robert J. Marks, "ROBERT J. MARKS: THERE'S ONE THING ONLY HUMANS CAN DO," Mind Matters News, July 22, 2021. [Web Page, Transcript, Transcript Cache, Audio, Audio Cache]

105. R.J. Marks II, *Introduction to Computational Intelligence*. [Homework Problems]

1 History- [YouTube: https://youtu.be/BihPfYmAhdA]

2 Overview 1- [YouTube: https://youtu.be/lgq4JG3GMeA]

3 Overview 2- [YouTube: https://youtu.be/1aot_xVXLVQ]

4 Overview 3- [YouTube: https://youtu.be/0agrtX0n4Z8]

5 Fuzzy Thinking- [YouTube: https://youtu.be/_YR_h93cHU]

6 Mamdani Control- [YouTube: https://youtu.be/yMbvylWZ04E]

7 Adv. Fuzzy Logic- [YouTube: https://youtu.be/CNuli7TzcZg]

8 Swarm Intelligence 1- [YouTube: https://youtu.be/jYHWhiKRHwU]

9 Swarm Intelligence 2- [YouTube: https://youtu.be/jYHWhiKRHwU]

10 Cellular Automata & Search- [YouTube: https://youtu.be/8itzBaz2Qsc]

11 Search 1- [YouTube: https://youtu.be/6XKubHQpaG4]

12 Search 2- [YouTube: https://youtu.be/wd1iyc1fPWU]

13 Search 3, Neural Networks 1- [YouTube: https://youtu.be/gGxKfF5wTwM]

14 Neural Networks 2- [YouTube: https://youtu.be/DEQh4GPyczg]

15 Swarm Demos - Neural Networks 3- [YouTube: https://youtu.be/IqAr1YZF3Io]

16 Simulated Annealing / Neural Networks 4- [YouTube: https://youtu.be/acHJ2ngO0IM]

17 Neural Networks 5 ... GANS- [YouTube: https://youtu.be/t9AgpAgnGZ0]

18 Neural Networks 6 ... Web Resources- [YouTube: https://youtu.be/qCSC0a4lUWc]

20 Resemblance/Particle Swarm/NN Inversion- [YouTube: https://youtu.be/JCINqam8R24]

21 ROC Curves- [YouTube: https://youtu.be/EBOtqGVl0Lg]

22 Fisher Distance- [YouTube: https://youtu.be/YANzIRX8Bic]

23 Project 4 Reports 1- [YouTube: https://youtu.be/qmsNJcLM4M4]

24 Project 4 Reports 2- [YouTube: https://youtu.be/1w6aaqvjvxs]

25 Project 5 Reports 1- [YouTube: https://youtu.be/SDFRijVxTtU]

26 Project 5 Reports 2- [YouTube: https://youtu.be/l4LTfeTPZeY]

106. "Artificial Intelligence, Cyberwarfare, and Military Preparedness" COSM, November 12, 2021, Bellevue, WA (with Stephen Meyer & Arthur Herman) [Link]

107. "Are human minds doomed to become obsolete?" OSO Logos, Baylor Student Union Bldg, November 16, 2021.

2022

108. "Professor Robert J. Marks teaches Evolutionary Informatics" Discovery Institute, January 10,2022 [YouTube: https://youtu.be/Zy2-b37TD-Y, Link, Video Cache]

109. "EVOLUTIONARY INFORMATICS" TAUGHT BY ROBERT J. MARKS II, Discovery Institute, January 10,2022. [Link]

    Syllabus
    Unit 1: Introduction to Information
    Unit 2: Shannon Information Theory
    Unit 3: Intro to Design & Search
    Unit 4: Making Design & Search Work
    Unit 5: Further Aspects of Design & Search
    Unit 6: Conservation of Information
    Unit 7: Modeling Conservation of Information
    Unit 8: Limitations of Evolutionary Search
    Unit 9: Deconstruction of Avida
    Unit 10: Measuring Meaning in Design

110. Apologetics Course I, First Baptist Church, Woodway, TX.

    (a) "What does it mean to love God with all your mind?" January 19 (with Will McKerral).

    (b) "Faith VS Science: Can a dedicated scientist believe in God?" January 26, 2022.

    (c) "Evolution Models: What are the different models of evolution? What shoulWhat should a Christian believe?" February 9, 2022.

    (d) "Evolution Models: What are the different models of evolution?

    (e) "Higher Dimensions & Infinity Where is heaven? What does eternity mean?" February 23, 2022.

    (f) "Artificial Intelligence: Will AI ever overtake and even replace mankind?" March 16, 2022.

111. Robert J. Marks "AI Apocalypse: Will Thinking Machines Replace Humans?" Dallas Conference on Science and Faith, Denton Bible Church, Denton, TX, January 22, 2022. [Link, Flyer, More.]

112. "Things You Do AI Never Will" University of Georgia, Faculty Commons, March 3, 2022.

113. "Sky Daddy in the Clouds?" Oso Logos, Baylor Student Chapter of Ratio Christi, Bill Daniels Student Center, March 31, 2022.

114. "God, Academia, and the Workplace: Witnessing for God Where He Isn't Welcome." (panel with Dr. Robert J. Marks, Dr. Robert Garcia and Dr. Julia Hejduk) Oso Logos, Baylor Student Chapter of Ratio Christi, Bill Daniels Student Center, April 19, 2022.

115. "AI Apocalypse: Will Thinking Machines Replace Humans?" 2022 Dallas Conference on Science and Faith in January 2022. [YouTube: https://youtu.be/55-S3uw5nuY, Video Cache.]

    > "Computer engineer Robert J. Marks talks about how artificial intelligence (AI) has influenced our society as well as the hype which has surrounded AI in the last few years. "

116. "Marks: Forget the Hype, 'Thinking Machines' Can't Replace Humans" Mind Matters News, July 7, 2022. [Link]

    > "Walter Bradley Center director Robert J. Marks gave a talk in January at the Dallas Conference on Science and Faith on whether a robot will really take your job: 'AI Apocalypse: Will Thinking Machines Replace Humans?"'

117. "Mind Matters Host Robert J. Marks Answers Questions About The 'AI Apocalypse"' Dallas Conference on Science and Faith in January 2022, Denton, Texas. [YouTube: https://youtu.be/5b3j8XMf9cE]

    > "Dr. Robert J. Marks II [and Dr. William A. Dembski] answers audience questions about his lecture, 'AI Apocalypse: Will Thinking Machines Replace Humans?' "

118. Robert J. Marks & Daniel Diaz "More than a Computer? The Specialness of the Human Mind" Tacoma, Washington, August 13,2022.

119. Apologetics Course II, First Baptist Church, Woodway, TX.

    (a) Robert J. Marks "Winning friends and influencing people for Christ" September 7, 2022.

    (b) Robert J. Marks "Near Death Experiences: Hallucinations, Bloviated Anecdotes or the Front Porch of Eternity?" October 7, 2022.

    (c) Robert J. Marks "What we learn from Walter Bradley" September 21, 2022.

120. Robert J. Marks & Daniel Diaz "Reliability For Complex Artificial Intelligence Design." Center for Standards & Ethics in Artificial Intelligence, Baylor University, September 29, 2022.

121. University of Wisconsin

(a) Robert J. Marks II "Non-Computable You" University of Wisconsin, Faculty Seminar, October 12. 2022

(b) Robert J. Marks II "Artificial Intelligence Panel" University of Wisconsin, Panel Member, October 12. 2022

(c) Robert J. Marks II "Artificial Intelligence: What Humans Do that Robots will Never Do!" University of Wisconsin, CRU, October 13. 2022

(d) Robert J. Marks II "Christian Calculus: Scientists and Their Faith" University of Wisconsin, Common Call Conference, Faculty Commons, October 15. 2022

(e) Robert J. Marks II 'What Humans Do that Robots will Never Do" University of Wisconsin, Common Call Conference, Faculty Commons, October 15. 2022

122. Highpoint Church, Madison, WI. October 16, 2022 .

(a) Robert J. Marks II "How to Live Out Loud as a Christian in Secular Vocations"

(b) Robert J. Marks II, "Fearfully and Wonderfully Made: What You Do AI Never Will," [YouTube: youtu.be/7zUTSH9yThY, Video Cache]. Contents:

- ◇ 5:30 Introduction
- ◇ 7:00 The AI Church
- ◇ 15:00 The Emperor's New Mind
- ◇ 18:44 Alan Turing
- ◇ 23:30 Noncomputable
- ◇ 25:56 Imagine
- ◇ 28:12 John Searle
- ◇ 30:14 IBM Watson
- ◇ 30:58 AI Doesn't Have Common Sense
- ◇ 33:33 Flubbed Headlines
- ◇ 35:38 Lovelace Test
- ◇ 37:53 Common Misconceptions
- ◇ 38:58 How did they do it?
- ◇ 41:31 Music
- ◇ 42:10 Creativity
- ◇ 44:55 Conclusion
- ◇ 47:15 Transhumanism and AI
- ◇ 49:38 Neural Networks and AI
- ◇ 51:50 Can We Trust What AI Says
- ◇ 53:30 Can AI and DNA Produce Immortality?
- ◇ 54:24 Religious People are Criticized
- ◇ 55:15 The Assumption in the Human Brain

2023

123. Robert J. Marks II, "Spectrum Engineering" NSF Sponsored, Belton High School, Belton, TX, May 5, 2023 (with Adam Goad & Samuel Hussey).

124. Robert J. Marks II, "An Unforgettable Talk" for GEAR UP (Getting Early Awareness and Readiness for Undergraduate Programs), sponsored by the US Department of Education, BRIC, Baylor University, June 6, 2023.

125. NSF Spectrum Sizzle, Baylor University, June 7, 2023

    (a) Robert J. Marks (moderator) "Answering the 'Why' question" with panelists Charles Baylis, Yang Li and Casey Lathem.

    (b) Robert J. Marks (moderator) "Should I go to grad school?" with panelists Charles Baylis, Austin Egbert, Andrew Clegg & Arvind Aradya.

126. Discovery's 2023 Summer Seminar, Glen Aire Conference Center, Colorado Springs, Colorado.

    (a) Robert J. Marks II, "Evolutionay Algorithms" June 29, 2023.

    (b) Robert J. Marks II, "Can AI Replace Humans?" June 30, 2023.

127. Apologetics Course III, First Baptist Church, Woodway, TX. 2023.

    (a) Robert J. Marks II, "Apologetics: What does it mean to love God with all your mind?" August 23, 2023.

    (b) Robert J. Marks II, "The First Church of Artificial Intelligence" September 13, 2023.

    (c) Robert J. Marks II, "Model Collapse in Artificial Intelligence" November 8, 2023.

    (d) Robert J. Marks II, "Apologetics Q&A" November 17, 2023 (with Will McKerall).

128. Robert J. Marks II, "AI and the Imago Dei," Ratio Christi, Bobo Student Center, Baylor University, Sept 6, 2023.

129. John West, Casey Luskin, Mark Garcia, and Robert Marks "Roundtable Discussion on Human Uniqueness" Westminster Conference on Science and Faith, The Miracle of Man, Covenant Fellowship Church, Glen Mills, PA September 29-30, 2023.

130. Agape Italia, Italy, Faculty Commons, October 2023.

    (a) Robert J. Marks II, "From Whence Science? The Impact of Christianity on the Science in Western Europe" Rome, Italy, October 9, 2023.

    (b) Robert J. Marks and Fabio Gasparetti, "Are You a Computer Made Out of Meat?" Agape Italia, Rome, Italy, October 9, 2023.

    (c) Robert J. Marks II, "What You Do Artificial Intelligence Never Will" Balogna, Italy, October 11, 2023.

131. Robert J. Marks II, "Panel Discussion on AI" Fall Arts and Technology Conference, Tehuacana, TX. October 21, 2023.

132. Mayborn Museum, Continuing Education, Baylor Campus, 2023.

    (a) Robert J. Marks II, "Near Death Experiences: Artificial Intelligence, Technology, and God", October 26, 2023.

    (b) Robert J. Marks II, "Living Out Loud as a Christian: Artificial Intelligence, Technology, and God," Mayborn Museum, Baylor Campus, October 30, 2023.

    (c) Robert J. Marks II, "Scientists and Their Faith: Artificial Intelligence, Technology, and God", Mayborn Museum, Baylor Campus, November 9, 2023.

    (d) Robert J. Marks II, "Will Artificial Intelligence Replace Humans: Artificial Intelligence, Technology, and God", Mayborn Museum, Baylor Campus, November 16, 2023.

133. Robert J. Marks II, Walter Myers III, William Dembski, Robert J. Marks, George Montanez "The Quintessential Limits and Possibilities of AI: Three Views" Panel, COSM 2024, Bellevue, Washington, November 1, 2023. [COSM Flyer, Cache]

134. Robert J. Marks II, "Faith & Science" Vision23 Conference, Bridges International, Baltimore Hilton, December 29, 2023.

2024

135. Big Sky Worldview Forum, Billings, MT. January 26, 2024.

    (a) Robert J. Marks II, "Non-Computable You - What You Do that A.I. Never Will?" Big Sky Worldview Forum, Billings, MT. January 26, 2024. 7PM. [Radio Ad, Flyer, Video, Video Cache, Slides.]

    (b) Robert J. Marks II, "From Whence Science - can a Christian be a Scientist?" Big Sky Worldview Forum, Billings, MT. January 26, 2024. 8PM. [Radio Ad, Flyer, Video, Video Cache, Slides.]

    (c) Robert J. Marks II, "The Mind-Body Question: Are You a Materialist Computer Made Out of Meat" Big Sky Worldview Forum, Billings, MT. January 27, 2024. 9AM. [Radio Ad, Flyer, Video, Video Cache, Slides.]

    (d) Robert J. Marks II, "Living-Out-Loud as a Christian - an Inspiring Hero" Big Sky Worldview Forum, Billings, MT. January 27, 2024. 10AM. [Radio Ad, Flyer, Video, Video Cache, Slides.]

    (e) Robert J. Marks II, "AI Q&A Dinner" Big Sky Worldview Forum, Billings, MT. January 27, 2024.

136. Robert J. Marks, "The 'ArmsRace' for FakeAI Election Content Is On" Epoch Times, January 11, 2024. [Link.]

> "'It's kind of like the arms race. You come up with a way of faking video, somebody comes up with a way of detecting it. But then the other side looks at the way of detecting it, and they figure out how to get around that,' he [Marks] said."

137. CRU, North Carolina University, Raleigh, North Carolina, February 9, 2024.

    (a) Robert J. Marks II, "Science & God" CRU, North Carolina University, Raleigh, North Carolina, February 8, 2024. [Flyer.]

    (b) Robert J. Marks II, "Living Out Loud as a Christian" CRU, North Carolina University, Raleigh, North Carolina, February 10, 2024. [Flyer1, Flyer2.]

138. Common Call, North Carolina University, Raleigh, North Carolina, February 9, 2024.

    (a) Robert J. Marks II & Monika Marks, "Perspectives on Marriage & Ministry" Common Call, North Carolina University, Raleigh, North Carolina, February 9, 2024.

    (b) Robert J. Marks II, "AI" Common Call, North Carolina University, Raleigh, North Carolina, February 10, 2024.[Flyer1, Flyer2.]

139. Robert J. Marks II, "Answers to every question you have about AI" Teal Residential College, Baylor, March 12, 2024.

140. Robert J. Marks II, "Where is Heaven?" Ratio Christi, Elliston Chapel, Baylor University, April 2, 2024, 7PM. [Flyer]

141. Regent University, Virginia Beach, VA, April 5, 2024.

    (a) Robert J. Marks II, "For a Greater Purpose: The Life and Legacy of Dr. Walter Bradley" April 5, 2024.

    (b) Robert J. Marks II, "Should You Go to Grad School?" ECS, Virginia Beach, VA, April 5, 2024.

    (c) Robert J. Marks II, "Non-Computable You: What You Do That Artificial Intelligence Never Will" April 5, 2024. Program, Picture.]

142. Stephen F. Austin University.

    (a) Robert J. Marks II, "What You Do AI Will Never Do" College of Sciences and Mathematics, April 15, 2024. [Flyer]

    (b) Robert J. Marks II, "Faculty Living Out Loud As Christians: Lessons from Walter Bradley" Baptist Student Ministry, April 16, 2024. [Flyer1, Flyer2]

143. Robert J. Marks II, "Where is Heaven" Grace Bible Church, Nacogdoches, TX, April 16, 2024.

144. Concordia University, Mackinac Island, Michigan, May 8-10, 2024.

(a) Robert J. Marks II, "AI in Perspective," Ignite and Inspire Leadership Conference (IILC), Concordia University, Mackinac Island, Michigan, May 8-10, 2024.

(b) Robert J. Marks II, "Non-Computable You" Ignite and Inspire Leadership Conference (IILC), May 8-10, 2024.

145. "Spectrum Sizzle: An Undergraduate Spectrum Workshop funded by the National Science Foundation," June 3-6, 2024, Baylor University, Waco, Texas. [Agenda.]

(a) "Answering the 'Why' Question: Finding Meaning in Work and Life," Rogers 109, Bob Marks (Moderator), Panelists: Charlie Baylis, Casey Latham, Tom Brooks

(b) "Graduate School," Moderator: Bob Marks, Panelists: Arvind Aradhya, Austin Egbert, Charlie Baylis

146. IEEE MTT-S International Microwave Symposium, Washington DC, June 16, 2024.

(a) Robert J. Marks, Jonathan E. Swindell, Austin Egbert, Samuel Haug, Charles Baylis "The Use of Artificial-Intelligence in Radio Spectrum" IEEE MTT-S International Microwave Symposium, Washington DC, June 16, 2024

(b) Panel Discussion Among Presenters.

147. Robert J. Marks, Discovery Summer Seminar, Glen Eyrie, Colorado Springs, Colorado June 24-29, 2024.

(a) "Evolutionary Algorithms" Thursday, June 27, 2024.

(b) "Can AI Replace Humans?" Friday, June 28, 2024.

(c) Faculty Panel (with John West, Casey Luskin, Jonathan Witt, Jonathan McLatchie, Brian Miller) Saturday June29, 2024.

148. Apologetics Course IV, First Baptist Church, Woodway, TX. 2024.

(a) Robert J. Marks II, "AI and You" September 18, 2024

(b) Robert J. Marks II, "The Free Will/Predestination Debate: What Science & Scripture Say" October 2, 2024.

(c) Robert J. Marks II, "Science & Faith: Western Europe Genesis" October 16, 2024.

149. AI Week,"Office of the Provost and the School of Engineering and Computer Science, Baylor University, October 14-16, 2024.

◇ Robert J. Marks "Ethical AI," October 14, 2024. YouTube: https://youtu.be/i7txw9hOcIY?si=YQv

◇ Robert J. Marks, David Copps, Collin Stultz, James Pitarresi "Panel Discussion: Exploring the Future of AI in Higher Education" Daniel Pack, Moderator. October 15, 2024.

150. Robert J. Marks II, "Non-Computable You" Ratio Christi, Elliston Chapel, Baylor University, October 29, 2024.

151. "It's Just an Apparition: Unmasking Al Hype" Panel: ROBERT J. MARKS - DIRECTOR, BRADLEY CENTER FOR NATURAL & ARTIFICIAL INTELLIGENCE, WILLIAM DEMBSKI - MATHEMATICIAN AND PHILOSOPHER, GEORGE GILDER - DISCOVERY INSTITUTE with moderator WALTER MYERS - SENIOR FELLOW, DISCOVERY INSTITUTE, COSM 2024, Bellevue WA, Hyatt Regency, October 31, 2024.

152. Robert J. Marks "Minding the Brain: Are You a Computer Made Out of Meat?" Teal Residential College, Baylor University, November 3, 2024.

2025

153. Robert J. Marks, William Dembski, George Gilder - panel moderated by Walter Myers III "It's Just an Apparition: Unmasking AI Hype" 2024 COSM, video release on January 16, 2025. [YouTube: https://youtu.be/TiQXOKshnXo?si=2mqCq4w0gCCH6o3s]

154. Robert J. Marks, "Prediction, AI and Machine Learning" SMART Hub (briefing of DOD and Industry), Arlington VA, February 5, 2025.

155. Robert J. Marks "Non-Computable You" University of North Texas, Denton, TX, Ratio Christi, February 10, 2025. [Link, Flyer, Thanks!]

156. Robert J. Marks "The challenges of AI" HS & Adult Learners, Marsha Michaelis, Kettle Falls, WA, February 13, 2025. [Zoom Video]

157. Robert J. Marks "AI Implications for Business" Technology Entrepreneurship, Baylor Hankamer School of Business, February 24, 2025.

158. Memphis University School, Memphis, Tennessee. [Instagram • Instagram cache • Facebook • Facebook cache • MUS • MUS cache •, Audience selfie.]

    ◇ Robert J. Marks, "Non-Computable You: What You Do AI Never Will" February 27, 2025. [YouTube, video cache]

    ◇ Robert J. Marks, "Is Your Mind the Same as Your Brain? Are You a Computer Made Out of Meat?" February 28, 2025. [Instagram, cache.]

159. NSF Spectrum Sizzle Summer Workshop for Undergraduates, Baylor University, June 2-4, 2025. [Link.]

    ◇ "Answering the Why Question: God & Science" (Yang Li, Christian Reyes, Robert J. Marks panel moderator)

    ◇ "Graduate School?" Robert J. Marks panel moderator

160. Robert J. Marks "Exploring the Mind-Brain Relationship" North Creek Presbyterian Church, Mill Creek, WA, June 18, 2025. [flyer.]

161. Robert J. Marks "Can AI Replace Humans?" Discovery Summer Seminar, Glen Eyrie Castle & Conference Center, Colorado Springs, June 27, 2025.

162. Robert J. Marks, Mongkok Baptist Church, Hong Kong, China. [Flyer, Flyer (Chinese), Abstract]

    ◇ "Non-Computable You: What You Do AI Never Will" July 8, 2025.

    ◇ "Is Your Soul Contained in Your Brain? Are You a Super- Computer Made Out of Meat?" July 9, 2025.

163. Robert J. Marks "Non-Computable You," International Conference on Machine Learning and Cybernetics (ICMLC), Bali, Indonesia, 12-15 July, 2025. Keynote talk.

164. Robert J. Marks "Is Your Mind the Same as Your Brain? Or are you more than a computer?" UT Dallas, Reasons to Believe, September 9, 2025.

165. Robert J. Marks "Non-Computable You" Center for Professional Selling, Baylor Hankamer School of Business, Friday, September 19, 2025.

166. Robert J. Marks "Is Your Mind the Same as Your Brain? Are You a Computer Made Out of Meat?" Ratio Christi, Ellison Chapel, Baylor University, Tuesday. September 30, 2025.

167. Robert J. Marks, World Economic Catholic Forum, Exploring moral aspects of Artificial Intelligence in the 21st Century, Zurich, 15-16 Nov 2025. [Link.]

7 Research Grants & Contracts

1. "Lensless space-variant processing," Graduate School Research Fund (1978-79), $5,824.

2. "Coherent optical extrapolation of two-dimensional bandlimited signals," National Science Foundation (1979-81), $32,000.

3. "Coherent optical interpolation of continuously sampled images," Graduate School Research Fund (1982-83), $6,596.

4. AT&T Research Equipment Grant (1985)...with L.E. Atlas, $62.000. "Analysis and application of neural nets," Boeing High Technology Center (1986-88).with L.E. Atlas-$110,000.

5. 'Neural network computer architectures," The Washington Technology Center (1987-89) with L.E. Atlas.

6. "Increasing the accuracy of inexact processors," SDI/IST through ONR & the Optical Systems Lab at Texas Tech University and WTC (1988-1989), $230,000.

7. "Power Systems Stability and Security Assessments Using Artificial Neural Networks" NSF (1988-1990), Project Coordinator, co P.I. with M.A. El-Sharkawi, M. Damborg & L.E. Atlas-$337,500.

8. "Neurocomputers," The Washington Technology Center (1989-91) with L.E. Atlas, $150,000.

9. "Electric load forecasting using artificial neural networks," Puget Sound Power and Light Company (1989-90) with M. El-Sharkawi, L.E. Atlas & M. Damborg-$115.000.

10. "Advanced Time-Frequency Displays," Boeing Commercial Airplane Company, September 1, 1989 through October 30, 1990, co-P.I. with Les Atlas-$128,000.

11. "Neural Network & Learning Systems," The Washington Technology Center (1991-92) with L.E. Atlas, $150,000.

12. "Solution of Inverse Problems in Electromagnetic and Optical Propagation Using Artificial Neural Networks," National Science Foundation, February 15, 1991 to February 14, 1993, (with Jenq-Neng Hwang, Leung Tsang and Akira Ishimaru),-$151,000.

13. "Advanced Neural Network Paradigms and Applications," Boeing Computer Services, January 1, 1991 to December 31, 1993-$90,000.

14. "Simulation Studies on Biomagnetic Detection of Bundle of His Signal and Its Application to the Cardiac Syncope Problem," General Electric, Schenectady NY, January 1, 1992 to May 31, 1992, co Principal Investigator (Lee Huntsman, Project Coordinator; with co PI's G.H. Bardy, C. Ramon, S.Oh)-$40,000.

15. "Biomagnetic Imaging of Three-Dimensional Current Distribution," National Science Foundation, Stage 1: 6-1-92 to 5-31-95. (co PI with C. Ramon)-$497,080.

16. Ibid. Stage 2: $104,358, 6-1-94 to 2 29, 1996

17. "Detection of Short Turns in Turbo Alternators," Southern California Edison, August 1, 1992 to July 31, 1993, (co Principal Investigator M.A. El-Sharkawi)-$93,765.

18. "S&P 500 Trading Using Spectrally Trained Neural Networks," Washington Technology Center, January 1993 to June 1993, $25,000.

19. "Tune & Prune Adaptation of Fuzzy Inference Engines," Royalty Research Fund, University of Washington, June 15, 1993 to September 1994, $14,000.

20. "Localization of Short Turns in Turbo Alternators," Southern California Edison, August 1, 1992 to July 31, 1993, (co Principal Investigator M.A. El-Sharkawi)-$94,000.

21. 'Financial Neural Networks," Washington Technology Center, August 1993 to March 1994, $10,000.

22. "Detection of Short Turns in Operating Turbo Alternators," Southern California Edison, August 1, 1993 to August 31, 1994, (co Principal Investigator M.A. El-Sharkawi)-$93,000.

23. "Advanced Neural Network Paradigms and Applications," Boeing Computer Services, January 1, 1994 to December 31, 1996-$90,000.

24. "Wavelet Based Neural Networks," Washington Technology Center, January 1995 to June 1995, $7,000.

25. "Genetic Algorithm Carbon Brake Analysis," Boeing Airplane Company, September 1994 to December 1994, $23,000.

26. "Under-Load Evaluation of Breaker Contacts Condition," National Science Foundation, GOALI Grant No.ECS-9634600, September 1, 1996 to August 31, 1997, (Co-PI with Mohamed A. El-Sharkawi in collaboration with Isador Kerszenbaum, Southern California Edison), $50,000.

27. "Intelligent Systems Applications for Transmissions and Distribution Systems," (Co-PI with Mohamed A. El-Sharkawi), Southern California Edison, 1996-97, $79,530.

28. "Advanced Neural Network Paradigms and Applications," Boeing Computer Services, January 1, 1996 to December 31, 1997-$23,000;
    - Ibid. 1997-98 $23,000;
    - Ibid. 1998-99 $23,000.

29. "UG Cable Replacement," Southern California Edison, 1997 - $50,000 (Co-PI with Mohamed A. El-Sharkawi).

30. "Twin signal signature sensing: application to shorted winding monitoring, detection and localization," NSF/EPRI, 1995-1999, (co Principal Investigator M.A. El-Sharkawi), $398,000.

31. "Environmentally Adaptive Sonar," Office of Naval Research/ Applied Physics Laboratory, September 1997 to September 1999 - $90,000 (Co-PI with Mohamed A. El-Sharkawi).

32. "A New Paradigm for Designing Radiation Beams for Cancer Treatment," The Whitaker Foundation, January 1998 to December 2000 - $210,000 (Co-PI with Paul Cho, Department of Radiation Oncology, UW School of Medicine.)

33. "Automatic Decision Aggregation," Boeing Defense, Nov 1997 through May 1998, $26,000.

34. 'Automatic Environmentally Adaptive Sonar Control," Office of Naval Research, 1998-2001, - $333,000 (Co-PI with M.A. El-Sharkawi).

35. "Assessment of prostate seed implants NIH, October 1, 2001 to Dec 31, 2002 (Co-PI with Paul Cho, Department of Radiation Oncology, UW School of Medicine.), NIH, $212,000.

36. "Sensor Coverage for Vehicle Health and Safety Systems," Boeing Defense, June 2001 to Dec. 2001 (PI $25,000).

37. "Intelligent Sensor and Satellite Networks for Earth Science & Exploration," JPL & NASA Sept 1, 2000 to Dec 31, 2002 (co PI with M.A. El-Sharkawi, subcontract from JPL for $250,900.)

38. "Model-Based Complex Data Set Correlation Boeing Airplane Company, Jan 16, 2001 to Jan 16, 2002, (PI $42,099)

39. "Physiologic Development of Speech Production," NIH, Sept 1, 2001 to Sept 2006 (PI. Christopher A. Moore, Speech & Hearing Sciences. R.J. Marks II is a co-investigator, Grant Total is $2,861,174.).

40. "Reconstruction of Missing Sensor Readings on Jet Aircraft Engines," Boeing Phantom Works, September 2001 to May 2002 ($32,000).

41. "Missing Sensor Data Restoration: Computationally Intelligent Discovery of Reading Dependencies," NSF, Sept 16, 2001 to Aug 31, 2004, (co-PI with M.A. El-Sharkawi, $588,898).
    ◦ Ibid. Undergraduate support addendum, $12,000.

42. "Intraoperative Dose Optimization for Prostate Brachytherapy," ARO, co-PI with Paul Cho and Y. Kim. $550,000, 2003-06 (3 years).

43. "Application of computationally intelligence techniques to long term multistatic sonar systems" (ONR - EE/APL, 3 years, Marks Co-PI) $960k total.

44. "Collective Behavior of Biological Swarms: System Modeling, Analysis, and Algorithmic for Distributed Dynamic Resource Allocation Problems," JPL Director's Research and Development Fund, Jet Propulsion Laboratory, Co-PIs are Payman Arabshahi (JPL), R.J. Marks II (UW), Michael Dickinson (Cal Tech) and Alcherio Martinoli (Cal Tech), 2003-04, $200,000.

45. "Reconstruction of Missing Sensor Readings on Jet Aircraft Engines: Phase II," Boeing Phantom Works, April 2003 to July 2003, ($32,000),

46. "Supplemental RA Support," Applied Physics Lab, University of Washington, Spring Quarter, 2003, ($11,138).

47. "Real-Time Distributed Control Networks: Dynamic Bandwidth Allocation via Adaptive Sampling" (with Ian Gravagne and John Davis, Baylor University) NSF, 3 years, $311k.

48. Ibid. Supplemental REU funds obtained for supporting summer undergraduate research ($15,000).

49. "Mu-Dynamics on Time Scales: Adaptive Time Domains for Dynamical Systems," (with Ian Gravagne and John Davis, Baylor University) NSF, 3 years, $143k.

50. "Multi-Agent System Based Intelligent Distributed Control System for Power Plants," (with Kwang Y. Lee, P.I. and Ian Gravagne), 2008–2011, $132k.

51. "Inversion of Swarm Dynamics for Underwater Tactical Applications," Office of Naval Research, 2009–2011, $270,000 (with Benjamin B, Thompson, ARL Penn State)

52. "Joint Optimization of Radar Power Amplifier and Waveforms for Reduced Spectral Spreading," ARL (Chales Baylis, P.I.) $62,000.

53. "Tactical Task Allocation and Resource Management in Nonstationary Swarm Dynamics," Office of Naval Research, 2012–2013, $270,000 (with Benjamin B, Thompson, ARL Penn State)

54. "Evaluation of Airport Wireless Interference Assessment and Comparison with University Campus Wireless Coexistence," TEM Consulting, (Charles Baylis, P.I., R.J. Marks co P.I.) $2000, Sept 19, 2013 to Sept 20, 2014.

55. "EARS: Joint Circuit and Waveform Optimization for Cognitive, Spectrally Confined Radar Transmission ," National Science Foundation, (Charles Baylis, P.I., R.J. Marks co P.I.) $400,000. October 1, 2013 to September 30, 2017.

56. Ibid. Supplemental $16,000 Research Experiences for Undergraduates (REU) awarded 2015. Supplemental $16,000 Research REU awarded 2016.

57. "Reconfigurable Power Amplifier and Filter Technology for Real-Time Adaptive Next Generation Radar," Army Research Laboratory, (Charles Baylis, P.I., R.J. Marks co P.I.) $1,138,455, May 2016 to June 2021

58. "Investigation of Wideband Low-Noise Amplifier Linearity in Receiver Interference Scenarios," Raytheon, January 1, 2016 August 31, 2016, (Charles Baylis, P.I., R.J. Marks co P.I.) $9,972 (2016-2017).

59. "Business Intelligence: Application to Influence Metrics," Influence Networks, June 15, 2017 through July 31, 2017, $16,115, Robert J. Marks II (PI)

60. "Testing Theories of Entrepreneurship: Agent and Swarm Based Models of Entrepreneurial Behavior and Outcomes." June 2017 - December 2017 (with Steve Bradley) Bough Grant, $3500.

61. "Artificial and Natural Intelligence: Identifying & Applying the Difference," Discovery Institute, 2018-2021, $288,790, Robert J. Marks II (PI)
    - Ibid. 2021-2022, $60,790.
    - Ibid. 2022-2023, $32,000.
    - Ibid. 2023-2024, $32,000.
    - Ibid. 2024-2025, $30,000.

62. "Software Defined Radar Option, Reconfigurable Power Amplifier and Filter Technology for Real-Time Adaptive Next Generation Radar" Army Research Laboratory, Dates of Funding: July 1, 2018 - June 30, 2020, $265,000, Charles Baylis (PI), Robert J. Marks II (Co-PI)

63. "Real-Time Optimization of Fundamental and Harmonic Load Impedances, Source Impedance, Input Power, and Bias," Sponsor: Naval Surface Warfare Center - Crane Division, Duration: July 2019 December 2020, Baylor Funding (Base Period Only):

$12,300, Other Collaborators: Purdue University, University of Toledo, Charles Baylis (PI), Robert J. Marks II (Co-PI)

64. "Wideband and High-Power Reconfigurable Plasma Matching Network for Compact and Efficient Phased Array Emitters," Sponsor: Office of Naval Research Electronic Warfare Program, Sponsor: Purdue University, Duration: July 2019 July 2022 (two competitive options of 12 months and 18 months possible), $274,000, Other Collaborators: Purdue University (lead), University of Toledo, University of Illinois, Charles Baylis (PI), Robert J. Marks II (Co-PI)

65. "Metacognition-Guided Real-Time Adaptable Circuit, Waveform, and Array Optimizations for Radar and Electronic Warfare" Army Research Office, Dates of Funding: September 2020 - September 2021, $350,000.00, Charles Baylis (PI), Robert J. Marks II (Co-PI)

66. "SII Planning: Developing a National Spectrum Innovation Initiative (SII) Center for Adaptive and Reconfigurable Wireless Technology" National Science Foundation, Dates of Funding: August 2020 - July 2021, $299,996, Charles Baylis (PI), Robert J. Marks II (Co-PI)

67. "Reconfigurable Array Radar Techniques for Real-Time Spectrum Sharing" Naval Research Laboratory (prime)/KeyW Corporation, $40,000, April 2020 - March 2021, Charles Baylis (PI), Robert J. Marks II (Co-PI)

68. "SWIFT: LARGE: Broker-Controlled Coexistence of 5G Wireless Artifically Intelligent Power Amplifier Array (AIPAA) with Passive Weather Radiometers" National Science Foundation, Dates of Funding: January 1, 2021 - December 31, 2023, $421,666, Charles Baylis (PI), Robert J. Marks II (Co-PI)

69. "Reconfigurable Power Amplifier and Filter Technology for Real-Time Adaptive Next Generation Radar," $1,448,679, 04/13/2016 to 12/31/2022. Charles Baylis (PI), Robert J. Marks II (Co-PI)

70. "Center for Standards and Ethics in Artificial Intelligence (CSEAI)" National Science Foundation, Awarded 2022. Pablo Rivas (PI) with Robert J. Marks, Greg Hamerly, Tomas Cerny and Liang Dong (co-PI's). February 1, 2022 to December 31, 2022 ($58,194 including cost sharing).
    ◦ Ibid. June 3, 2021 to Jan 31, 2023, $19,996.00.

71. "Intelligent Automated Amplifier Design and Measurement Optimization," Keysight Technologies, Nov. 2022 to July 2023, $120,000. Charles Baylis (PI), Robert J. Marks II (Co-PI).

72. "Conference: Undergraduate Spectrum Workshop," National Science Foundation, $99,999.00. August 2022 to July 2023. Charles Baylis (PI), Robert J. Marks II (Co-PI).

73. Baylis, C. P. (Principal Investigator, 25), Dong, L. (Co-PI, 25), Li, Y. (Co-PI, 25), Marks, R. J. (Co-PI, 25),"SMART Hub: Hub for Spectrum Management with

Adaptive and Reconfigurable Technology," Federal Pass-Thru, Huntington Ingalls Industries, (May 20, 2024 - May 19, 2025)

74. Baylis, C. P. (Principal Investigator, 67), Marks, R. J. (Co-PI, 33), "Metacognition-Guided Real-Time Adaptable Circuit, Waveform, and Array Optimizations for Radar and Electronic Warfare.," Federal, US Army Research Laboratory, (September 15, 2020 - September 14, 2025) Amount Awarded: $1,476,621.00 Amount Funded: $1,476,621.00 Expenditure

75. Baylis, C. P. (Principal Investigator, 67), Marks, R. J. (Co-PI, 33), "Collaborative Research: SWIFT: LARGE: Broker-Controlled Coexistence of 5G Wireless Artificially Intelligent Power Amplifier Array (AIPAA) with Passive Weather Radiometers," Federal, National Science Foundation, (January 1, 2021 - December 31, 2024) Amount Awarded: $533,899.00 Amount Funded: $533,899.00 Expenditure

76. Baylis, C. P. (Principal Investigator, 25), Marks, R. J. (Co-PI, 25), Dong, L. (Co-PI, 25), Li, Y. (Co-PI, 25), "SMART Hub (Hub for Spectrum Management with Adaptive and Reconfigurable Technology)," Proposal, US Army Research Laboratory, (March 24, 2024)

77. Baylis, C. P. (Principal Investigator, 50), Marks, R. J. (Co-PI, 50), "IAC MAC RFP P000045000-002 - Waveform Methodologies (SmartHub)," Proposal, US Army Research Laboratory, (October 7, 2024)

78. Baylis, C. P. (Principal Investigator, 67), Marks, R. J. (Co-PI, 33), "Collaborative Research: NewSpectrum: Semiconductor Plasma Phased Arrays with Integrated System Performance-to-Radiator Mapping," Proposal, National Science Foundation, (May 24, 2024)

8 Courses Taught

8.1 Baylor University

1. EGR 3335, Signals & Systems
2. EGR 5001, Baylor Engineering & Research Seminars
3. ELC 5358, Introduction to Computational Intelligence
4. ELC 5354, Random Signals & Noise
5. ELC 5351, Multidimensional Signal Processing
6. ELC 5370, Introduction to Information Theory

8.2 University of Washington

1. EE 306, Elements of Electrical Engineering
2. EE 310, Electronics Laboratory
3. EE 235, Circuits & Systems I
4. EE 333, Circuits & Systems II
5. EE 335, Linear Systems Analysis I
6. EE 381, Electrophysics I
7. EE 383, Electrophysics II
8. EE 416, Random Signals for Communications and Signal Processing
9. EE 417, Introduction to Communication Theory I
10. EE 418, Introduction to Communication Theory II
11. EE 341, Discrete Time Linear Systems
12. EE 440, Linear Systems Analysis II
13. EE 446, Control Systems Analysis
14. EE 468, Fourier Optics & Holography
15. EE 500, Graduate Seminar
16. EE 505, Introduction to Probability & Random Processes
17. EE 508, Stochastic Processes
18. EE 518, Digital Signal Processing
19. EE 521, Multidimensional Signal Processing
20. EE 522, Shannon Sampling & Interpolation Theory
21. EE 523, Signal Analysis
22. EE 559, Computational Neural Networks
23. EE 579, Advanced Topics in Electromagnetics
24. EE 595, Introduction to Fuzzy Systems
25. EE 595, Advanced Topics in Communication Theory

8.3 Student Comments

Reviews are not taken for every class.

2004

1. Introduction to Computational Intelligence, Spring 2004

   "Your enthusiasm and sense of humor add so much to the class. Baylor is so lucky to have you! "

   "Very enthusiastic. Makes learning the material fun."

2. Random Variables and Stochastic Processes, Fall 2004

   "Very gregarious and jovial about the subject matter Clearly an expert in his field."

   "Colorful, yet demented pictures"

2005

3. Multidimensional Signal Processing, Spring 2005

   "Awesome Professor!"

   "(Marks) is an awesome teacher."

   "His enthusiasm (contributed most)."

   "Incredible knowledge about subject material."

   "His presentations are entertaining. I love him."

2007

4. Random Variables and Stochastic Processes, Fall 2005

   "[Dr. Marks] is always excited about the material."

   "[Dr. Marks] doesn't have problems answering questions asked."

   "Good attitude. Really cared about his students. Give the man a raise."

   "[Dr. Marks shows] humor [and] excitement in the course and the material. He needs a raise."

"[Dr. Marks] makes sure the students learn the material."

5. Signals & Systems, Autumn 2007

"... in my four years at Baylor, I have not taken a course by a better professor. He is a pleasure to learn from, and though his class is hard work, he relates it to the real world and makes it viable and interesting. Would take [another course] from him in a heartbeat."

"Dr. Marks is the best professor I have had at Baylor hands down. He always keeps the class engaging and enjoyable to be in. He goes above and beyond the material of the course to make it more interesting but still manages to clearly explain course material and even makes it seem simple after a while."

"[Dr. Marks is] the best teacher I've had in college."

"[I enjoyed the] humor! It's really easy to stay focused when something funny might happen at any time!"

"Giving examples of how the principles/techniques are used in the real world is amazingly helpful!"

"I don't know if [Dr. Marks] could be more AMAZING."

"Every section [of this class] should be taught by Bob Marks."

"Bob Marks threw in enough relevant and hilarious ancectodes as he lectured that would help hold my attention. This was great because it is easy to lose concentration when dealing with such complex mathematics. Also, his review sessions saved me. They helped a lot!"

"[Bob Marks] is great!"

"You are stimulated to really want to learn the material whenever Dr. Marks is lecturing."

"[Dr. Marks] relates the material to the real world. It helps to know how and why things work and when to use them."

"[Dr. Marks'] passion for the subject was great. [His] sense of humor was fantastic and lightened the mood of what could have been a very boring class"

"[Dr. Marks gave a] flawless performance."

"Marks is awesome."

"I think this class was great."

"[Dr. Marks] is so funny!!!"

"Awesome guy; very kind and keeps the class interesting for an otherwise boring course. Very dedicated to the students and helping them learn the material.... [He had] good side stories that contribute to understanding of material. Had lots of review sessions and was very flexible; was best part of class."

"[Dr. Marks] was great, [I] loved this class."

"Doctor Marks was very interested in the subject and has such a vast understanding of the subject that he had no trouble explaining himself in different ways. The help sessions in the evening are a great help."

"Dr. Marks is] absolutely amazing. He has a good understanding of the material so he can really break it down and explain things. He was so willing to help when we needed it no matter the amount of time or effort needed."

"[Dr. Marks was] very personable and nice. A fun teacher... Evening sessions were great."

"[Dr. Marks] cared about the students and made the classroom more of a real life atmosphere as opposed to just teaching from the book."

"email: Dr. Marks, I just wanted to tell you how much I enjoyed meeting you and having you as my teacher this semester. I really enjoyed the passion that you have for the material you were teaching and also that you would talk to students like they were equals. I really appreciated that. Your sense of humor and comedic timing made what could have been a dull class very enjoyable to come to. I also liked the little tips for life that you would sneak into a lecture as well. Thank you for an enjoyable semester. "

2008

6. Random Variables and Stochastic Processes, Fall 2008

"[Dr. Marks has] love for material, enthusiasm."

"[I enjoyed the] enthusiasm and presentations."

"I really enjoyed the not-so-structured aspect of the class."

2010

7. Introduction to Computational Intelligence, Fall 2010

   "[Dr. Marks] was enjoyable to listen to and made learnng the material a good experience."

   "[I enjoyed the] humor. Applicable stories to illustrate how this stuff is used in industry."

   "[Dr. Marks has] great enthusiasm for teaching and [the] material in [the] class. [He] acively engages students in otherr topic to stimulate discussion which allows for a more interesting lecture."

   "[I enjoyed] His enthusiasm. His knowledge of the material."

   "He was very enthusiastic with the course material. It was very easy to tell that he has great passion for his work and wants others to share it with."

2011

8. Multidimensional Signal Processing, Spring 2011

   "[Dr. Marks] is an expert!."

   "Dr. Marks's lectures are always interested."

   "He's awesome!"

   "Dr. Marks is fun to talk to and interact with. He answers questions well and obviously love what he teaches."

   "Tell me more about philosophy!"

   "He's awesome. Humor. Expert in his field of study."

   "[Dr. Marks should spend] less time critiquing liberals, atheists etc."

2012

9. Multidimensional Signal Analys

   "He explains the stuff step by step"

   "Learned, humorous, and instructive"

   "Enthusiasm and vivid language."

2013

10. Comp Intell App

    "The instructor is patient, loving, learned, and good at explaining knowledge in an interesting way. So my passion about the class was well stimulated. Also, the instructor is considerate about students' level, so the knowledge would not be quite difficult to digest."

    "The patience he had when I didn't understand a topic, to clarify and help me finally understand things."

    "Humorous"

11. Intro to Information Theory

    "You do a good job of bringing the material into terms that are easier to understand conceptually"

2014

12. Intro Comput'nl Intelligence

    "Dr. Marks is a very interesting person, but I wish more of the class time was dedicated to the material."

    "He always talk about some stories"

    "Good class learned a lot"

    "He is very funny, interesting"

    "His interest in this topic stimulate my inspiration"

    "Class lecture were very interesting with interactive simulations. The in class history of the subject also increased interest in the material."

    "Interest and knowledge of the material"

    "Able to communicate complex or abstract ideas very well. Friendly. His personality always keeps class enjoyable."

    "Thorough understanding of and great insight into the material, strong desire to make material understandable, and informal instruction approach."

13. Multidemensional DSP

"He is humor"

"Dr. Marks is a great man who not only brings great knowledge in with him, but a loving of Christ as well. He is brilliant and understands the complex theory that is prevalent throughout the entire course."

"Dr. Marks' funny and laid back attitude makes material fun that would otherwise be rather dry!"

"The course was cool and some of the lessons had interesting potential."

2015

14. Random Signals and Noise

"humor"

"Writing on the board as he explains the ideas we're learning clearly, and encouraging student participation and questions"

"Dr. Marks is a fantastic man. He is an effective professor because he is brilliant"

"Knowledge of the subject matter."

"Lecture was always very engaging and it was cool to see things come full circle on where certain formulas come from."

"I love the fact that interesting topics that come up in class are explored even when this was not a planned part of lecture!"

"Personally I like his intuitive way of explaining materials also supplied with good examples. Quiz format is good too, except I think there should be more of it."

15. Intro to Information Theory

"Dr. Marks is brilliant and good at explaining to those who are new to the subject"

"He is very interested in and zealous about this topic, and I found that contagious. He made excellent use of a great textbook. His humor livened up the class even more. Being devoted to the class, I enjoyed the concept of presenting the homework I'd done to the whole class. (Though I understand others have a phobia of presenting; I'm just getting out of that.)"

"He has a wealth of knowledge concerning the background of the material. He knows names and dates for practically every theory we discussed in the class. Using this knowledge, he adds in a lot of anecdotes about his own experience or the experience of others to make the theories seem less monotonous."

"His vast knowledge of not only the course material but the history of the material. It is very interesting to hear who and how ideas were discovered in relation to the theory as most classes just work through the math and giving a brief history of the idea puts it into perspective."

"Dr. Marks is really passionate about Information Theory. He is the best!!"

2016

16. Intro Comput'nl Intelligence

"Enjoys the material and takes the time to explain it"

"Dr. Marks is a genuinely kind instructor who has so much incredible knowledge and experience to share. I looked forward to going to this class everyday to learn more from him. He teaches class with examples that make concepts easy to process and most of them are also incredibly entertaining. He is calm, organized, and collected but shows real passion for the material."

"Dr. Marks does his best on trying to keep the class engaged by asking open-ended questions and expecting us to answer."

"His vast understanding of the material in conjunction with his passion for the subject."

"Dr. Marks is a very engaging lecturer. He uses clever analogies to convey complicated"

"Constant interaction/conversation with the audience."

"Does very well to ensure that concepts are clearly understood before moving into the math. Makes sure to keep the "big picture" in mind during lectures. Provides plenty of examples of useful applications of the topics covered."

"Explaining most things very understandably and injecting humor made class easy to follow"

"Knowledge of material, experience in implementation"

"Experience"

"His enthusiasm about the subject matter and his knowledge of it, and how it can be applied to the real world"

"He understood the material very well and used clear examples to explain the concepts in a simple and accurate way"

"Method of lecturing, interaction with students is relaxed but effective. Knowledge of material. Helped pioneer some of the methods, and is very well-informed on the rest."

"I like the the way he explain problems, always relates to something you would know and give a good example of the subject he explains."

"Dr. Marks teaches in more of a conversational tone instead of lecturing. This is helpful because it is relaxing and makes it easier to focus on the concept instead of memorizing the procedures."

17. Multidimensional Signal Analysis

"His obvious passion for the subject is a great motivator in my study of the topics"

"He is very clearly passionate about the material. He keeps class light-hearted, and is always quick to have a somewhat applicable anecdote for a given topic. He has a way of presenting a very difficult concept in a way that makes it seem very approachable."

"Dr. Marks is very invested in the subjects he teaches and knows a great deal about them. He is casual with his instruction in such a way that makes the topics more enjoyable but also sets clear expectations for what will be demanded of us. He is genuine and transparent and a pleasure to learn from."

2017

18. Random Signals and Noise

"Interesting PPT slides and detailed explanation for knowledge helps us to learn more effectively"

"Relating the math to real world problems."

"Dr. Marks is full of surprises and knows so much about literally everything that it's a joy to learn from. He is passionate about the material in his classes and isn't afraid to crack a joke or make light of a homework problem failure"

"He has a very vast depth of knowledge on the subjects at hand. Its apparent he really knows the material at its core."

"I have taken every class from Dr. Marks that I could simply because he was teaching it."

19. Intro to Information Theory

"Very interesting topics"

"His engaging lecture style and his obvious passion for the subject."

"Energy"

"He teaches us how to think and solve a problem, which is more important than learning the knowledges"

"Dr. Marks was very well informed on the material and was able to explain it in a way that the book was not able to. His ability to connect with the students also contributed to a positive and insightful classroom atmosphere."

"Great Teacher! Humorous and Patient"

"His insight and experience in the subject as well as neighboring subjects"

"His engaging attitude, knowledge of the material, and ability to approach the subject from multiple angles"

2018

20. Multidimensional Signal Analysis

"The characteristics that contributed the most were his interest in the material and his experience with the material."

"Dr Marks shows a clear passion for what he does, his stories are some of my favorite parts of his class. He is an amazing lecturer."

21. Intro Comput'nl Intelligence

"The deph [sic] of the explanations [contribute most to his teaching effectiveness"

"Dr. Marks is very interested in the subject and relates the topics to a lot more than just the textbook examples."

"His enthusiasm and passion for the material makes it very easy to get excited about learning more yourself."

2019

22. Random Signals and Noise

> "Dr. Marks has a unique style of presentation that makes class fun and engaging. He definitely knows the class material like the back of his hand which makes asking questions and receiving answers very simple and easy. He definitely cares that his students learn the concepts of the course, and he definitely made me enjoy statistical concepts way more than in my undergraduate stats class."
>
> "He makes his classes very interactive which made asking him good questions very easy. "
>
> "He already is an excellent professor. He can keep up the work on reading his students and understanding their weak areas"

23. Intro to Information Theory

> "The deph of the explanations [contributes most to his effectiveness.]"
>
> "Dr. Marks is very interested in the subject and relates the topics to a lot more than just the textbook examples."
>
> "His enthusiasm and passion for the material makes it very easy to get excited about learning more yourself."
>
> "I wish there was time to cover more material in this course, perhaps offer an Information Theory 2 where some topics can be explored more in depth."

2020

24. Intro Comput'nl Intelligence

> "Dr. Marks does a great job of bringing together many subtopics of computational intelligence while not sacrificing the complexity of each subtopic's contribution"
>
> "[The most valuable aspects of this course was] Participation by presenting your work to the rest of the class, and deep insight on the topics."
>
> "Many times, the class can feel unstructured, but that may be due to Marks' unique style of presentation, which I personally admire."

25. Multidimensional Signal Analysis

"Describe what you found to be the most valuable aspects of this course: An holistic vision of transversal topics that are broadly used in other classes "

"valued the geographical explanations on different topics. They were very insightful and help me a lot with understanding the material."

"The emphasis on intuitive understanding rather than rote memorization of formulations is appreciated."

"Dr. Marks communicates subject matter in a magnificent manner, so that at everything becomes clear. He does not have trouble with reminding students of things they forget or did not initially understand correctly, but understands how to make things understandable. The lectures were recorded and available to watch again!"

2021

26. Random Signals and Noise

"The homeworks are very helpful to understand the applications of the mathy theory. "

"The online recordings available to watch when studying helped me understand the material very well. "

"Thanks Dr. Marks - this class really challenged me and I feel that I learned a lot of useful tools."

2022

27. Intro to Information Theory

"I enjoyed the class discussion and the visual explanations of the topics."

"Dr. Marks does an excellent job at explaining the fundamentals of information theory and how it applies to aspects of everyday engineering problems such as signal processing, statistics, and computer science."

2023

28. Random Signals and Noise

"Dr. Marks's teaching style made the class very engaging and interesting, including interesting facts and background information regarding the mathematical principles being taught."

29. Intro to Information Theory

    "Extremely thought engaging. The course inspires a new way of thinking about the world."

    "I really enjoy Dr. Marks' teaching style, he makes the class interesting in a way most other professors don't, by connecting pretty much every topic to real world stories and applications."

2025

30. Random Signals and Noise

    Describe what you found to be the most valuable aspects of this course:
    "The course content and the way he teaches with notable examples."
    "I found this course pretty valuable to learn about the random signals and noise."

9 Professional Activities

9.1 Organizations

◇ Financial Neural Networks, Chief Technology Officer, 1992-1994.

◇ Multidimensional Systems Corporation, President, 1997-2002.

◇ Arbor Ministries, Seattle, Washington, Board of Directors, Secretary (2002-2012).

◇ Center for Evolutionary Informatics, Board of Directors, President (2008-present).

◇ American Institute for Technology and Science Education (AITSE), Advisory Council, (2009-2013).

◇ Intelligent Education, Advisory Board, (2015-present)

◇ Walter Bradley Center for Natural and Artificial Intelligence, Director & Senior Fellow, 2018-present

9.2 Expert Witness

◇ Neuromedical Systems, Inc (Plaintiff) vs. Neopath (Defendant), United States District Court, Southern District of New York (1997-98) - Decision for the Defendant.

◇ Neopath (Plaintiff) vs Neuromedical Systems, Inc (Defendant) vs., United States District Court, Seattle (1997-98) - for the Plaintiff.

- ◇ Nestor, (Plaintiff) vs. Hecht-Nielsen Corporation Software (Defendant), filed Nov. 25, 1998, in U.S. District Court in Rhode Island.
- ◇ Hecht-Nielsen Corporation Software (Plaintiff) vs. Transaction Systems Architects Inc. and ACI Worldwide Inc. (Defendants), U.S. District Court in San Diego.
- ◇ Ysleta Del Sur Pueblo: Tigua Gaming Agency (Defendant)vs State of Texas (Plaintiff) -for the Defendant

9.3 Consulting

- ◇ Microsoft Corporation, Redmond, WA
- ◇ Boeing Computer Services
- ◇ Boeing Airplane Company
- ◇ Applied Physics Lab, University of Washington
- ◇ APPA Systems Inc., Bellevue, WA
- ◇ Technical Arts Mfg. Co. Inc., Redmond ,WA
- ◇ John Fluke Manufacturing Company Inc., Everett, WA
- ◇ Space Labs, Redmond, WA
- ◇ Lasentec, Bellevue, WA
- ◇ Flow Industries, Kent, WA.
- ◇ Philipp Technologies, Bellevue, WA
- ◇ Multidimensional Systems Corporation, Lynnwood, WA
- ◇ Pacific Gas & Electric
- ◇ American Pioneer Corporation, Ballard
- ◇ Decisions Systems Corporation, Atlanta, GA
- ◇ Inficom Corp, Redmond, WA
- ◇ DARPA, Crystal City, VA
- ◇ Lineage Media and Solutions, Inc. Bellevue, WA

9.4 Interviewed

1991

1. "Jim French interviews Robert J, Marks on KIRO Radio, Seattle, about neural networks, 1991." [YouTube: https://youtu.be/36XmnxePlLE]

9.4.1 2000-2009

2007

"Well-Informed: Dr. Robert Marks and the Evolutionary Informatics Lab - mp3 audio," ID the Future, July 20, 2007[Podcast]

2. "Well-Informed: Dr. Robert Marks and the Evolutionary Informatics Lab" ID the Future, July 20, 2007 [Link, Cache]

3. Casey Luskin, "Baylor University Denies Research Scientisct Adademic Freedom" ID the Future, September 7, 2007 [Link, Cache]

9.4.2 2010-2019

2010

4. "Darwin as the Pinball Wizard: Talking Probability with Robert Marks" ID the Future, March 3, 2010. [Link, Cache]

2011

5. Dr. Tom Woodward, "Interview with Dr. Robert J. Marks," Darwin or Design, January 22, 2011. [Cache, YouTube: https://youtu.be/Yoj9xo0YsOQ]

6. Claire Berlinski, "Bob Marks on Ricochet," June 17, 2011 [YouTubeLink, Video Cache]

2012

7. Donald Wunsch "IEEE CIS History Commitee: Donald C. Wunsch II interviews R.J. Marks II," IEEE History, March 26, 2012. [YouTube Link, Video Cache]

2013

8. Casey Luskin "Darwin as the Pinball Wizard: Talking Probability with Robert J. Marks II," ID the Future, May 19, 2013. [Link, YouTube Link, Video Cache]

2014

9. "Robert Marks: Active Information in Metabiology," ID the Future, May 17, 2014. [YouTube Link, Video Cache]

> "On this episode of ID the Future, listen in as Casey Luskin talks with Dr. Robert Marks about his paper, Active Information in Metabiology,' that was recently published in Bio-Complexity and critiques the ideas of mathematician Gregory Chaitin. Dr. Marks explains metabiology and the significance of active information' for intelligent design."

TouTube Video: "From PODCAST to Expelled: No Intelligence Allowed': Robert J. Marks II" June 8, 2014.

10. "From PODCAST to Expelled: No Intelligence Allowed': Robert J. Marks II," June 8, 2014. [YouTube Link, Video Cache]

2015

11. Sarah Chaffee,"ID Inquiry: Robert Marks on Information" ID the Future, November 2, 2015. [Audio Cache, YouTube Link]

2016

12. Jonathan McLatchie "The Nature of Omniscience: A Conversation with Dr. Robert Marks," Apologetics Academy Podcast, August 27, 2016. [Web Page, YouTube, Video Cache]

2017

13. "The Bob Phillips Show," The Bridge, KTXW Austin, 1120 AM, April 24, 2017. [YouTube Link, Video Cache, YouTube Promo, Promo Video Cache]

14. Julian Charles "Introduction to Evolutionary Informatics: Dr. Robert J. Marks II" The Mind Renewed, May 20, 2017. [Link, Transcript, YouTube Link, Video Cache, YouTube Raw Link, Raw Video Cache.]

15. Janet Mefford Today "A.I. Hype & Limitations with guest Robert J. Marks", American Family Radio June 22, 2017. [YouTube Link, Video Cache.]

16. "From PODCAST to 'Expelled: No Intelligence Allowed' " published June 23, 2017 YouTube Link, Video Cache.]

17. Point of View with Kerby Anderson. "Robert J. Marks speaks on 'Are Supercomputers On The Verge Of Becoming Our Overlords?'," June 26, 2017. [YouTube, Video Cache.]

18. The Remnant Road "RAGING AGAINST THE MACHINES with guest Robert J. Marks" June 26, 2017 YouTube Link, Video Cache.]

19. Mark Cope "The Going Home Show" (Newstalk 102.3 KXYL) with guest R.J. Marks, June 27, 2017. [YouTube Link, Video Cache.]

20. "Vocal Point: Jerry Newcombe [Dr. James Kennedy Ministries] interviews Dr. Robert Marks about AI hype," For God & Country, June 29, 2017. [Podcast Audio, YouTube Link, Video Cache.]

21. Reb Crother, "Math, Computers, and Evolution: Robert Marks on Searches and Artificial Intelligence, Part 1, Evolution News & Science, July 10, 2017. [Link, Cache, Audio, YouTube Link, Video Cache.]

    > "On a new episode of ID the Future, CSC Director of Communications Rob Crowther talks with Robert Marks, Distinguished Professor of Electrical and Computer Engineering at Baylor University, about Marks' new book, Introduction to Evolutionary Informatics, which makes an important but esoteric-sounding field accessible to the general reader.
    >
    > "Dr. Marks talks about how he and William Dembski originally connected as researchers, and began working on the subject in 2007, how intelligent design can inform thinking on artificial intelligence, and what a search for a search' means in evolutionary terms"

22. Doug Thorpe & Dr. Andrew Wyant " 'Dr. Robert Marks, Origins, Evolution and Information' on God Talk," July 10, 2017. [Audio, YouTube Link, Video Cache.]

23. Terry Lowry, "ARE SUPER COMPUTERS ON THE VERGE OF BECOMING OUR OVERLORDS?," The What's Up Radio Program!, July 20, 2017. [Audio Part 1, Audio Part 2, Cache Audio Part 1. Cache Audio Part 2, YouTube Link, Video Cache.]

24. Robert Crowther "Why Artificial Intelligence Will Never Replace Humanity," December 18, 2017. [Podcast, YouTube Link, Video Cache.]

    > "On this episode of ID The Future, Robert Crowther talks with Dr. Robert Marks, Distinguished Professor of Electrical and Computer Engineering at Baylor University and author of Introduction to Evolutionary Informatics, about artificial intelligence and its limits. From the jump they delve into what artificial intelligence and computers will never be able to do, that is non-algorithmic tasks, and what examples of those look like such as creativity and consciousness. Marks goes over the popular tests for consciousness (Turing Test & Lovelace Test) and explains why computers still have not passed it and never will."

2018

25. Robert Crowther "The Dangers, Limits and Promise of Artificial Intelligence," ID the Future, January 8, 2018. [Link, Cache, YouTube Link, Video Cache.]

    > "On this episode of ID The Future, Robert Crowther explores the dangers and potential of artificial intelligence with Dr. Robert Marks, Distinguished Professor of Electrical and Computer Engineering at Baylor University and

co-author of Introduction to Evolutionary Informatics. Marks uses John Searle's Chinese Room' analogy to explain why computers do not have understanding and never will. At the same time, Marks predicts that continuing advances in technology will further augment our abilities."

26. "Don't Raise the White Flag to Our AI Overlords Just Yet." ID the Future, January 22, 2018. [Link, Cache, YouTube Link, Video Cache.]

    "On this episode of ID The Future, computer engineer Robert Marks, coauthor of Introduction to Evolutionary Informatics, considers the apocalyptic danger portrayed in The Terminator movies and discussed in all seriousness by some prominent scientists and technologiststhe threat of artificial intelligence one day taking over the world. Yes, computing power doubles every couple of years or so, but Dr. Marks insists that a qualitative gulf separates humans from computers, a difference that no amount of computing power can ever overcome. Listen in to learn what it is."

27. "The Limits of Computation," Great Minds with Michael Medved, November 29, 2018. [Link, Video Cache, YouTube Link, Video Cache.]

    "Addressing one of today's most acclaimed technological frontiers, Michael Medved and professor of electrical and computer engineering Robert Marks discuss the limits of artificial intelligence. They begin with definitions - What is a computer? What is an algorithm? - before tackling some pervasive media myths. Can a computer innovate or only imitate? Can computers now really do anything different from the Turing Machine, devised as a model by Alan Turing in the 1930s? Could a computer be programmed to interact with humans like the sinister HAL 9000 in 2001: A Space Odyssey? The answer is yes, says Bob Marks, and whatever flaws such a machine displayed would be the faults inadvertently woven into it by its human programmers."

    - ◇ 01:30 — Dystopian science fiction movies and the greatest threat to humanity
    - ◇ 02:30 — The launch of the Bradley Center and Dr. Robert Marks
    - ◇ 03:20 — What is a computer? Hidden Figures and human computers
    - ◇ 03:50 — The best analogy for an algorithm
    - ◇ 04:46 — Computational Algorithmic, stepwise code
    - ◇ 05:24 — Alan Turing and the dawn of modern day computers
    - ◇ 06:02 — What was the big breakthrough of the universal Turing machine?
    - ◇ 07:00 — Can computers create something out of nothing?
    - ◇ 07:50 — Can computers compose music or write plays?
    - ◇ 09:00 — Creativity beyond programming, interpolation versus extrapolation
    - ◇ 11:00 — The limits of computing and thinking outside of the box
    - ◇ 13:00 — Watson, chess, Jeopardy, and AlphaGo

- ◇ 14:05 — John Searle and the "Chinese Room Argument
- ◇ 15:00 — Is there reason to worry about the ascendancy of AI, the singularity
- ◇ 16:15 — Programming feelings, the "creep factor" of sex robots, Spielberg's A.I.
- ◇ 17:28 — The power of "seductive optics" as a crutch for primitive AI
- ◇ 18:15 — Constructing a definitive test for creativity

2019

28. "Animals, Computers, and Distinctly Human Intelligence," Great Minds with Michael Medved, January 17, 2019. [Web Page Link, Audio Cache, Youtube: https://youtu.be/5T6IzeZub0, Video Cache.] [Web Page Link, Cache, YouTube Link, Video Cache.]

    > "In a wide-ranging conversation, Robert Marks and Michael Medved tackle questions like what it means for something to be not just unknown but unknowable.' "

    - ◇ 00:00 — An opportunity to visit Israel from archaeology to high tech with Michael Medved, Stephen Meyer, George Gilder, and Titus Kennedy
    - ◇ 03:25 — Swarm intelligence in nature and deriving algorithms
    - ◇ 04:20 — Mysteries of salmon and Monarch butterfly migrations
    - ◇ 04:40 — What are analogous mysteries in artificial intelligence?
    - ◇ 05:00 — Alan Turing and the astonishing Halting problem
    - ◇ 06:07 — What is the difference between being unknown and being unknowable?
    - ◇ 07:05 — Something unknowable: the potential extent of image compression
    - ◇ 09:55 — What are non-algorithmic distinctive properties of being human?
    - ◇ 0:35 — Can computers age? That is, can they mature?
    - ◇ 12:00 — Soul, spirit, and human uniqueness amongst the animals
    - ◇ 13:30 — Deep learning and inferring from examples
    - ◇ 14:45 — Can computers wonder or pose problems?
    - ◇ 15:15 — Evolutionary computing to design an antenna at NASA
    - ◇ 16:45 — Frankenstein and artificial general intelligence
    - ◇ 17:30 — Unanticipated contingencies and allowing self-driving car casualties
    - ◇ 18:45 — What is the most noteworthy, categorical difference between human and artificial intelligence?

29. "Thinking Outside the Materialist Box," Great Minds with Michael Medved, January 17, 2019. [Web Page, Web Page Cache, YouTube Link, Audio Cache, Video Cache.]

> "Robert Marks speaks with wisdom and humor about artificial intelligence and technology and directs the Walter Bradley Center for Natural and Artificial Intelligence."

- ◇ 01:30 — The Mind Matters podcast, hosted by Robert Marks
- ◇ 02:25 — How would you define materialism, also know as naturalism?
- ◇ 02:55 — The impact of materialistic ideology on the hype surrounding AI
- ◇ 03:05 — How does the impact of materialism on AI relate to Darwinism?
- ◇ 03:50 — The attempt to model or simulate evolution using computers
- ◇ 04:40 — Algorithms such as AVIDA that purportedly simulate evolution
- ◇ 06:28 — Can you upload something like human consciousness?
- ◇ 07:45 — Can a machine have free will?
- ◇ 08:50 — Silicon Valley's vision of our human future as a "planetary zoo"
- ◇ 10:25 — Could a computer answer questions about the existence of extraterrestrials?
- ◇ 11:40 — Results are sometimes unexpected, but computers do what they're told
- ◇ 13:03 — Can a computer know something?
- ◇ 14:10 — The effects of materialistic ideology on the hype that surrounds AI
- ◇ 15:45 — A mistaken assumption of Yuval Harari
- ◇ 16:25 — Can computers be programmed to love? Or care?
- ◇ 18:00 — The importance of averting dangers in developing AI
- ◇ 18:45 — Has anyone attempted to build an evolving computer?

30. "Robert J. Marks: Are There Things About Human Beings That You Cannot Write Code For?" Bradley Center Grand Opening, Dallas Country Club, April 9, 2019. [Web Page Link, Web Page Cache, YouTube Link, Video Cache.]

31. "The ethics of Artificial Intelligence" The World and Everything in It. Interviewed by J.C. Derrick, July 24,2019 [Web Link Cache, [AudioCache.]

32. Intro only to The World & Everything In It, July 29, 2019. [Audio Cache.]

33. Computational Intelligence - Baylor Engineer Dr. Robert Marks August 19, 2019. [[YouTube Link, Video Cache.]

    > "Robert Marks, Ph.D., professor of electrical and computer engineering in Baylor's School of Engineering and Computer Science, discusses his work on the applications of machine intelligence and how technology development impacts sustainability in developing countries."

34. "Computer Engineer Bob Marks Discusses the Perils and Promise of AI," ID the Future, Sept 4, 2019. [Web Page, Web Page Cache, Audio.]

> "... Dr. Robert J. Marks, Distinguished Professor of Electrical and Computer Engineering at Baylor University and former President of the IEEE Neural Networks Council, argues that computer programs cannot be genuinely creative. Computer programs also won't be able to experience consciousness, he says, never mind all the media hype on this point."
>
> "Marks also discusses deep learning and computational neural networks, their promise and limitations. As for quantum computing, it will be dramatically faster but he insists it won't provide a leap into consciousness."

35. Matt McIlwain "AI's Role in Unlocking Human Potential," COSM, Bellevue, WA, October 24, 2019 (With Oren Etzioni CEO, Allen Institute for Artificial Intelligence and Dr. George Montaez.) [Web Page Link.]

36. "Gee-Whiz Tech and AI Reality Part I ," Mind Matters News, Larry L. Linenschmidt, December 12, 2019. [Web Page, Web Page Cache, Audio.]

> "Robert J. Marks talks with Larry L. Linenschmidt of the Hill Country Institute about the nature and limitations of artificial intelligence from a computer science perspective."

37. "The Unexpected and the Myth of Creative Computers," Mind Matters News, Larry L. Linenschmidt, December 19, 2019. [Web Page, Web Page Cache, Audio.]

9.4.3 2020-2029

2020

38. Jim French (KIRO Radio, Seattle), "An AI Flash From the Past," Mind Matters, January 2, 2020. [Web Page, Web Page Cache, Audio.]

> "Robert J. Marks airs one of his older interviews with Jim French on KIRO Radio [Seattle] to show the similarity to today's reporting on artificial intelligence."

39. The Michael Medved Show (Nationally syndicated / MCI Network, Seattle, WA "The Case for Killer Robots: Why America's Military Needs to Continue Development of Lethal AI," Robert J. Marks guest, Hour 2, January 9, 2020 [Web Page, Raw Au [Web Page, Web Page Cache, Raw Audio.]

40. Perry Atkinson on the Dove Network, (Medford, OR [broadcast on cable in OR/CA] [TV]) American Military's Use of Lethal AI, Robert J. Marks guest, Friday, Jan 10, 2020. [video cache.]

41. Kim Komando, "The Kim Komando Show," (Bloomberg / WestStar Multimedia Entertainment, Phoenix, AZ) "Killer Robots," Robert J. Marks guest, Friday, Jan 10, 2020. [YouTube: youtu.be/E1QHQwnaM3k, Video Cache.] [YouTUbe, Video Cache.]

42. Ed Martin, "The Ed Martin Movement," Robert J. Marks guest, KXFN / Salem Radio Network [President, Phyllis Schlafly Eagles], St. Louis, MO, Jan 10, 2020. [Audio, Audio Cache: starts 16:40.]

    > "Robert Marks, author and artificial intelligence expert, tells me about his book Killer Robots: Why America's Military Needs to Continue Development of Lethal AI."

43. Lanny James, "The Lanny James Show: The Case For Killer Robots" Robert J. Marks guest, KMLB/KJLO/KILP/KRVV, Monroe, Louisiana, Jan 10, 2020. [Raw Audio.]

44. The Bill Meyer Show, KMED/KCMD, Medford, OR, January 10, 2020. [Audio, Raw Audio], Audio.]

    > "the case for KILLER ROBOTS. Guest to discuss that is Dr. Robert Marks."

45. "Kevin Wall," KBET, Las Vegas, NV, January 13, 2020 [Web Page, Audio Cache, Raw Audio] [Web Page Cache], Audio, Raw Audio.]

    > "Dr. Robert Marks (Director of the Walter Bradley Center for Natural and Artificial Intelligence at Discovery Institute, and a distinguished professor of electrical and computer engineering at Baylor University) talks about his new book on killer robots."

46. "The Denise Simon Experience: Killer Robots," guest Robert J. Marks, January 13, [Raw Audio.]

47. "The Andy Caudwell Show," guest Robert J. Marks (Killer Robots), KSMA AM, KZSB FM, January 13, 2020. [Web Page Cache, ,Audio.]

48. "Brandon Vogt" guest Robert J. Marks, KKOB, Albuquerque, NM, January 13, 2020.

49. "Talk of the Town with Steve Noxon" guest Robert J. Marks, WATR, Waterbury, CT, January 14, 2020. [Web Page, Raw Audio] [Raw Audio.]

50. John Gormley, guest Robert J. Marks, CKOM/CJME, Saskatchewan, Saskatoon, CANADA, January 14, 2020. [Web Page Cache],

    > "Dr. Robert Marks, director of the Walter Bradley Center for Natural and Artificial Intelligence at Discovery Institute and Distinguished Professor of Electrical and Computer Engineering at Baylor University, takes a less fearful view of militarized AI, arguing that AI is neither good nor bad and those writing, coding, and using the AI systems are responsible for the morality and ethics of its use."

51. "Gary Jeff Walker" guest Robert J. Marks, WLW, Cincinnati, OH, January 14, 2020. [Web Page, Audio Cache (starts at 57:30), Raw Audio] [Audio - Starts at 57:30, Audio Raw.]

52. "Bill Martinez Live" with guest Robert J. Marks, Bloomberg Radio / CRN, Huntington Beach, CA January 15, 2020.

53. Dan Klein with guest Robert J. Marks, WOND, Atlantic City, NJ January 15, 2020.

54. "Steve Gruber, the voice of reason" with guest Robert J. Marks, WJIM, Lansing, MI and syndicated, January 16, 2020.

55. "Melody Barns, Voice of Freedom" with guest Robert J. Marks, WDGJ, Albany, NY, January 17, 2020. [Raw Audio.]

56. "The Simon Conway Show: ROBERT MARKS MAKES A MORAL CASE FOR KILLER ROBOTS" WMT/WHO, Cedar Rapids, IA, January 17, 2020. [Audio, Raw Audio.]

57. "ID Inquiry: Robert Marks on Information," ID The Future, January 17, 2020. [Web Page, Web Page Cache, Audio.]

58. Coast-to-Coast AM: Killer Robots with guest host Ian Punnet, January 17-18, 2020. [Web Page Cache], Audio Cache. The Best of Coast-to-Coast.]

59. "Scott Sloan: With Guest Robert J. Marks" WLW, Cincinnati, OH January 21, 2020. [Audio, Raw Audio.]

60. "Rude Awakening Show with Erik Davis & Rob Dyrdek," WOCM-FM, Ocean City, MD, January 21, 2020. [Web Page, Audio Cache, Raw [Audio, Raw Audio.]

61. "The Lucy Ann Lance Show with guest Robert J. Marks" WLBY, Ann Arbor, MI, January 21, 2020. [Web Page, Raw Audio] [Raw Audio]

62. "Mornings with Dan Rivers" WKBN / iHeart Media, Youngstown, OH, January 21, 2020. [Audio, Raw Audio.]

    > "Robert Marks talks to Dan about his new book Killer Robots: Why America's Military Needs to Continue Development of Lethal AI"

63. "Kirby Nation - Robert J. Marks: The Case for Killer Robots" KVI, Seattle, January 21, 2020. [Web Page, Audio, Raw Audio]

    > "In The Case for Killer Robots: Why America's Military Needs to Continue Development of Lethal AI, artificial intelligence expert Robert J. Marks investigates the potential military use of lethal AI and examines the practical and ethical challenges."

64. Lanny James, "The Lanny James Show: The Case For Killer Robots (interview #2)" Robert J. Marks guest, KMLB/KJLO/KILP/KRVV, Monroe, Louisiana, Jan 23, 2020. [Raw Audio.]

65. "Drivetime Live with Mark Hahn" with guest Robert J. Marks, KSCJ, Sioux City, IA, January 23, 2020. [Raw Audio.]

66. "The Schilling Show" with guest Robert J. Marks, WINA, Charlottesville, VA, January 27, 2020. [Web Page, Audio, Raw Audio.]

67. Brian Thomas, "Robert Marks - The Case for Killer Robots" January 31, 2020. [Web Page, Audio.]

68. "Chosen Generation with Pastor Greg" with guest Robert J. Marks, USA Radio Networks / Nationally syndicated, (KTRB, San Francisco, CA / KYAH, Delta, UT / KDIS / Little Rock, AK / WKLAP, New Port Richey, FL) Bandera, TX, January 31, 2020. [Audio- starts at 24:25]

69. "Nick Digilio" with guest Robert J. Marks on WGN, Chicago, February 4, 2020. [Audio]

    "Dr. Robert J. Marks on 'killer robots' and AI in the military."

70. "Bloomdaddy" WJAS, Pittsbrug, February 6, 2020. [Audio.]

71. "Need To Know with Jeff Angelo' WHO in Des Moines, February 6, 2020. [Audio]

    "30 countries have called for a ban on the development of lethal weapons that utilize artificial intelligence. AI expert Dr. Robert Marks joins Jeff to assert that America SHOULD build killer robots. In fact, Dr. Marks has written a book titled, 'The Case For Killer Robots.' "

72. Bill Edwards with guest Robert J. Marks, WTKS Savanah, GA, February 6, 2020.

73. "The Sergio Show" (Sergio Sanchez) with guest Robert J. Marks, KURV McAllen, TX, February 6, 2020.

74. "The WILS Morning Wake-Up with Dave Akerly" with guest Robert J. Marks, WILS, Lansing MI, February 6, 2020.

75. Jim Bohannon with guest Robert J. Marks, nationally syndicated, February 12, 2020. [Audio.]

76. Charles Heller, Liberty Radio, Guest: Robert J. Marks, March 1, 2020. [Web Page, Audio]

    "Dr. Bob Marks with a wonderfully intelligent take on why we need to maintain the technological edge."

77. "Are our brains downloadable?" Robert J. Marks COSM Interview," YouTube, June 19, 2020. [YouTube Page, Video Cache.]

    "Jay Richards interviews Dr. Robert J. Marks II, Director of the Bradley Center for Natural and Artificial Intelligence, about the meaning and future of artificial intelligence. Marks challenges the notion espoused by Ray Kurzweil and others that our minds are 'downloadable.' "

78. Rob Atkinson and Jackie Whisman "The Case for Killer Robots, With Special Guest Robert Marks," ITIF (Information Technology & Innovation Foundation), August 10, 2020. [Web Page & Transcript, Web Page & Transcript Cache, Audio.]

79. Larry L. Linenschmidt, Hill Country Institute, "ROBERT J. MARKS ON THE LIMITATIONS OF ARTIFICIAL INTELLIGENCE," Mind Matters News, August 27, 2020. [Web Page, Web Page Cache, Audio, Transcript, Transcript Cache.]

80. Jeryn Anthonypillai "Interview with Dr. Robert J. Marks II, " Humans & Science, Sept 20, 2020. [Web Page, Web Page Cache, Transcript, Audio Cache.]

81. "Robert J. Marks on Killer Robots," Mind Matters News, November 19, 2020. [Web Page, Web Page Cache, Transcript, Transcript Cache, Audio, Audio Cache.]

    > "Robert J. Marks discusses AI and the military, autonomous weapons, and his book The Case for Killer Robots with hosts Robert D. Atkinson and Jackie Whisman from the Information Technology & Innovation Foundation (ITIF)"

82. "Robert J. Marks on Information and AI (Part I)," interviewed by Michael Egnor, Mind Matters News, December 3, 2020. [Web Page, Web Page Cache, Audio Cache, Transcript Cache.]

    > "What is information? How is information created? Will artificial intelligence ever be creative? Dr. Michael Egnor discusses information theory, correlations, and creative artificial intelligence with Dr. Robert J. Marks."

83. "ROBERT J. MARKS ON SPECIFIED COMPLEXITY AND MEANINGFUL INFORMATION (PART II)," interviewed by Michael Egnor, Mind Matters News, December 10, 2020. [Web Page, Web Page Cache, Audio Cache, Transcript Cache.]

    > "What is specified complexity? What makes some information more meaningful than other information? How does information theory affect artificial intelligence? Dr. Michael Egnor discusses information theory, artificial intelligence, and mimetic contagion with Dr. Robert J. Marks."

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84. Robert J. Marks, "Robert J. Marks On AI Evolutionary Computing (Part III)," Mind Matters News, January 21, 2021 [Web Page, Web Page Cache, Transcript, Transcript Cache, Audio Cache.]

85. "No Free Lunches for Darwinthe AI Case Against Blind Evolution," ID the Future, February 3, 2021. [Web Page, Web Page Cache, Audio, Audio Cache.]

86. Robert J. Marks, "What you do artificial intelligence never will," First Look: Institute for Principle Studies, San Jose, September 24,2021.

87. Robert J. Marks, "Christian Calculus: Scientists and Their Gods," First Look: Institute for Principle Studies, San Jose, September 25,2021.

88. Robert J. Marks, "A.I. Q&A Panel (with Daniel Castro & Dr. Ciro M. Lopez) First Look: Institute for Principle Studies, San Jose, September 25,2021.

89. "Talking with Robert Marks, Director of the Walter Bradley Center for Natural & Artificial Intelligence (Splash page), AI & Faith, aiandfaith.org, October 18, 2021 [Web Page] [Web Page, Web Page Cache.]

90. "DEFINE INFORMATION BEFORE YOU TALK ABOUT IT: EGNOR INTERVIEWS MARKS," Mind Matters News, October 20, 2021. [Web Page, Web Page Cache, Transcript, Transcript Cache, Audio, Audio Cache.]

91. Gretchen Huizinga "What Role Should Christians Take in Shaping AI? with Robert J. Marks," Beatrice Institute, December 29, 2021 [Web Page, Transcript, Transcript Cache, Audio Cache.] [Web Page, Web Page Cache, Transcript, Transcript Cache, Audio Cache.]

2022

92. "Robert Marks COSM 2021 Interview," with Jay Richards, released April 11, 2022. [YouTube, Video Cache.]

93. "Non-Computable You (One Minute Trailer)," Discovery, June 22, 2022, [YouTube, Video Cache.]

94. "The Simon Conway Show," WHO, Cedar Rapids, IA, June 23, 2022. [Audio Cache.]

95. "The Chuck & Julie Show: Non-Computable You," BBS Radio / podcast, Denver, CO, June 27 2022. [Audio Cache.]

96. Perry Atkinson, "The Future of Artificial Intelligence," The Dove TV Network, June 28, 2022. [Web Page & Video, Web Page Cache.]

97. "The Bill Meyer Show," Non-Computable You, KMED / KCMD, Medford, OR, June 28, 2022. [Audio Cache]

98. "Author Robert Marks discusses why we will never be replaced by robots," Morning News w/JT, WERC / Alabama Radio Network, Birmingham, AL, June 27, 2022. [Audio Cache.]

99. "KSAL Morning News w/Jeff Garretson: Non-Computable You," KSAL, Salina, KS, June 28, 2022

100. "Phil Parker: Non-Computable You," YR / iHeartMedia, Bismarck, ND, June 28, 2022

101. "The Robert Davi Show: Non-Computable You," CRN Digital Talk Radio, Chatsworth, CA, June 28, 2022.

102. "The Gary Jeff Walker Show: Non-Computable You" KTLK, St. Louis, MO, June 29, 2022.

103. "The Denise Simon Show: Non-Computable You" WDDQ, Valdosta, GA, June 29, 2022. [Audio Cache.] [Audio]

104. "James Lowe, The Jiggy Jaguar Program," Non-Computable You, KJAG, Hutchison, KS, June 30, 2022. [Video, Video Cache.]

105. "The Michael Medved Show," Non-Computable You, June 30, 2022. [Audio Cache.]

106. "Mark Hahn" Non-Computable You, KSCJ, Sioux City, IA, June 30, 2022. [Audio Cache.]

107. "Dr. Robert Marks Can AI predict school shooters? The Cats Roundtable with John Catsimatidis, WABC, New York, NY, July 1. 2022 [Web Page, Audio Cache.] [Web Page, Audio Cache.]

108. "Why Computers Will Never Understand What They are Doing" Mind Matters News, July 7, 2022. [Web Page, Transcipt, Transcript Cache, Audio, Audio Cache.] [Web Page, Web Page Cache, Transcript, Transcript Cache, Audio, Audio Cache.]

    > "Robert J. Marks talks about his new book Non-Computable You: What You Do That Artificial Intelligence Never Will with talk show host Bill Meyer."

109. "Non-Computable You," Lee Elci , www.949newsnow.com/show/lee-elci-show/, July 11, 2022.

110. "Robert J. Marks: Are future humans doomed to be replaced by artificial intelligence?," Non-Computable You. The Power Hour w/David Kreiger, KCXL, Liberty, MO / KTW, Spokane, WA / Rense Radio Network, July 11, 2022. [Audio, Audio Cache.]

111. "Non-Computable You," The Truckers Network Radio Show w/Shelley Johnson, TNCRadio.Live, Houston, TX, July 11, 2022. [Audio Cache.]

112. "Rob Simone: Non-Computable You" Resonance Broadcasting / 104.4 FM London, Resonance FM and syndicated UK radio, July 12, 2022.

113. "Barry Foster: Non-Computable You," WWTK, Sebring, FL, July 13, 2022

114. "Mind Matters Host Robert J. Marks Answers Questions About The 'AI Apocalypse' " 2022 Dallas Conference on Science and Faith, Dallas, TX, January 2022. [YouTube: https://youtu.be/5b3j8XMf9cE. Video Cache] [YouTube, Video Cache.]

    > "Dr. Robert J. Marks II answers audience questions about his lecture, AI Apocalypse: Will Thinking Machines Replace Humans?' "

115. "Dan Klein," Non-Computable You, WOND, Atlantic City, NJ, July 13, 2022

116. "Non-Computable You" C-Span Book Interview, FreedomFest2022, Las Vegas, July 15, 2022. [Web Page, Video Cache.]

117. "The Bill Bunkley Show," Non-Computable You, AM 930 The Answer, FM93.7, West Central Florida, July 19, 2022. [Audio Cache.]

118. "Larry Rifkin," Non-Computable You, www.americatrendspodcast.com, July 21, 2022.

119. "AI Expert: Pilots in TOP GUNMAVERICK are Obsolete; You are Not," Evolution News & Science, July 25, 2022. [Web Page, Web Page Cache, Audio, Audio Cache.]

120. "Andy Caldwell," KZSB, Santa Barbara, CA / News-Press Radio and K-News, San Luis Obispo, CA. Non-Computable You, August 2, 2022.

121. "Dr. Robert Marks on AI," Chosen Generation, Pastor Greg Young, USA Radio Networks / Nationally syndicated, (KTRB, San Francisco, CA / KYAH, Delta, UT / KDIS / Little Rock, AK / WKLAP, New Port Richey, FL) Bandera, TX. August 3, 2022. [Web Page, Audio Cache.] [Web Page, Web Page Cache, Audio Cache.]

122. "Should AI be granted a patent?," Denise Simon, WDDQ, Valdosta, GA, August 3, 2022. [Audio Cache.]

123. "Non-Computable You," Sergio Sanchez, KURV, McAllen, TX August 3, 2022

124. "Why computers and A.I. will NOT replace humanity! (Whew)" Bill Meyer Show, August 4, 2022. [Web Page, Web Page Cache, Audio Cache.]

125. "Non-Computable You: What You Do That Artificial Intelligence Never Will," The Schilling Show, Newsradio WINA, 1070 AM, 98.9 FM, Charlottesville, VA, August 4, 2022. [Web Page, Web Page Cache, Audio, Audio Cache.]

126. "Are We Meat Computers?" WPXI-TV, NBC, The Pittsburgh Cable News Channel, Pittsburgh Now with Chris Moore, Pittsburgh, PA. August 4, 2022 [Web Page Cache]

127. "AI," The Dove Network, Medford, OR [broadcast on cable in OR/CA] [TV] with Perry Atkinson, August 5, 2022. [Video Cache.]

128. "Deprogram," Michael Parker, TNT Radio, August 8, 2022. [Web Page, Web Page Cache, Audio Cache.]

    > "Robert J Marks makes a strong case against AI being granted any ownership of intellectual property."

129. "Artificial Intelligence: Will Machines Take Over?," Science Uprising, Discovery, Robert J. Marks, John Lennox, Selmer Bringsjord and Jay Richards, August 11, 2022. [YouTube, Video Cache.]

> "Are you going to be replaced by a machine? Could a robot really be curious? Or experience love? Could a computer plot evil? Some really smart people think machines will achieve not just human but super human consciousness. Oxford professor of mathematics John Lennox and Baylor University computer engineer Robert J. Marks disagree."

130. "Separating Fact from Fiction about Artificial Intelligence," Science Uprising (Bonus Interview), Discovery, Robert J. Marks, August 11, 2022. [YouTube, Video Cache.]

> "In this bonus interview for the series Science Uprising, computer engineer and artificial intelligence (AI) expert Robert J. Marks addresses the fact and fiction of AI. Marks discusses what AI is and isn't, whether humans will ever be able to upload themselves into a computer, what humans do that AI won't be able to replicate, and why many predictions about AI are wrong."

131. "Intelligence, Transhumanism, and Whether Computers Will Ever Be More Than 'Human' " Humanize with Wesley J. Smith, August 11, 2022. [Web Page, Web Page Cache, Audio Cache.]

> "Wesley's guest, Dr. Robert J Marks II has the answers. An Electrical Engineer, Marks is the Distinguished Professor of Engineering in the Dept. of Engineering and Computer Science at Baylor University. He has worked in the field of artificial neural networks for more than three decades,"

132. "Top Gun, HAL 9000 and Jobs of the Future" Mind Matters News, September 15, 2022. [Web Page, Web Page Cache, Transcript, Transcript Cache, Audio, Audio Cache.]]

> "Walter Bradley Center Director and Mind Matters podcast host Robert J. Marks continues the press tour for his book Non-Computable You: What You Do That Artificial Intelligence Never Will."

133. "School Shooters, the AI Church, and Patents" Mind Matters News, September 22, 2022. [Web Page, Transcipt, Transcript Cache, Audio, Audio Cache.] [Web Page, Web Page Cache, Transcript, Transcript Cache, Audio, Audio Cache.]

> "Walter Bradley Center Director and Mind Matters podcast host Robert J. Marks discusses artificial intelligence and predicting school shootings with John Catsimatidis on The Cats Roundtable."

134. "Can a Computer Be a Person?" interview by Wesley Smith, Mind Matters News, November 10, 2022. [Web Page, Web Page Cache, Transcript, Transcript Cache, Audio, Audio Cache.]

135. "Non-Computable You" Philosophy for the People, Pat Flynn Host, with guest Robert J Marks, December 20, 2022. [Audio Cache.]

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136. "Deprogram with Michael Parker" TNT Radio: 6AM-8AM (BRISBANE) — 8PM-10PM (LONDON) — 3PM-5PM (NEW YORK), January 7, 2023. [Audio Cache.]

137. "Robert Marks on Joseph Arthur & his Technicolor Dreamcast" TNT Radio, January 7, 2023 [Audio Cache.]

138. "IS THE HUMAN BRAIN JUST GPT-3 MADE OF MEAT?" Mind Matters News, January 7, 2023. [Web Page, Web Page Cache, Transcript, Transcript Cache, Audio, Audio Cache.]

139. "Robert J Marks on AI," The Michael Medved Show, January 26, 2023

140. 'IS THE HUMAN BRAIN JUST GPT-3 MADE OF MEAT?" Mind Matters News, January 26, 2023 [Web Page, Transcipt, Transcript Cache, Audio, Audio Cache.] [Web Page, Web Page Cache, Transcript, Transcript Cache, Audio, Audio Cache.]

    > "Robert J. Marks talks with Pat Flynn on the Philosophy for the People podcast. Together they discuss the benefits and limits of the GPT-3, the mind-body problem, and the unique, 'non-computable' qualities of the human person."

141. Robert J. Marks II with Jay Richards at COSM" Cosm 2022, Bellevue WA, Published, February 14, 2023. [YouTube, Video Cache]

142. Steve Paikin "Is ChatGPT Conscious?" (with Melonie Mitchell & Max Tegmark.) The Agenda, February 14, 2023. [YouTube, Video Cache]

    - ◇ 00:00 Intro
    - ◇ 01:54 Does ChatGPT understand?
    - ◇ 07:10 Blake Lemoine: LaMDA is sentient
    - ◇ 14:10 Are we computers made out of meat?
    - ◇ 10.2 Hosted Interviews Curriculum Vitae
    - ◇ 18:13 Will AI wipe out humanity?
    - ◇ 25:54 What humans do that AI never will
    - ◇ 27:00 Can computers feel emotions?
    - ◇ 32:00 Ethics of AI

143. The Laura Ingraham Show, Interview with Robert J Marks, March 1, 2023

    - ◇ Audio Cache,
    - ◇ Facebook "Social media has had incredibly negative effects on our youth" Laura Ingraham Show, March 1, 2023 [Facebook, Facebook Cache]

- ◇ Twitter, "There are non-computable characteristics of human beings" Laura Ingraham Show, March 1, 2023 [Twitter, Twitter Cache]
- ◇ Twitter, "ChatGPT... is being trained to be very left-wing." March 3, 2023 [Twitter, Twitter Cache]

144. "AI: Friend or Foe? A Friendly Discussion" COSM, March 8, 2023, Bellevue, WA [YouTube, Video Cache]

> "A distinguished panel of artificial intelligence (AI) experts, include Blake Lemoine and Robert J. Marks, debates the meaning of artificial intelligence, what the future holds for its application (both positive and negative), and how far AI can be taken in terms of mimicking and even exceeding human capabilities. "

145. Scott Whitlock "AI expert warns of too much 'hype': Humans will still be in charge, won't be 'pets' to new tech" Fox Digital, March 18, 2023 [Link, Cache,]

> "In an interview with Fox News Digital, Marks, the Director of the Walter Bradley Center for Natural & Artificial Intelligence, suggested that the culture gets a lot wrong about the technology. He suggested, "I maintain that all technology goes through what I call a hype curve." "

146. Michael Patrick Shiels "Michigan's Big Show" March 20, 2023. WJIM-AM 1240 Lansing, WBRN 1460 AM & 95.1 FM Big Rapids & Reed City, WTKG 1230 AM Grand Rapids, WKZO 590 AM Kalamazoo, WKBZ 1090 AM Muskegon, WMKT 1270 AM & 102.3 FM Traverse City & Charlevoix & Petoskey, WATT 1240 AM Cadillac, WSJM 94.9 FM Benton Harbor & St. Joseph [Audio Cache]

147. Kennedy Saves the World, Guest Robert J. Marks, Fox Business News, April 5, 2023.

148. "Kennedy Calms Your A.I. Nerves" Kennedy Saves the World, Fox News Podcast, April 12, 2023. [Audio Cache]

> "On this episode, Kennedy sits down with the Director of the Walter Bradley Center for Natural & Artificial Intelligence, Dr. Robert Marks, to prove that artificial intelligence will not destroy the world, contrary to popular belief.
>
> "Dr. Marks explains to listeners that despite the rapidly increasing technology, A.I. bots will never become sentient or understand what their jobs are for. He claims the actual dangers are when bias is programmed into them, but as long as these consequences are known, there should be no threat to the human world inflicted by the artificial world."

149. The Manny Munoz Show, iHeart Media, Miami, 610 WIOD, April 11, 2023

150. Kennedy Saves the World, "These are the two 'big dangers' of artificial intelligence." Guest Robert J. Marks, Fox Business News, April 13, 2023. [Link, Cache, Video Cache.]

151. Caroline Carny, "Bears for Life" Panel discussion with Professors Blair, Hejduk, Marks and Matthews, Baylor University, April 18, 2023.

152. Carry Harrison, "A.I. It lies, it apologizes, It Writes Books & It Wants To Replace You." Rethinking Heroes, March 22, 2023. [Link, Cache, Audio Cache.]

    > "With me is Dr. Robert J. Marks, a pioneer in computing intelligence, who says, "no way." In his new book, Non-Computable You: What You Do That Artificial Intelligence Never Will. In it, Dr. Marks says as impressive as AI is, it doesn't hold a candle to human intelligence... and it never will. "

153. "AI: Is it Good or Bad for Society?," Mind Matters News, May 25, 2023. [Web Page, Web Page Cache, Transcript, Transcript Cache, Audio, Audio Cache.]

    > "Robert J. Marks reminds us that AI is like fire: its benefits and value depend on how wisely (or foolishly) we use it."

154. Cindy Drukier "Artificial Intelligence: Who Is Really in Control" International Reporters Roundtable, NAB, June 10, 2023 [with Rebekah Koffler and Nathan Worcester]. [Link, Web Page Cache, VideoCache.]

    > "Robert J. Marks II, professor of electrical engineering at Baylor University, author, and editor, gives us the fundamentals of AI technology."

155. "Chat GPT: Digital Plagiarism?" International Reporters Roundtable, June 15, 2023. [YouTube: youtu.be/lo2ufXcSjDo, Video Cache.]

156. "Why You Are Non-Computable." Mind Matters News, August 31, 2023. [Web Page, Web Page Cache, Transcript, Transcript Cache, Audio, Audio Cache.]

    > "Usually Robert Marks does the interviewing, but today, the script is flipped. In this episode, we revisit the press tour Dr. Marks went on to promote the seminal ideas of his 2022 book Non-Computable You: What You Do That Artificial Intelligence Never Will"

157. Pat Flynn, "Minding the Brain: Discussing the Groundbreaking New Book on the Mind-Brain Problem" Guests: Brian Krouse, Angus Menuge and Robert J. Marks. Mind Matters News, September 28, 2023. [Web Page, Web Page Cache, Transcript, Transcript Cache, Audio, Audio Cache.]

158. Pat Flynn, "Minding the Brain: Why Science and Philosophy Need Each Other" Guests: Brian Krouse, Angus Menuge and Robert J. Marks. Mind Matters News, October 5, 2023. [Web Page, Web Page Cache, Transcript, Transcript Cache, Audio, Audio Cache.]

    > "In this episode, Pat Flynn interviews Brian Krouse, Angus Menuge, and Robert J. Marks about alternatives to materialism and how scientific exploration leads us to deeper questions that science alone can never answer.d"

159. Pat Flynn, "Minding the Brain: Unraveling the Mystery of Consciousness" Guests: Brian Krouse, Angus Menuge and Robert J. Marks. Mind Matters News, October 12, 2023. [Web Page, Web Page Cache, Transcript, Transcript Cache, Audio, Audio Cache.]

160. The Michael Medved Show "AI Inbreeding Produces Artificial Idiocy" November 20, 2023. [Link, Cache, Audio, Audio Cache]

161. "The future of humanity and artificial intelligence" Oxygen Canada News (Arabic). Rama Botros, Host. December 28, 2023. [YouTube Link, Video Cache]

2024

162. Aaron Flint "ChatGPT and Big Sky, Montana," Billings: KBUL Newstalk 103.3 FM / 970 AM ☐ Bozeman: 95.1 FM / 1450 KM MS ☐ Butte: 94.7 FM KXTL / 1370 AIM ☐ Forsyth: 94.5FM / 112.50 AM KIKC ☐ Fort Peck: 107.1 FM KVCK ☐ Glendive: 103.1 FM KXGN / 1400AM ☐ Great Falls: 102.7 FM KINX ☐ Helena 95.9FM KCAP ☐ Kalispell: 107.9 FM KJJIR / 880AM ☐ Lewistown: 95. 9 FM KQPZ ☐ Livingston: 1340 KPRK ☐ Malta: 100.1 FM KMMR ☐ Missoula: 99.7 FM KMPT / 930AM ☐ Plentywood: 100.1 FM KATQ ☐ Scobey: 95.7FM KCGM ☐ Shelby: 1150AM KSEN ☐ WoIf Point: 92.7FM KVCK. ☐ January 23, 2024.

163. Brendon Fallon "Transhumanism: A Technocratic Race to Transcend HumanityBut at What Cost?" International Reporter's Roundtable, (panelist with Joe Allen & Shasta Justin), February 25, 2024. [Link, Video Cache]

164. "The Quintessential Limits and Possibilities of AI: Three Views" with Walter Myers III (Microsoft) moderator, William Dembski, Robert J Marks, and George Montañez. Posted April 10, 2024. [YouTube Link, Video Cache]

165. Visit to US Congressmen on Capitol Hill in Washington DC. April 11, 2024.

    - ◇ Host: Van Hipp ADI. [Photo Link]
    - ◇ Congressman Pete Sessions, Texas' 17th District. [Photo Link]
    - ◇ Congressman Neal Dunn, Florida's 2nd Congressional District. [Photo Link]
    - ◇ Congressman Gregory F. Murphy, 3rd Congressional District, NC. [Photo Link]

166. Wesley J. Smith, "Robert J. Marks II and Zoltan Istvan on the Promise or Threat of Artificial Intelligence," Humanize, May 5, 2024. [Web Page, Web Page Cache, Audio, Audio Cache.]

167. Casey Luskin, "AI Isn't Going to Destroy the World (or Save It, Either): Revisiting a classic podcast interview with Robert J. Marks" Mind Matters News, May 28, 2024. [Web Page, Web Page Cache, Alternate Web Page, Alternate Web Page Cache, Audio, Audio Cache.]

> "Casey Luskin interviews computer engineering professor Robert J. Marks, head of the Walter Bradley Center for Natural and Artificial Intelligence."

168. Walter Myers III "The Limits and Possibilities of Artificial Intelligence" Robert J. Marks, George Montanez, William Dembski panel, Mind Matters News, May 30, 2024. [Web Page, Web Page Cache, Transcript, Transcript Cache, Audio, Audio Cache.]

169. "Limits of AI" The Mark Davis Show, The Mark Davis Show, 660am The Answer, Dallas, TX, July 27, 2024. [Cache]

170. Wesley J. Smith, "Robert Marks & Zoltan Istvan Debate AI and Transhumanism" Guest: Robert J. Marks & Zoltan Istvan, Mind Matters News, July 18, 2024. {Rebroadcast} [Web Page, Web Page Cache, Audio, Audio Cache.]

171. Mark Davis, "AI's Boundaries and Human Creativity: A Conversation with Dr. Robert J. Marks" Guest: Robert J Marks and Tom Winkler, Mind Matters News, September 12, 2024. {Rebroadcast} [Web Page, Web Page Cache, Transcript, Transcript Cache, Audio, Audio Cache.]

172. Tom Winkler host, "DFW Reading Group with Bob Marks: Non-Computable You" November 23, 2024.

2025

173. Kevin Tankersley, "AI in the Classroom" The Wacoan, pp.100-104, January 2025.

> "'I'm an engineer. l'm not blessed in prose like a journalist is,' he said. 'When I write prose, it's usually kind of clunky. I'll go to ChatGPT and I'll say: Rewrite this. Then I'll put a colon, and I'll put my clunky paragraph. And it rewrites it, and I take it, and I use it and I don't think that that's any problem . I'm using it as a tool in a very good sense. The content is totally mine.' "

174. "The Manny Munoz Show" iHeart Radio, January 21, 2025. [Link, Cache, Audio, Audio Cache]

175. Pat Flynn, "Beyond the Physical: A Panel Discussion on the Nature of the Mind" Guests: Angus Menuge, Robert J. Marks, Brian Krouse, Mind Matters News, January 30, 2025. [Web Page, Web Page Cache, Transcript, Transcript Cache, Audio, Audio Cache.]

176. Bart van den Dikkenberg "AI-chatbot begrijpt evenveel als broodrooster (AI chatbot understands as much as toaster)" Reformatorisch dagblad (Netherlands), February 24, 2025. [Web Page, Web Page cache, Web Page translated cache, pdf]

> Quotes: "ChatGPT relies on syntax: the statistics of words in a sentence. People rely on semantics: the meaning of words."

> "AI is just a tool, like electricity or fire. It can be used good or evil."
>
> "Turning a soul into an algorithm pure nonsense.
>
> "If we remove people's non-algorithmic characteristics, we will get a very boring person."
>
> "Sophia has been granted citizenship in Saudi Arabia. And Homer Simpson has been given citizenship in Winnipeg, Ontario. Both decisions are silly. The difference is that the city of Winnipeg acknowledged that their action was a joke."
>
> "Robots deserve no more human rights than a 3D printer or toaster."
>
> "The better we understand the creation and the possibilities of logic and algorithms, the more we see the glory of God."

177. Wesley J. Smith, "The Unique Properties of the Human Mind" Guests: Angus Menuge, Robert J. Marks and Brian Krouse. Mind Matters News, April 17, 2025. [Web Page, Web Page Cache, Transcript, Transcript Cache, Audio, Audio Cache.]

> "Wesley J. Smith speaks to three contributors of the recent volume Minding the Brain to explore from both philosophical and scientific viewpoints why the mind and brain are distinct things. You'll hear from software engineer Brian R. Krouse, philosopher and author Angus J. Menuge, and Mind Matters News host Robert J. Marks. The trio discuss evidence that suggests the mind has properties not reducible to physical brain activity alone, such as intentionality, abstract reasoning, and free will."

178. Pat Flynn, "Can Evolutionary Processes Take Credit for Human Creativity?" Guests: Dr. Eric Holloway and Professor Robert J. Marks, Mind Matters News, May 1, 2025. [Web Page, Web Page Cache, Transcript, Transcript Cache, Audio, Audio Cache.] Reposted as

> Reposted as "Can Evolutionary Processes Explain Human Creativity?" ID the Future, May 28, 2025l [Web Page, Web Page Cache, Audio, Audio Cache.]

179. Pat Flynn, "AI Language Models: Real Intelligence Or Creative Thievery?" Guests: Eric Holloway, Pat Flynn, and Robert J. Marks. Mind Matters News, May 8, 2025. [Web Page, Web Page Cache, Transcript, Transcript Cache, Audio, Audio Cache.]

180. Pat Flynn "Why Our Minds Are More Than Meat Computers" Guests: Eric Holloway and Robert J. Marks, Mind Matters News, May 15, 2025. [Web Page, Web Page Cache, Transcript, Transcript Cache, Audio, Audio Cache.]

181. Jessica Rosenthal, "Why Some Senate Republicans May Block The One, Big Beautiful Bill" FOX Radio News, May 28, 2025. [Link, Web Cache, Audio Cache, Audio Cache - Marks Only.]

> "Director of the Discovery Institute's Bradley Center and Professor at Baylor University, Dr. Robert J. Marks, joins the podcast to discuss his assessment of AI's ability to harm us, take our jobs, and manipulate human capabilities."

Also see "Extra: The Potential, The Limitations, And The Risks Of AI" [Link]

182. Allan Pereira "Robert J Marks on AI" The Science Dilemma, Recorded June 3, 2025. [YouTube: youtu.be/xOmBKshIP3g?si=wCruV4g4OvsSDNil, Video Cache]

183. Dr. Lee Warren, "The Self-Brain Surgery Podcast," August 15, 2025, [Link]

184. Amos Tarfa "Dr. Robert Marks & Non Computable You" Living Sensibly, June 21, 2025 [YouTube Link: https://youtu.be/k5D6A3urXyQ?si=Z3PZfI0jN-D7VuI7]

9.5 Hosted Interviews

Including hosted interviews and panel moderation & participation.

9.5.1 1970-1999

1973

1. WPFR "Teletalk With Bob Marks: Early Talk Radio (1973)," YouTube Video, June 23, 2017. [YouTube: https://youtu.be/v5eFEQ6-0h4]. [YouTube, Video Cache.]

> "This radio talk show was recorded on November 26, 1973.
>
> "Before Rush Limbaugh and Glenn Beck, there was Bob Marks breaking into talk radio with Teletalk. The FCC (Federal Communications Commission) did not allow partisan political controversy when Teletalk was recorded. They do now. During Ronald Reagans first presidential campaign, for example, if a Ronald Reagan movie were aired on television, two hours of equal time could be demanded by the Jimmy Carter campaign. This law, no longer in effect, allows the more polarized political radio talk shows of today.
>
> "Bob Marks was not only the shows host, he ran board. There was no one else in the studio to help. There is no call screener. When someone calls, they are put on the air. There are also no breaks except 5 minutes every hour for ABC news. There are no taped commercials or promos. Just talk."

9.5.2 2000-2009

2004

2. NASA/JPL Workshop on Biosynthetic Engineering for the Exploration of Space, Jan. 30-31, 2004 , California Institute of Technology, January 30, 2004 (co-Chair).

2006

3. "Challenges and Opportunities of Neural Network Research" (International Symposium on Neural Networks), ISNN2006, Chengdu, China, (May 30, 2006) - Panel Member.

4. "President's Panel", IEEE World Conference on Computational Intelligence, Vancouver, B.C. "The Genesis of the IEEE CIS: Examining the Fossil Record, " 2006

9.5.3 2010-2019

2011

5. "THE GOD DIALOGUES II: A Panel Discussion," Texas A&M University, October 27, 2011, Sponsored by Ratio Christi (Debate between Muslim, Atheist and Christian views of God.)

2011

6. "Three Predominant Interpretations of Creation (Young Earth Creationism, Old Earth Creationism, and Theistic Evolution)," Live Oak Classical School, Waco, TX, May 24, 2012 (one of three panelists)

2013

7. "Love and Cookies," Panel at Teal Residential College, February 13, 2014 (with Brian Thomas and Randall Jean)

2014

8. "Man Up," Panel at Teal Residential College, May 1, 2014 (with Ian Gravagne and Ken Van Treuren)

2016

9. "Algorithmic Specified Complexity I: Genesis" ID the Future Podcast (with Winston Ewert) February 3, 2016. [Link, Cache, YouTube, Video Cache]

10. "Algorithmic Specified Complexity II: Application to Conway's Game of Life" ID the Future Podcast (with Winston Ewert) February 8, 2016. [Link, Cache, YouTube, Video Cache]

11. "Algorithmic Specified Complexity III: Measuring Meaning in Images" ID the Future Podcast (with Winston Ewert) February 10, 2016. [Link, Cache, YouTube, Video Cache]

2017

12. "Does God Matter? Answering tough questions about Christ & Christianity" September 21, 2017. [YouTube https://youtu.be/uCkUtv1y00M] [Video Download]

13. "Does Life Matter? Answering the hard questions about abortion" November 29, 2017. [YouTube https://youtu.be/gZqBcWLUzqg] [Video Download]

2018

14. "Will the Machines Take Over? Human Uniqueness in the Age of Smart Machines" Broadcast from the William Allen Theater at Seattle's Museum of Flight in Seattle, WA [YouTube Link: https://youtu.be/GJ7WJitJ5E0.] WILL THE MACHINES TAKE OVER? Mind Matters, June 1, 2018. [Link]

15. Robert J. Marks "Why 'Mind Matters' Matter," Mind Matters Today, July 12, 2018 [Link, Audio Only, Cache]

    > "Host Robert J. Marks introduces the breadth of issues that will be covered on the Mind Matters podcast, from job displacement to human flourishing in a world increasingly run by our algorithms. In brief, Mind Matters will bring natural and artificial intelligence head to head in the areas of research, application and education."

16. Robert J. Marks "TRUSTING THE BLOCKCHAIN: Will Fullerton on Blockchain as a Foundational Technology," Mind Matters News, July 30,2018 [Link, Audio Only, Cache]

    > "Robert J. Marks and Will Fullerton discuss what changes await as we enter the implementation phase of a foundational technology: blockchain. While China is making a multi-billion dollar investment, IBM is betting on countless blockchain projects. And by promising to disintermediate financial institutions, blockchain holds the promise of radically reducing obstacles and overhead from human transactions. Still, challenges remain to be solved that are inherent to the technology. Join Bob and Will for a stimulating conversation."

17. Robert J. Marks "BITCOIN AND THE KEYS TO CRYPTOCURRENCY SECURITY," Mind Matters News, August 8,2018. Guest: Will Fullerton. [Link, Audio Only, Cache]

    > "Everyone has heard the buzz about Bitcoin, but what is driving this mad dash and the volatile cryptocurrency markets? What are the mechanics of Bitcoin, of mining and trading it? How are transactions secured against tampering? Is it anonymous, and thereby shielded from the IRS? As Warren Buffet would have it, is it time to be fearful or greedy?"

18. Robert J. Marks "NON-ALGORITHMIC MIND: The distinctiveness of human creativity and consciousness," Mind Matters News, August 23, 2018. Guest: Dr. Eric Holloway. [Link, Audio Only]

    > "What is an algorithm and could a computer ever perform a non-algorithmic task? Computers are getting faster, algorithms are getting more complex, and our computing power is growing. With all these advancements, are there limitations that computers can never overcome?"

19. Robert J. Marks "WHAT HUMANS DO THAT A.I. CAN'T," Mind Matters News, September 2, 2018. Guest: Dr. Eric Holloway. [Web Page Cache, Audio Only Link, Audio Cache]

    > "AI can do many things faster and better than humans. It can beat humans in chess, outsmart us in Jeopardy, and defeat us at GO. The question remains. Is there anything a human can (and always will) do better than an AI?"

20. Robert J. Marks "WHAT IS BUSINESS INTELLIGENCE? Discussing how Artificial Intelligence Has Changed the Opera with Jeremiah Marks," September 20, 2018, Mind Matters News, Guest: Jeremiah Marks, CPA, MBA. [Web Page Cache, Audio Cache]

    > "Business intelligence affects you daily; from advertising and solicitation to how much you pay for tickets to watch the Dallas Cowboys. Jeremiah Marks talks about what business intelligence is and how it changes the way we approach our customers."

21. Robert J. Marks "DOES TECHNOLOGY FAVOR TYRANNY? Deconstructing Yuval Harari's Silly Forecast of AI's Future Impact," Mind Matters News, October 5, 2018.Guest: Dr. Jay Richards. [Web Page Cache, Audio Cache.]

    > "Will infotech and biotech erode human agency, subvert human desires, and render free-market economics obsolete? At first glance, there looks to be a wide gap between the future of AI and the destruction of democracy. Some futurists claim to have jumped that chasm. In a cheery little column published by the Atlantic, Yuval Noah Harari posits AI will ultimately destroy democracy and favor Digital Dictatorships. What is his argument and does it hold water?"

22. Robert J. Marks "FORECASTING ABOUT THE FUTURE," Mind Matters News, Guest: Jay Richards, October 18, 2018. [Web Page, Audio Cache]

23. Robert J. Marks "The End of Human Drama," Mind Matters News, Guest: Jay Richards, October 18, 2018. [Web Page, Audio Cache]

    > "In this third part of their reflection on Yuval Harari's Atlantic piece anticipating technology's march toward tyranny, Jay Richards and Robert J.

> Marks discuss the many assumptions therein. At the root of these speculations is an overestimation of the power of information processing systems and an underestimation of the human ability to be the true governors of their creations, not their docile 'pets'."

24. Robert J. Marks "Ewert Unpacks his New ID Model, the Dependency GraphPt. 1," ID the Future, October 10, 2018. Guest: Dr. Winston Ewert. [Web Page Cache, Audio Cache]

> "On this episode of ID the Future, guest host Robert J. Marks talks with Dr. Winston Ewert about Ewert's groundbreaking new hypothesis challenging Darwin's common descent tree of life. The new model is based on the well-established technique of repurposing software code in different software projects. Ewert, a senior researcher at Biologic and the Evolutionary Informatics Lab, describes the nested hierarchical pattern of life and how any credible theory of life's origin and diversity must explain it. He then describes how Darwin's basic theory fits, and doesn't fit, the pattern, and the various ancillary mechanisms invoked to close the gaps. These patches include horizontal gene transfer, convergent evolution, and incomplete lineage sorting. Ewert then cues up what he argues is a better, more elegant hypothesis, the common design hypothesis laid out in his peer-reviewed technical paper available here."

25. Robert J. Marks "Dependency Graph, Pt. 2: Winston Ewert Defends His Groundbreaking New ID Model." ID the Future, October 15, 2018. Guest: Winston Ewert. [Web Page Cache, Audio Cache]

26. AI and Ethics; Industry Panel with George Montanez, Sujatha Kashyap, & Sujatha Perepa, moderated by Robert J. Marks II, Paul L. Foster Campus for Business and Innovation, McClinton Auditorium, Foster 240. [Web Page Cache]

27. Robert J. Marks "APPROPRIATE TECHNOLOGY FOR THE DEVELOPING WORLD," Mind Matters News, Guest: Brian Thomas. December 11, 2018. [Web Page, Audio Cache]

28. Robert J. Marks "APPROPRIATE TECHNOLOGY FOR THE DEVELOPING WORLD: PART II," Mind Matters News, Guest: Brian Thomas, December 13, 2018 [Web Page, Audio Cache

29. Robert J. Marks " APPROPRIATE TECHNOLOGY FOR THE DEVELOPING WORLD: PART III," Mind Matters News, Guest: Brian Thomas, January 10, 2019. [Web Page, Audio Cache]

30. Robert J. Marks "THIS YEAR'S TOP TEN AI EXAGGERATIONS, HYPERBOLE, AND FAILURES: PART I," Mind Matters News, December 20, 2018 [Web Page, Audio Cache]

31. Robert J. Marks "THIS YEAR'S TOP TEN AI EXAGGERATIONS, HYPERBOLE, AND FAILURES: PART II," Mind Matters News, December 28, 2018 [Web Page, Audio Cache]

32. Robert J. Marks "EXPORTING AND SECURING TECHNOLOGIES OF TODAY AND TOMORROW," Mind Matters News, Guest: Daniel Ogden JD, JANUARY 24, 2019. [Web Page, Audio Cache]

33. Robert J. Marks "Military Technology and AI," Mind Matters News, Guest: Daniel Ogden JD, JANUARY 31, 2019. [Web Page, Audio Cache]

2019

34. Robert J. Marks "ROBOTIC ACCOUNTING DEPARTMENT," Mind Matters News, Guest: Jeremiah Marks, February 7,2019. [Web Page, Audio Cache]

35. Robert J. Marks "AI IN UGANDA: How business intelligence and data analytics help medical centers in developing countries," Mind Matters News, Guest: Dr. Peter Kulaba, February 14, 2019. [Web Page, Audio Cache]

36. Robert J. Marks "UGANDAN DATA ANALYTICS: How Data Analytics Improves Medical Care in Uganda," Mind Matters News, Guest: Dr. Peter Kulaba, February 21, 2019. [Web Page, Audio Cache]

37. Robert J. Marks "A HEART FOR UGANDA: Providing a Way Forward for Ugandan Medicine," Mind Matters News, Guest: Dr. Peter Kulaba, March 7, 2019. [Web Page, Audio Cache]

38. Robert J. Marks "BINGECAST: BLOCKCHAIN AND BITCOIN," Mind Matters News, Guest: Will Fullerton, February 28, 2019. [Web Page, Audio Cache]

39. Robert J. Marks "JOHN LENNOX ON AI: BUILDING THE TOWER OF BABEL - Separating A.I. Religion from Reality," Mind Matters News, Guest: JOHN LENNOX, March 15, 2019. [Web Page, Audio Cache]

40. Robert J. Marks "JOHN LENNOX ON AI: DOWNLOADING THE MIND: Reducing the Mind to Bits," Mind Matters News, Guest:JOHN LENNOX, March 21, 2019. [Web Page, Audio Cache]

41. Robert J. Marks "BINGECAST: THE SUCCESSES AND LIMITATIONS OF A.I.," Mind Matters News, 2019. [Web Page, Audio Cache]

42. Robert J. Marks "HAL PHILIPP: INVENTOR OF THE MODERN TOUCH SCREEN," Mind Matters News, Guest: Hal Philipp, April 11, 2019. [Web Page, Audio Cache]

43. Robert J. Marks "HAL PHILIPP: FORMULA ONE RACING TECH & KEYLESS CARS," Mind Matters News, Hal Philipp, April 25, 2019. [Web Page, Audio Cache]

44. Robert J. Marks "IN PATENT DISPUTES, THE BIGGER THEY ARE, THE HARDER THEY HIT," Mind Matters News, Guest: Hal Philipp, May 2, 2019. [Web Page, Audio Cache]

45. Robert J. Marks "I SUED APPLE FOR PATENT INFRINGEMENT," Mind Matters News, Guest: Hal Philipp, May 9, 2019. [Web Page, Audio Cache]

46. Robert J. Marks "ADVICE FOR BUDDING INVENTORS AND ENTREPRENEURS: HAL PHILIPP SHARES HIS EXPERIENCE," Mind Matters News, Guest: Hal Philipp, May 16, 2019. [Web Page, Audio Cache]

47. Robert J. Marks "HOW THE INJURED BRAIN HEALS ITSELF: Our Amazing Neuroplasticity," Mind Matters News, Guest: Jonathan Sackier MD, May 23, 2019. [Web Page, Audio Cache]

48. Robert J. Marks "BINGECAST: YUVAL HARARIS SILLY DYSTOPIAN IDEAS" Mind Matters News, Guest: Jay Richards, May 30, 2019. [Web Page, Audio Cache]

49. Robert J. Marks "HOW TONGUE STIMULATION ACCELERATES BRAIN HEALING," Mind Matters News, Guest: Jonathan Sackier MD, June 6, 2019. [Web Page, Audio Cache]

50. Robert J. Marks "GARY SMITH: THE AI DELUSION 'When I Nod My Head, Hit It!' And Other Commands that Confuse AI,," Mind Matters News, Guest: Gary Smith, June 13, 2019. [Web Page, Audio Cache]

51. Robert J. Marks "THE TEXAS SHARPSHOOTER FALLACIES," Mind Matters News, Guest: Gary Smith, June 20, 2019. [Web Page, Audio Cache]

52. Robert J. Marks "BINGECAST: 80% OF THE WORLD DOESNT NEED CUTTING EDGE AI," Mind Matters News, Guest: Professor Brian Thomas, June 27, 2019. [Web Page, Audio Cache]

53. Robert J. Marks "BINGECAST: TECHNOLOGY AND NATIONAL SECURITY," Mind Matters News, Guest: DANIEL OGDEN, 2019. [Web Page, Audio Cache]

54. Robert J. Marks "TIME PASSES, LOVE FADES, BUT WHAT DOES IT ALL MEAN?," Mind Matters News, Guest: Gary Smith, August 1, 2019. [Web Page, Audio Cache]

55. Robert J. Marks "THE HOLY GRAIL OF ARTIFICIAL INTELLIGENCE," Mind Matters News, Guest: Gary Smith, August 8, 2019. [Web Page, Audio Cache]

56. Robert J. Marks "SHOULD WE BE AFRAID OR EXCITED ABOUT AI," Mind Matters News, Guest: J.C. Derrick, August 22, 2019. [Web Page, Audio Cache]

57. Robert J. Marks "BINGECAST: BURSTING 2018S TOP TEN HYPED STORIES," August 29, 2019. [Web Page, Audio Cache]

58. Robert J. Marks "NEUROPLASTICITY: HOW YOUR BRAIN NEVER STOPS CHANGING," Mind Matters News, Guest: YURI DANILOV, September 5, 2019. [Web Page, Audio Cache]

59. Robert J. Marks "ACCELERATING NEUROPLASTICITY," Mind Matters News, Guest: YURI DANILOV, September 12, 2019. [Web Page, Audio Cache]

60. Robert J. Marks "IS WHAT WE KNEW ABOUT THE BRAIN ALL WRONG?," Mind Matters News, YURI DANILOV, September 19, 2019. [Web Page, Audio Cache]

61. Robert J. Marks "BINGECAST: BUSINESS INTELLIGENCE AND AI ACCOUNTING," Mind Matters News, Guest: Jeremiah Marks, September 26, 2019. [Web Page, Audio Cache]

62. Robert J. Marks "CAN MACHINES THINK?," Mind Matters News, Guest: GEORGE MONTAÑEZ, October 2, 2019. [Web Page, Audio Cache]

63. Robert J. Marks "THE TURING TEST, ARTIFICIAL INTELLIGENCE, AND INTELLIGENT DESIGN," Mind Matters News, Guest: GEORGE MONTAÑEZ, October 10, 2019. [Web Page, Audio Cache]

64. Robert J. Marks "BINGECAST: JOHN LENNOX ON THE PROMISE AND THREAT OF AI," Mind Matters News, Guest: John Lennox, October 31, 2019. [Web Page, Audio Cache]

65. Robert J. Marks "WALTER BRADLEY: IS YOUR BODY AN INSTRUMENT OF YOUR MIND?," Mind Matters News, Guest: Walter Bradley, Nov 7, 2019. [Web Page, Audio Cache]

66. Robert J. Marks "DONT GO TOWARDS THE LIGHT?," Mind Matters News, Guest: Walter Bradley, Nov 14, 2019. [Web Page, Audio Cache]

67. Robert J. Marks "WALTER BRADLEY: EXPERIENCES OF HEAVEN?," Mind Matters News, Guest: Walter Bradley, November 21, 2019. [Web Page, Audio Cache]

68. Robert J. Marks "HAL PHILIPP ON PATENTS, LITIGATION, AND ENTREPRENEURSHIP," Mind Matters News, Guest: Hal Philipp, November 28, 2019. [Web Page, Audio Cache]

69. Robert J. Marks "BIBLICAL ACCOUNTS OF NEAR-DEATH EXPERIENCES," Mind Matters News, Guest: Walter Bradley, December 5,2019. [Web Page, Audio Cache]

70. Robert J. Marks "Is Cheese Consumption Causing Deaths from Tangled Sheets?," Mind Matters News, Guest: Gsry Smith, December 26, 2019. [Web Page, Audio Cache]

71. Robert J. Marks "Listen to Robert J. Marks New Book *The Case for Killer Robots*," January 9, 2020. [Web Page, Audio Cache]

9.5.4 2020-2029

2020

72. Robert J. Marks "Walter Bradley on the Newly Expanded *Mystery of Life's Origin*" ID the Future, Guest: Walter Bradley, January 29, 2020. [Web Page, Audio Cache]

    > "Robert J. Marks interviews Walter Bradley, co-author of the seminal 1984 ID book *The Mystery of Life's Origin*, now being released in a revised and expanded edition with updates from multiple contributors discussing the progress (or lack of it) in origins science in the 35 years since the books original publication."

73. Robert J. Marks "Walter Bradley on the New Mystery of Lifes Origin, Pt. 2," ID the Future, February 2020. [Web Page, Audio Cache]

    > "Robert Marks continues his conversation with Walter Bradley, co-author (with Charles Thaxton and Roger Olsen) of the groundbreaking 1984 work *The Mystery of Life's Origin*."

74. Robert J. Marks "SHOCKED BY SCHRÖDINGERS CAT," Mind Matters News, Guest: Enrique Blair, January 16, 2020. [Web Page, Audio Cache]

75. Robert J. Marks "QUANTUM DOTS, BITS, AND COMPUTING: OH MY!," Mind Matters News, Guest: Enrique Blair, January 3, 2020. [Web Page, Audio Cache]

76. Robert J. Marks "The Future of Quantum Computing," Mind Matters News, Guest: Enrique Blair, February 6, 2020. [Web Page, Audio Cache]

77. Robert J. Marks "Is Your Brain the Same as Your Mind?" Mind Matters News, Guest: Michael Egnor, February 13, 2020. [Web Page, Audio Cache]

78. Robert J. Marks "Is There Evidence for a Soul?," Mind Matters News, Guest: Michael Egnor, February 20, 2020. [Web Page, Audio Cache]

79. Robert J. Marks "Data Analytics in Uganda," Mind Matters News, Guest: Dr. Peter Kulaba, February 27, 2020. [Web Page, Audio Cache]

80. Robert J. Marks "Free Will or Free Wont?," Mind Matters News, Guest: Michael Egnor, March 5, 2020. [Web Page, Audio Cache]

81. Robert J. Marks "Splitting the Brain and Staying You," Mind Matters News, Guest: Michael Egnor, March 12, 2020. [Web Page, Audio Cache]

82. Robert J. Marks "Michael Egnor on Whether People in Comas Can Think," Mind Matters News, Guest: Michael Egnor, March 19, 2020. [Web Page, Audio Cache]

83. Robert J. Marks "Charles Thaxton on The Mystery of Lifes Origin, Then and Now," ID the Future, March 23, 2020. [Web Page, Audio Cache]

> "Robert J. Marks interviews chemist Charles Thaxton about a seminal 1984 book he co-authored"

84. Robert J. Marks "Roger Olsen on the Mystery of Lifes Origin on the Early Earth," ID the Future, April 1, 2020 [Web Page, Audio Cache]

> "Robert Marks interviews Roger Olsen, co-author of the groundbreaking 1984 book The Mystery of Lifes Origin. In the books epilogue they suggested that a designing intelligence stands as the best explanation for the origin of life."

85. Robert J. Marks "HEALING THE BRAIN," Mind Matters News, Guest: John Sackier, March 26, 2020. [Web Page, Audio Cache]

86. Robert J. Marks "THE TURING TEST IS DEAD. LONG LIVE THE LOVELACE TEST," Mind Matters News, Guest: Selmer Bringsjord, April 2, 2020. [Web Page, Audio Cache]

87. Robert J. Marks "CAN WE UPLOAD OURSELVES TO A COMPUTER AND LIVE FOREVER?," Mind Matters News, Selmer Bringsjord, April 9, 2020. [Web Page, Audio Cache]

88. Robert J. Marks "WILL AI EVER WRITE A CRITICALLY ACCLAIMED NOVEL?," Mind Matters News, Selmer Bringsjord, April 16, 2020. [Web Page, Audio Cache]

89. Robert J. Marks "COVID-19: HOW 900 BYTES CHANGED THE WORLD," Mind Matters News, Guest:Daniel Andrés Díaz-Pachón , April 23, 2020. [Web Page, Audio Cache]

90. Robert J. Marks "YURI DANILOV ON THE COMPLEXITY OF OUR BRAINS," Mind Matters News, Guest: YURI DANILOV, April 30, 2020. [Web Page, Audio Cache]

91. Robert J. Marks "KURT GÖDELS PROOF OF THE EXISTENCE OF GOD," Mind Matters News, Guest: Selmer Bringsjord, 2020. [Web Page, Audio Cache]

92. Robert J. Marks "DENISE SIMON ON CYBER WARFARE AND MISINFORMATION," Mind Matters News, Guest: Denise Simon, May 14, 2020. [Web Page, Audio Cache]

93. Robert J. Marks "RUSSIAN DEEPFAKES AND OTHER AI MISCHIEF," Mind Matters News, Guest: Denise Simon, May 21, 2020. [Web Page, Audio Cache.]

94. Robert J. Marks "Thomas Furness and the Invention of Virtual Reality," Mind Matters News, Guest: Dr. Thomas Furness, June 4, 2020. [Web Page, Transcript, Audio Cache, Transcript Cache.]

95. Robert J. Marks "Applications Everywhere: When VR First Went Viral," Mind Matters News, Dr. Thomas Furness, June 11, 2020. [Web Page, Transcript, Audio Cache, Transcript Cache]

96. Robert J. Marks "Distracted by Virtual Reality," Mind Matters News, Guest: Dr. Thomas Furness, June 18, 2020. [Web Page, Transcript, Audio Cache, Transcript Cache]

97. Robert J. Marks "Bingecast: George Montañez on Intelligence and the Turing Test," Mind Matters News, Guest: George Montañez,June 25, 2020. [Web Page, Audio Cache]

98. Robert J. Marks "How Will Artificial Intelligence Impact the World by 2084? ," Mind Matters News, Guest: John Lennox, July 2, 2020. [Web Page, Transcript, Audio Cache, Transcript Cache.]

99. Robert J. Marks "False Assumptions in the Hype over AI," Mind Matters News, Guest: John Lennox, July 9, 2020. [Web Page, Transcript, Audio Cache, Transcript Cache.]

100. Robert J. Marks "Does Revelation Talk About Artificial Intelligence?" Mind Matters News, Guest: John Lennox, July 16, 2020. [Web Page, Transcript, Audio Cache, Transcript Cache.]

101. Robert J. Marks, "RATS IN THE TECHNOLOGY LAB," Mind Matters News, Guest: Thomas Furness, July 23, 2020. [Web Page, Transcript, Audio Cache, Transcript Cache.]

102. Robert J. Marks"John Lennox on What (Not) to Expect of AI in 2084," ID the Future, Guest: John Lennox, July 27, 2020. [Web Page, Audio Cache]

103. Robert J. Marks, "John Lennox Talks AI, SciFi, Transhumanism and the Image of God," ID the Future, Guest: John Lennox, July 29, 2020 [Web Page, Audio Cache]

104. Robert J. Marks, "BINGECAST: WALTER BRADLEY ON NEAR-DEATH EXPERIENCES," WALTER BRADLEY, Mind Matters News, Guest: July 20, 2020. [Web Page Transcript, Audio Cache, Transcript Cache.]

105. Robert J. Marks, "DR. THOMAS FURNESS AND APPLICATIONS OF AUGMENTED REALITY," Mind Matters News, Guest: THOMAS FURNESS, August 6, 2020. [Web Page, Transcript, Audio Cache, Transcript Cache.]

106. Robert J. Marks, "ARE WE HERE TO RE-CREATE OURSELVES?," Mind Matters News, Guest: Dr. Geoffrey Simmons, September 17, 2020. [Web Page, Transcript, Audio Cache, Transcript Cache.]

107. Robert J. Marks, "SELMER BRINGSJORD ON THE LOVELACE TEST," Mind Matters News, Guest: Selmer Bringsjord, September 24, 2020. [Web Page, Transcript, Audio Cache, Transcript Cache]

108. Robert J. Marks, "HOW CAN YOU TALK TO YOURSELF?," Mind Matters News, Guest: Geoffrey Simmons, October 1, 2020. [Web Page, Transcript, Audio Cache, Transcript Cache]

109. Robert J. Marks, "AI DEVELOPMENT IN RUSSIA PART 1," Mind Matters News, Guest: Samuel Bendett, October 8, 2020 [Web Page, Transcript, Audio Cache, Transcript Cache]

110. Robert J. Marks, "AI DEVELOPMENT IN RUSSIA PART 2," Mind Matters News, Guest: Samuel Bendett, October 15, 2020 [Web Page, Transcript, Audio Cache, Transcript Cache]

111. Robert J. Marks, "GEORGE GILDER ON *GAMING AI*" Mind Matters News, Guest: George Gilder, October 22, 2020 [Web Page, Transcript, Audio Cache, Transcript Cache.]

112. Robert J. Marks, "ARTIFICIAL INTELLIGENCE GAMING THE STOCK MARKET," Mind Matters News, Guest: George Gilder, October 29, 2020 [Web Page, Transcript, Audio Cache, Transcript Cache.]

113. Robert J. Marks, "GEORGE GILDER ON SUPERINTELLIGENT AI," Mind Matters News, Guest: George Gilder, November 5, 2020 [Web Page, Transcript, Audio Cache, Transcript Cache.]

114. Robert J. Marks, "George Gilder on Blockchain and Carbon Computing" Mind Matters News, Guest: George Gilder, November 12, 2020 [Web Page, Transcript, Audio Cache, Transcript Cache.]

115. Robert J. Marks, "Enrique Blair on Quantum Computing" Mind Matters News, Guest: Enrique Blair, November 26, 2020 [Web Page, Transcript, Audio Cache, Transcript Cache.]

116. Robert J. Marks, "AI DIRTY DOZEN 2020 PART I," Mind Matters News, Guest: Eric Holloway & Jonathan Bartlett, December 17, 2020 [Web Page, Transcript, Audio Cache, Transcript Cache.]

117. Robert J. Marks, "AI DIRTY DOZEN 2020 PART II," Mind Matters News, Guest: Eric Holloway & Jonathan Bartlett, December 24, 2020 [Web Page, Transcript, Audio Cache, Transcript Cache.]

118. Robert J. Marks, "AI DIRTY DOZEN 2020 PART III," Mind Matters News, Guest: Eric Holloway & Jonathan Bartlett, December 31, 2020 [Web Page, Audio Cache, Transcript Cache.]

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119. Robert J. Marks, "AI Smash Hits 2020 Part I" Mind Matters News, Guests: Eric Holloway & Jonathan Bartlett, January 7, 2021 [Web Page, Transcript, Audio, Audio Cache, Transcript Cache]

120. Robert J. Marks, "Algorithmic Specified Complexity Pt. 1: Genesis," ID the Future, Guest: Winston Ewert, January, 8 2021 [Web Page, Audio, Audio Cache]

121. Robert J. Marks, "AI Smash Hits 2020 Part II," Mind Matters News, Guest: Jonathan Bartlett and Dr. Eric Holloway, January 14, 2021. [Web Page, Transcript, Transcript Cache, Audio, Audio Cache]

122. Robert J. Marks, "Algorithmic Specified Complexity Pt. 2: Conways Game of Life,"ID the Future, Guest: Winston Ewert, January 15, 2021 [Web Page, Audio, Audio Cache]

> "Robert J. Marks and Winston Ewert, both of the Evolutionary Informatics Lab, discuss John Conway's *Game of Life*"

123. Robert J. Marks, "Algorithmic Specified Complexity Pt. 3: Measuring Mt. Rushmore" ID the Future, Guest: Winston Ewert, January 20, 2021 [Web Page, Audio, Audio Cache, Audio Cache]

124. Robert J. Marks, "Denise Simon on Russian Misinformation Tactics," Mind Matters News, Guest: Denise Simon, January 28, 2021. [Web Page, Transcript, Transcript Cache, Audio, Audio Cache]

125. Robert J. Marks, "The Life of Walter Bradley with William Dembski (Part I)," Mind Matters News, Guest: William A. Dembski, February 11, 2021. [Web Page, Transcript, Transcript Cache, Audio, Audio Cache]

126. Robert J. Marks, "The Life of Walter Bradley with William Dembski (Part II)," Mind Matters News, Guest: William A. Dembski, February 18, 2021 [Web Page, Transcript, Transcript Cache, Audio, Audio Cache]

127. Robert J. Marks, "John Lennox on Artificial Intelligence and Humanity " Mind Matters News, Guest: John Lennox, February 25, 2021 [Web Page, Transcript, Transcript Cache, Audio, Audio Cache]

128. Robert J. Marks, "THE CHAITIN INTERVIEW I: CHAITIN CHATS WITH KURT GÖDEL," Mind Matters News, Guest: Gregory Chaitin, March 4, 2021. [Web Page, Transcript, Transcript Cache, Audio, Audio Cache]

129. Robert J. Marks, "THE CHAITIN INTERVIEW II: DEFINING RANDOMNESS," Mind Matters News, Guest: Gregory Chaitin, March 11, 2021 [Web Page, Transcript, Transcript Cache, Audio, Audio Cache]

130. Robert J. Marks, "THE CHAITIN INTERVIEW III: THE CHANGING LANDSCAPE FOR MATHEMATICS," Mind Matters News, Guest: Gregory Chaitin, March 18, 2021 [Web Page, Transcript, Transcript Cache, Audio, Audio Cache]

131. Robert J. Marks, "Gregory Chaitin Talks G"odel, Incompleteness and Children" ID the Future, Guest: Gregory Chaitin, March 24, 2021 [Web Page, Audio, Audio Cache]

132. Robert J. Marks, "THE CHAITIN INTERVIEW IV: KNOWABILITY AND UNKNOWABILITY," Mind Matters News, Guest: Gregory Chaitin, March 25, 2021 [Web Page, Transcript, Transcript Cache, Audio, Audio Cache]

133. Robert J. Marks, "THE CHAITIN INTERVIEW V: CHAITINS NUMBER" Mind Matters News, Guest: Gregory Chaitin, April 1, 2021 [Web Page, Transcript, Transcript Cache, Audio, Audio Cache]

134. Robert J. Marks, "Bingecast: Thomas Furness on Virtual Reality" Mind Matters News, Guest: Tom Furness, Mind Matters News, April 29, 2021 [Web Page, Transcript, Transcript Cache, Audio, Audio Cache]

135. Robert J. Marks, "Dr. Angus Menuge: The Mind-Body Problem (Part I)" Mind Matters News, Guest: Angus Menuge, May 6, 2021 [Web Page, Transcript, Transcript Cache, Audio, Audio Cache]

136. Robert J. Marks, "Dr. Angus Menuge: Models of Consciousness (Part II)" Mind Matters News, Guest: Angus Menuge, May 13, 2021 [Web Page, Transcript, Transcript Cache, Audio, Audio Cache]

137. Robert J. Marks, "Dr. Angus Menuge: Unity of Consciousness (Part III) " Mind Matters News, Guest: Angus Menuge, May 20, 2021 [Web Page, Transcript, Transcript Cache, Audio, Audio Cache]

138. Robert J. Marks, "Michael Egnor on the Human Brain" Mind Matters News, Guest: Michael Egnor, May 27, 2021. [Web Page, Transcript, Transcript Cache, Audio, Audio Cache]

139. Robert J. Marks, "Paul Werbos: The Evolution of Artificial Neural Networks" Mind Matters News, Guest: Paul Werbos, Mind Matters News, June 3, 2021 [Web Page, Transcript, Transcript Cache, Audio, Audio Cache]

140. Robert J. Marks, "Paul Werbos: The National Science Foundation and AI" Mind Matters News, Guest: Paul Werbos, June 10, 2021 [Web Page, Transcript, Transcript Cache, Audio, Audio Cache]

141. Robert J. Marks, "Paul Werbos: Can the NSF Return to Its Former Glory?" Mind Matters News, Guest: Paul Werbos, June 17, 2021. [Web Page, Transcript, Transcript Cache, Audio, Audio Cache]

142. Robert J. Marks, "Geoffrey Simmons: Human Design and Robots" Mind Matters News, Guest: Geoffrey Simmons, 2021. [Web Page, Transcript, Transcript Cache, Audio, Audio Cache]

143. Robert J. Marks, "Paul Werbos: Quantum Turing Machines" Mind Matters News, Guest: Paul Werbos, July 1, 2021. [Web Page, Transcript, Transcript Cache, Audio, Audio Cache]

144. Robert J. Marks, "SAMUEL BENDETT ON AI DEVELOPMENT IN RUSSIA," Mind Matters News, Guest: SAMUEL BENDETT, July 29, 2021. [Web Page, Transcript, Transcript Cache, Audio, Audio Cache]

145. Robert J. Marks, "SARAH SEGUIN ON EMPS AND HOW TO PROTECT YOUR DATA," Mind Matters News, Guest: SARAH SEGUIN, August 5, 2021. [Web Page, Transcript, Transcript Cache, Audio, Audio Cache]

146. Robert J. Marks, "EMPS. BE AFRAID. BE VERY AFRAID," Mind Matters News, Guest: SARAH SEGUIN, August 12, 2021. [Web Page, Transcript, Transcript Cache, Audio, Audio Cache]

147. Robert J. Marks, "USING EMPS IN WARFARE," Mind Matters News, Guest: SARAH SEGUIN, August 19, 2021. [Web Page, Transcript, Transcript Cache, Audio, Audio Cache]

148. Robert J. Marks, "RUN THE GAMBIT OF COMPLEXITY," Mind Matters News, Guests: Daniel Andrés Díaz-Pachón and Ola Hössler, September 2, 2021. [Web Page, Transcript, Transcript Cache, Audio, Audio Cache]

149. Robert J. Marks, "LIFE IS FINE-TUNED IN A FEARFUL AND WONDERFUL WAY," Mind Matters News, Guests: Daniel Andrés Díaz-Pachón and Ola Hössler, September 9, 2021. [Web Page, Transcript, Transcript Cache, Audio, Audio Cache]

150. Robert J. Marks, "THE UNIVERSE IS SO FINE-TUNED!" Mind Matters News, Guests: Daniel Andrés Díaz-Pachón and Ola Hössler, September 16, 2021. [Web Page, Transcript, Transcript Cache, Audio, Audio Cache]

151. Robert J. Marks, "WHY IS THERE FINE-TUNING EVERYWHERE?," Mind Matters News, Guests: Daniel Andrés Díaz-Pachón and Ola Hössler, September 23, 2021. [Web Page, Transcript, Transcript Cache, Audio, Audio Cache]

152. Robert J. Marks, "GEORGE GILDER: AN ECONOMIC GENIUS TALKS ABOUT GAMING AI," Mind Matters News, Guest: GEORGE GILDER, September 30, 2021. [Web Page, Transcript, Transcript Cache, Audio, Audio Cache]

153. Robert J. Marks, "THE 2020 AI DIRTY DOZEN HYPED STORIES: COUNTDOWN BY BRADLEY CENTER BRAIN TRUST MEMBERS" Mind Matters News, Guest:Jonathan Bartlett and Eric Holloway , Mind Matters News, October 7, 2021. [Web Page, Transcript, Transcript Cache, Audio, Audio Cache]

154. Robert J. Marks, "THE 2020 AI SMASH HITS: COUNTDOWN BY BRADLEY CENTER BRAIN TRUST" Mind Matters News, Guest:Jonathan Bartlett and Eric Holloway, Mind Matters News, October 21, 2021.. [Web Page, Transcript, Transcript Cache, Audio, Audio Cache]

155. Robert J. Marks, "How Finely Tuned Is Our Universe?," ID the Future, Guest: Ola Hössler & Díaz-Pachón, October 11, 2021 [Web Page, Audio, Audio Cache]

156. Robert J. Marks, "Life: Fearfully and Wonderfully Fine Tuned," ID The Future, Guest: Ola Hössler & Díaz-Pachón, October 20, 2021 [Web Page, Audio, Audio Cache]

157. Robert J. Marks, "New Book Spotlights High Tech Animal Navigation," ID the Future, Guest: Eric Cassell, November 3, 2021. [Web Page, Audio, Audio Cache]

158. Robert J. Marks, "ARTIFICIAL GENERAL INTELLIGENCE: THE MODERN HOMUNCULUS" Mind Matters News, Guests: Justin Bui & Sam Haug, November 4, 2021 [Web Page, Transcript, Transcript Cache, Audio, Audio Cache]

159. Robert J. Marks, "WHEN AI GOES WRONG" Mind Matters News, Guests: Justin Bui & Sam Haug, November 11, 202 [Web Page, Transcript, Transcript Cache, Audio, Audio Cache]

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160. Robert J. Marks, "The Astonishing Algorithms That Allow Animals to Navigate & Migrate" Mind Matters News, Guest: Eric Cassell, January 6, 2022. [Web Page, Transcript, Transcript Cache, Audio, Audio Cache]

161. Robert J. Marks, "Jaw Dropping Algorithms That Allow Social Behavior to Thrive" Mind Matters News, Guest: Eric Cassell, Mind Matters News, January 13,2022. [Web Page, Transcript, Transcript Cache, Audio, Audio Cache]

162. Robert J. Marks, "Design versus Naturalist Origin Theories of Animal Algorithms" Mind Matters News, Guest: Eric Cassell, Mind Matters News, January 20,2022 [Web Page, Transcript, Transcript Cache, Audio, Audio Cache]

163. Robert J. Marks, "Discussing Consciousness and the Mind-Body Problem" Guest: Angus Menuge. Mind Matters News, February 24,2022, [Web Page, Transcript, Transcript Cache, Audio, Audio Cache]

164. Robert J. Marks, "What Does It Mean to Be Human in an Age of Artificial Intelligence?" Mind Matters News, Gretchen Huizinga. Mind Matters News, March 3,2022 [Web Page, Transcript, Transcript Cache, Audio, Audio Cache]

165. Robert J. Marks, "EMPS, Swarms and Other Types of Terrifying Technology " Guest: Sarah Seguin. Mind Matters News, March 31, 2022 [Web Page, Transcript, Transcript Cache, Audio, Audio Cache]

166. Robert J. Marks, "The National Science Foundation and Advancement in Artificial Intelligence" Guest: Paul Werbos. Mind Matters News, April 28,2022 [Web Page, Transcript, Transcript Cache, Audio, Audio Cache]

167. Robert J. Marks, "Exercising Free Wont in Fentanyl Addiction: Unless You Die First" , Guest: Richard Hurley. Mind Matters News, May 4,2022 [Web Page, Transcript, Transcript Cache, Audio, Audio Cache]

168. Robert J. Marks, "A FIRST-HAND ACCOUNT OF KICKING FENTANYL ADDICTION: REVERSING HEBBS LAW" Guest: "Stretch." Mind Matters News, May 12,2022 [Web Page, Transcript, Transcript Cache, Audio, Audio Cache]

169. Robert J. Marks, "Good and Bad Algorithms in the Practice of Medicine" Guest: Richard Hurley. Mind Matters News, May 19,2022 [Web Page, Transcript, Transcript Cache, Audio, Audio Cache]

170. Robert J. Marks, "Its a Wonderful, Complex, and Finely-Tuned Universe" Guests: Daniel Andrés Díaz-Pachón and Ola Hössler, Mind Matters News, May 26,2022 [Web Page, Transcript, Transcript Cache, Audio, Audio Cache]

171. Robert J. Marks, "The House Always Wins In The Long Run" Guest: Sal Cordova. Mind Matters News, June 2,2022 [Web Page, Transcript, Transcript Cache, Audio, Audio Cache]

172. Robert J. Marks, "When The House Cant Win The Game, It Will Change The Rules" Guest: Sal Cordova. Mind Matters News, June 9,2022 [Web Page, Transcript, Transcript Cache, Audio, Audio Cache]

173. Robert J. Marks, "Can A Good Hustler Count Cards Like A Computer?" Guest: Sal Cordova. Mind Matters News, June 16,2022 [Web Page, Transcript, Transcript Cache, Audio, Audio Cache]

174. Robert J. Marks, "Card Counting Strategies and Dangers" Guest: Sal Cordova, Mind Matters News, June 23,2022 . [Web Page, Transcript, Transcript Cache, Audio, Audio Cache]

175. Robert J. Marks, "AI: The Potential and the Problems" Guest: Justin Bui and Samuel Haug, Mind Matters News, June 30,2022. [Web Page, Transcript, Transcript Cache, Audio, Audio Cache]

176. Robert J. Marks, "Weaving the Technology of Our Lives" Guest: Andrew McDiarmid, Mind Matters News, July 14, 2022 [Web Page, Transcript, Transcript Cache, Audio, Audio Cache.]

    > "Andrew McDiarmid discusses technology, digital wellness, and freedom with Robert J. Marks."

177. Robert J. Marks, "Who Controls the Tech?" Guest: Andrew McDiarmid, Mind Matters News, July 21, 2022. [Web Page, Transcript, Transcript Cache, Audio, Audio Cache.]

178. Robert J. Marks, "What Are NFTs?" Guests: Adam Goad and Dr. Austin Egbert, Mind Matters News, August 11, 2022. [Web Page, Transcript, Transcript Cache, Audio, Audio Cache.]

    > "Whats the big deal with non-fungible tokens (NFTs)? Is it worth it to invest in NFTs? How does copyright work with NFTs? Adam Goad, Dr. Austin Egbert, and Dr. Robert J. Marks discuss non-fungible tokens..."

179. Robert J. Marks, "Web3: The Next Generation of the Internet" Guests: Adam Goad and Dr. Austin Egbert, Mind Matters News, August 8, 2022. [Web Page, Transcript, Transcript Cache, Audio, Audio Cache.]

    > "Adam Goad and Dr. Austin Egbert discuss blockchain, Web3, decentralization, and the metaverse with Dr. Robert J. Marks."

180. Robert J. Marks, "The NFT Anti-Bubble" Guests: Adam Goad and Dr. Austin Egbert, Mind Matters News, August 18, 2022. [Web Page, Transcript, Transcript Cache, Audio, Audio Cache.]

    > "Where are NFTs on this hype curve and will they continue to exist? Adam Goad, Dr. Austin Egbert, and Dr. Robert J. Marks discuss non-fungible tokens, the economy, and decentralization."

181. Robert J. Marks, "Animal Algorithms and Artificial Intelligence" Guest: Eric Cassell, Mind Matters News, August 25, 2022. [Web Page, Transcript, Transcript Cache, Audio, Audio Cache.]

182. Robert J. Marks, "What Is Decentralized Finance?" Guests: Adam Goad and Dr. Austin Egbert, Mind Matters News, September 1, 2022. [Web Page, Transcript, Transcript Cache, Audio, Audio Cache.]

183. Robert J. Marks, "Staking and Liquidity on Web3" Guests: Adam Goad and Dr. Austin Egbert, Mind Matters News, September 8, 2022. [Web Page, Transcript, Transcript Cache, Audio, Audio Cache.]

    > "Staking is a is a new approach that replaces [crypto-currency] mining and reduce costs. How does it work? Adam Goad, Dr. Austin Egbert, and Dr. Robert J. Marks discuss staking, liquidity, and decentralized finance."

184. Robert J. Marks, "Appropriate Technology: The Haitian Energy Problem" Guests: Brian Thomas & Kayla Garrett, Mind Matters News, October 13, 2022. [Web Page, Transcript, Transcript Cache, Audio, Audio Cache.]

    > "Robert J. Marks discusses technology in Haiti with electrical engineer Brian Thomas and environmental engineer Kayla Garrett who work for a small nonprofit called JustEnergy, which works in northern Haiti creating solar energy systems for hospitals, clinics, schools, and orphanages."

185. Robert J. Marks, "Appropriate Technology: Solar Powering Hospitals, Orphanages & Schools" Guests: Brian Thomas & Kayla Garrett, Mind Matters News, October 20, 2022. [Web Page, Transcript, Transcript Cache, Audio, Audio Cache.]

186. Robert J. Marks, "Charles Thaxton on The Mystery of Lifes Origin, Then and Now" Guest: Charles Thaxton, ID the Future, November 19, 2022 [Web Page, Audio, Audio Cache.]

> "On this ID the Future from the vault, host Robert J. Marks interviews chemist Charles Thaxton about a seminal 1984 book he co-authored,The Mystery of Lifes Origin, foundational to the intelligent design movement."

187. Robert J. Marks, "Roger Olsen on Solving the Mystery of Lifes Origin," ID the Future, November 18, 2022. Guest: Roger Olsen, [Web Page, Audio, Audio Cache.]

> "On this classic ID the Future, Robert J. Marks interviews Roger Olsen, co-author of the groundbreaking book *The Mystery of Lifes Origin*."

188. Robert J. Marks, "Patents: A License To Sue," Guest: Richard W. Stevens, Mind Matters News, November 17, 2022. [Web Page, Transcript, Transcript Cache, Audio, Audio Cache.]

189. Robert J. Marks, "Patents and the Creativity Requirement," Guest: Richard W. Stevens, Mind Matters News, December 1, 2022. [Web Page, Transcript, Transcript Cache, Audio, Audio Cache.]

190. Robert J. Marks, "Can AI Be Issued Patents?" Guest: Richard W. Stevens, Mind Matters News, December 8, 2022. [Web Page, Transcript, Transcript Cache, Audio, Audio Cache.]

191. Robert J. Marks, "Defining the Role of AI in Patents," Guest: Richard W. Stevens, Mind Matters News, December 15, 2022. [Web Page, Transcript, Transcript Cache, Audio, Audio Cache.]

> "Can a human hold a copyright for a piece of artwork that they used AI to generate? Robert J. Marks discusses copyright, trademarks, and artificial intelligence with attorney and author, Richard W. Stevens."

192. Robert J. Marks, "The Practice of Medicine and Ongoing Issues with Opioid Addiction," Guest: Dr. Richard Hurley & Stretch, Mind Matters News, December 29, 2022. [Web Page, Transcript, Transcript Cache, Audio, Audio Cache.]

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193. Robert J. Marks, "WAYS THE BRAIN CAN BREAK," Mind Matters News, January 5, 2023. Guest: Dr. Andrew Knox. [Web Page, Transcript, Transcript Cache, Audio, Audio Cache.]

194. Robert J. Marks, "WAYS THE BRAIN CAN HEAL," Mind Matters News, January 12, 2023. Guest: Dr. Andrew Knox. [Web Page, Transcript, Transcript Cache, Audio, Audio Cache.]

195. Robert J. Marks, "IS THE MIND AN ILLUSION?" Mind Matters News, January 19, 2023. Guest: Dr. Andrew Knox. [Web Page, Transcript, Transcript Cache, Audio, Audio Cache.]

196. Robert J. Marks, "HUMAN TRAFFICKING IN YOUR OWN BACKYARD" Mind Matters News, February 2, 2023 Guest: Charles Crockett, [Web Page, Transcript, Transcript Cache, Audio, Audio Cache.]

    "Robert Marks speaks on the difficult topic of human trafficking with his guest Charles Crockett, who works with the anti-trafficking advocacy organization Unbound Now."

197. Robert J. Marks, "SOCIAL MEDIAS ROLE IN HUMAN TRAFFICKING" Mind Matters NewsFebruary 9, 2023, Guest: Charles Crockett [Web Page, Transcript, Transcript Cache, Audio, Audio Cache.]

198. Robert J. Marks, "MORE PORN = MORE TRAFFICKING" February 16, 2023, Guest: Charles Crockett [Web Page, Transcript, Transcript Cache, Audio, Audio Cache.]

    "Robert J. Marks and Charlie Crockett discuss how the normalization of online pornography is connected with sex trafficking and abuse."

199. Robert J. Marks, "WINNING AND LOSING STRATEGIES FOR CASINO GAMBLING" Mind Matters News, February 23, 2023, Guest: Sal Cordova [Web Page, Transcript, Transcript Cache, Audio, Audio Cache.]

200. Robert J. Marks, "A Chat with Blake Lemoine on Google and AI Sentience,' Guest:Blake Lemoine, Mind Matters News, February 23, 2023. [Web Page, Web Page Cache, Transcript Cache, Audio, Audio Cache.]

    "Former Google employee Blake Lemoine claimed that the Large Language Model LaMDA was a sentient being. The claim got him fired. In this episode, Lemoine sits down with Robert J. Marks to discuss AI, what he was doing at Google, and why he believes artificial intelligence can be sentient."

201. Robert J. Marks, "Blake Lemoine and the LaMDA Question," Guest: Blake Lemoine, Mind Matters News, March 9, 2023. [Web Page, Web Page Cache, Transcript, Transcript Cache, Audio, Audio Cache.]

    "Blake Lemoine ... Robert J. Marks ... debate sentience in AI, non-computable traits of human beings, and the question of the soul."

202. Robert J. Marks, "Jeffrey Funk on AI, Startups, and Big Tech," Guest: Jeffrey Funk, Mind Matters News, March 16, 2023. [Web Page, Web Page Cache, Transcript, Transcript Cache, Audio, Audio Cache.]

    "Jeffrey Funk joins Robert J. Marks to talk about the artificial intelligence industry, how it's used by Big Tech, and AI's exaggerated hype. How do we respond to AI when technology is changing every year?"

203. Robert J. Marks, "Where Does Innovation Come From?," Guest: Jeffrey Funk, Mind Matters News, March 23, 2023. [Web Page, Web Page Cache, Transcript, Transcript Cache, Audio, Audio Cache.]

    > "Jeffrey Funk and Robert J. Marks explore the question of where todays technological innovation is fostered. Academia? Private corporations? The military? "

204. Robert J. Marks, "Navigating the Technological Age," Guest: Andrew McDiarmid, Mind Matters News, March 30, 2023. [Web Page, Web Page Cache, Transcript, Transcript Cache, Audio, Audio Cache.]

    > "Discovery Institute Senior Fellow Andrew McDiarmid sits down with Robert J. Marks to talk about the root meaning of technology, how it has developed, and the ways we can healthily navigate our highly technologized world."

205. Robert J. Marks, "Navigating the Technological Age," Guest: Jeffrey Funk, Mind Matters News, April 6, 2023. [Web Page, Web Page Cache, Transcript, Transcript Cache, Audio, Audio Cache.]

    > "Robert Marks ... [and] Jeffrey Funk...focus on ChatGPT, its value and limits, and the hype that often accompanies new developments in AI."

206. Robert J. Marks, 'Talk More, Tech Less," Guest: Dawn Wible, Mind Matters News, April 13, 2023. [Web Page, Web Page Cache, Transcript, Transcript Cache, Audio, Audio Cache.]

    > "Dawn Wible, founder of the digital wellness organization 'Talk More Tech Less,' talks with Robert J. Marks about her advocacy for healthy screen time among children and young adults. "

207. Robert J. Marks, 'Working Towards Digital Flourishing," Guest: Dawn Wible, Mind Matters News, April 20, 2023. [Web Page, Web Page Cache, Transcript, Transcript Cache, Audio, Audio Cache.]

208. Robert J. Marks, "Medicine for Digitally Addicted Boys," Guest: Kent Marks, Mind Matters News, May 4, 2023. [Web Page, Web Page Cache, Transcript, Transcript Cache, Audio, Audio Cache.]

    > "In this episode, Robert Marks speaks with former Boy Scout leader Kent Marks on his experience in the organization and the enduring need to help boys navigate life in the digital age."

209. Robert J. Marks, "An Antidote for Digital Addiction," Guest: Kent Marks, Mind Matters News, May 11, 2023. [Web Page, Web Page Cache, Transcript, Transcript Cache, Audio, Audio Cache.]

210. Robert J. Marks, "AI and Intellectual Property," Guest: Richard W. Stevens, Mind Matters News, June 8, 2023. [Web Page, Web Page Cache, Transcript, Transcript Cache, Audio, Audio Cache.]

211. Robert J. Marks, "AI Libel and Responsibility," Guest: Richard W. Stevens, Mind Matters News, June 15, 2023. [Web Page, Web Page Cache, Transcript, Transcript Cache, Audio, Audio Cache.]

    > "And in legal matters, who is responsible for AI? Robert J. Marks and legal expert Richard W. Stevens discuss these topics and more in this week's podcast episode."

212. Robert J. Marks, "Gregory Chaitin Talks Godel, Computer Science, and the Blessing of Children ," Guest: Gregory Chaitin, ID the Future, June 19, 2023. [Web Page, Web Page Cache, Audio, Audio Cache.]

    > "Robert J. Marks begins a conversation with trailblazing mathematician and computer scientist Gregory Chaitin."

213. Robert J. Marks, "Can Lawyer Robots Solve Complex Legal Cases?" Guest: Richard Stevens, Mind Matters News, June 22, 2023. [Web Page, Web Page Cache, Transcript, Transcript Cache, Audio, Audio Cache.]

214. Robert J. Marks, "What is the Future of the Internet?" Guest: Adam Goad, Mind Matters News, June 29, 2023. [Web Page, Web Page Cache, Transcript, Transcript Cache, Audio, Audio Cache.]

    > "Robert J. Marks speaks with computer engineer Adam Goad about Web 3.0, decentralization, cryptocurrency, and the future of the blockchain."

215. Robert J. Marks, "Can AI Mimic Spontaneous Jazz and the Blues?" Guest: James Hirsen, Mind Matters News, August 10, 2023. [Web Page, Web Page Cache, Transcript, Transcript Cache, Audio, Audio Cache.]

    > "Robert J. Marks sits down with musician James Hirsen to talk about AI deep fakes, its impact on the arts, and the personal aspect of music that makes it so special. "

216. Robert J. Marks, "Defining and Discussing the Radio Spectrum" Guests: Andrew Clegg & Austin Egbert. Mind Matters News, August 17, 2023. [Web Page, Web Page Cache, Transcript, Transcript Cache, Audio, Audio Cache.]

217. Robert J. Marks, "Can the Radio Spectrum Ever Fill Up ?" Guests: Andrew Clegg & Austin Egbert. Mind Matters News, August 24, 2023. [Web Page, Web Page Cache, Transcript, Transcript Cache, Audio, Audio Cache.]

    > "...what happens when the radio spectrum gets overused and starts filling up? Thats the question addressed in todays episode with Robert J. Marks, research scientist Austin Egbert, and special guest, Google engineer Andrew Clegg."

218. Robert J. Marks, "When the Government Controls the Spectrum" Guests: Andrew Clegg & Austin Egbert. Mind Matters News, September 7, 2023. [Web Page, Web Page Cache, Transcript, Transcript Cache, Audio, Audio Cache.]

219. Robert J. Marks, "After You Die: Near-Death Experiences With Glimpses of Heaven and Hell" Guest: Walter Bradley, Mind Matters News, October 26, 2023. [Web Page, Web Page Cache, Transcript, Transcript Cache, Audio, Audio Cache.]

220. Robert J. Marks, "Hope & Energy: Empowering Haiti Through Appropriate Technology" Guests: Brian Thomas and Kayla Garrett, [Web Page, Web Page Cache, Transcript, Transcript Cache, Audio, Audio Cache.]

221. Robert J. Marks, "Can Artificial Intelligence Hold Copyright or Patents?" Guest: Richard Stevens, Mind Matters News, December 28, 2023. [Web Page, Web Page Cache, Transcript, Transcript Cache, Audio, Audio Cache.]

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222. Robert J. Marks, "A Commonsense Defense of Idealism" Co-Host: Brian Krouse, Guest: Doug Axe. Mind Matters News, January 11, 2024. [Web Page, Web Page Cache, Transcript, Transcript Cache, Audio, Audio Cache.]

    > "Idealism is the belief that reality exists exclusively in the minds and ideas of individuals. "

223. Robert J. Marks, "Unpacking Idealism: Animals and Consciousness" Co-Host: Brian Krouse, Guest: Doug Axe. Mind Matters News, January 18, 2024. [Web Page, Web Page Cache, Transcript, Transcript Cache, Audio, Audio Cache.]

224. Robert J. Marks, "Healing the Brain: Insights from a Neurologist" Guest: Andrew Knox, Mind Matters News, January 25, 2024. [Web Page, Web Page Cache, Transcript, Transcript Cache, Audio, Audio Cache.]

225. Robert J. Marks, "From Material to Mind: Understanding Idealism" Co-Host: Brian Krouse, Guest: Doug Axe, Mind Matters News, February 1, 2024. [Web Page, Web Page Cache, Transcript, Transcript Cache, Audio, Audio Cache.]

226. Robert J. Marks, "Beyond the Physical: Embracing an Idealistic Worldview" Co-Host: Brian Krouse, Guest: Doug Axe, Mind Matters News, February 8, 2024. [Web Page, Web Page Cache, Transcript, Transcript Cache, Audio, Audio Cache.]

227. Robert J. Marks, "Can AI Ever Be Sentient? A Conversation with Blake Lemoine" Guest: Blake Lemoine, Mind Matters News, February 29, 2024. [Web Page, Web Page Cache, Transcript, Transcript Cache, Audio, Audio Cache.]

228. Angus Menuge & Robert J. Marks, "Methodological Naturalism: Neutral Principle or Self-Refuting Philosophy?" Guest: Dr. Robert Larmer, Mind Matters News, March 14, 2024. [Web Page, Web Page Cache, Transcript, Transcript Cache, Audio, Audio Cache.]

229. Angus Menuge & Robert J. Marks, "Consciousness and Agency: A Critique of Methodological Naturalism" Guest: Dr. Robert Larmer, Mind Matters News, March 21, 2024. [Web Page, Web Page Cache, Transcript, Transcript Cache, Audio,

230. Robert J. Marks, "The State of Innovation and the Impact of AI" Guest: Jeffrey Funk, Mind Matters News, March 28, 2024. [Web Page, Web Page Cache, Transcript, Transcript Cache, Audio, Audio Cache.]

231. Angus Menuge & Robert J. Marks, "Is Methodological Naturalism Necessary for Scientific Progress?" Guest: Robert Larmer, Mind Matters News, April 4, 2024. [Web Page, Web Page Cache, Transcript, Transcript Cache, Audio, Audio Cache.]

232. Robert J. Marks, "Talk More, Tech Less: Digital Wellness Tips From Dawn Wible" Guest: Dawn Wible, [Web Page, Web Page Cache, Transcript, Transcript Cache, Audio, Audio Cache.]

233. Robert J. Marks & Brian Krouse, "The Relational Person: Challenging the Dominant Model in Psychology" Guest: Dr. Eric Jones, Mind Matters News, June 6, 2024. [Web Page, Web Page Cache, Transcript, Transcript Cache, Audio, Audio Cache.]

234. Robert J. Marks & Brian Krouse, "The Atomistic vs. Relational Model of Personhood" Guest: Dr. Eric Jones, Mind Matters News, June 13, 2024. [Web Page, Web Page Cache, Transcript, Transcript Cache, Audio, Audio Cache.]

235. Robert J. Marks & Brian Krouse "A Case for the Relational Person" Guest: Dr. Eric Jones, Mind Matters News, June 20, 2024. [Web Page, Web Page Cache, Transcript, Transcript Cache, Audio, Audio Cache.]

236. Robert J. Marks, "Trail Life: An Antidote for Digital Addiction in Boys" Guest: Kent Marks, Mind Matters News, June 27, 2024. [Web Page, Web Page Cache, Transcript, Transcript Cache, Audio, Audio Cache.]

237. Robert J. Marks & Angus Menuge, "Dr. Jonathan Loose on Personal Identity and the Life Scientific" Guest: Dr. Jonathan Loose, Mind Matters News, July 4, 2024. [Web Page, Web Page Cache, Transcript, Transcript Cache, Audio, Audio Cache.]

238. Robert J. Marks & Angus Menuge, "Exploring Personal Identity: More from Dr. Jonathan Loose" Guest: Dr. Jonathan Loose, Mind Matters News, July 11, 2024. [Web Page, Web Page Cache, Transcript, Transcript Cache, Audio, Audio Cache.]

239. Robert J. Marks, "Doug Smith on The Pitfalls of Virtual Reality (VR)" Guest: Doug Smith, Mind Matters News, August 1, 2024. [Web Page, Web Page Cache, Transcript, Transcript Cache, Audio, Audio Cache]

240. Robert J. Marks, "How to Rise Above Addictive Technologies to Find Real Freedom" Guest: Doug Smith, Mind Matters News, August 8, 2024. [Web Page, Web Page Cache, Transcript, Transcript Cache, Audio, Audio Cache.]

241. Robert J. Marks, "Richard Stevens on All Things AI and Law" Guest: Richard Stevens, Mind Matters News, August 29, 2024. [Web Page, Web Page Cache, Transcript, Transcript Cache, Audio, Audio Cache.]

242. "Dr. Robert J. Marks Reads From Minding the Brain" Mind Matters News, September 9, 2024. [Web Page, Web Page Cache, Audio, Audio Cache.]

243. Robert J. Marks & Brian Krause, "In What Sense is Consciousness a Property?" Guest: Mihretu Guta, Mind Matters News, October 3, 2024. [Web Page, Web Page Cache, Transcript, Transcript Cache, Audio, Audio Cache.]

244. Robert J. Marks & Brian Krause, "The Unique Relationship Between Consciousness and Its Bearer" Guest: Mihretu Guta, Mind Matters News, October 10, 2024. [Web Page, Web Page Cache, Transcript, Transcript Cache, Audio, Audio Cache.]

245. Robert J. Marks & Brian Krause, "Mirror Neurons, Consciousness, and the Bearer Question" Guest: Mihretu Guta, Mind Matters News, November 14, 2024. [Web Page, Web Page Cache, Transcript, Transcript Cache, Audio, Audio Cache.]

246. Robert J. Marks & Brian Krause, "The Significance of Mirror Neurons: More With Dr. Mihretu Guta" Guest: Mihretu Guta, November 21, 2024. [Web Page, Web Page Cache, Transcript, Transcript Cache, Audio, Audio Cache.]

247. Robert J. Marks, "Flashes of Genius: An Interview with Touch Screen Inventor Hal Philipp" Guest: Hal Philipp, Mind Matters News, December 12, 2024. [Web Page, Web Page Cache, Transcript, Transcript Cache, Audio, Audio Cache.]

248. Robert J. Marks, "Military Preparedness and the Path to Peace: An Interview with Veteran Bobby Hollingsworth" Guest: Major General Bobby Hollingsworth, Mind Matters News, December 12, 2024. [Web Page, Web Page Cache, Transcript, Transcript Cache, Audio, Audio Cache.]

249. Robert J. Marks, "From Dairy Farm to Fighter Pilot: More With Veteran Bobby Hollingsworth" Guest: Bobby Hollingsworth, Mind Matters News, December 19, 2024. [Web Page, Web Page Cache, Transcript, Transcript Cache, Audio, Audio Cache

250. Robert J. Marks, "The Radio Frequency Spectrum as a Finite Natural Resource" Guest: Andrew Clegg & Austin Egbert, Mind Matters News, December 26, 2024. [Web Page, Web Page Cache, Transcript, Transcript Cache, Audio, Audio Cache.]

2025

251. Robert J. Marks, "Semper Fi: A Marine's Perspective on Faith, Duty, and Service" Guest: Maj. Gen. Bobby Hollingsworth, Mind Matters News, January 2, 2025. [Web Page, Web Page Cache, Transcript, Transcript Cache, Audio, Audio Cache.]

252. Robert J. Marks, "The AI Bubble: Lessons from Past Financial Bubbles" Guest: Gary Smith, Mind Matters News, January 9, 2025. [Web Page, Web Page Cache, Transcript, Transcript Cache, Audio, Audio Cache.]

253. Robert J. Marks, "The Hype and Limitations of Generative AI" Guest: Gary Smith, Mind Matters News, January 16, 2025. [Web Page, Web Page Cache, Transcript, Transcript Cache, Audio, Audio Cache.]

254. Robert J. Marks, "Cognitive Psychology and the Limits of AI: An Interview with Dr. Joe McDonald" Guest: Joe McDonald, Mind Matters News, January 23, 2025. [Web Page, Web Page Cache, Transcript, Transcript Cache, Audio, Audio Cache.]

255. Robert J. Marks, "How AI Can Complement Human Capabilities: More with Dr. Joe McDonald" Guest: Joe McDonald, Mind Matters News, February 6, 2025. [Web Page, Web Page Cache, Transcript, Transcript Cache, Audio, Audio Cache.]

256. Robert J. Marks, "Perspectives of a Different Kind of AI Entrepreneur" Guest: David Copps, Mind Matters News, March 6, 2025. [Web Page, Web Page Cache, Transcript, Transcript Cache, Audio, Audio Cache.]

257. Robert J. Marks, "How to Build a Successful Startup in the Age of AI" Guest: David Copps, Mind Matters News, March 13, 2025. [Web Page, Web Page Cache, Transcript, Transcript Cache, Audio, Audio Cache.]

258. Robert J. Marks, "Transforming Industries with AI: Insights from Entrepreneur David Copps" Guest: David Copps, Mind Matters News, March 20, 2025. [Web Page, Web Page Cache, Transcript, Transcript Cache, Audio, Audio Cache.]

259. Robert J. Marks, "Piloting the Cloud: A Technical Tour with Walter Myers III " Guest: Walter Myers III, Mind Matters News, April 3, 2025. [Web Page, Web Page Cache, Transcript, Transcript Cache, Audio, Audio Cache.]

260. Robert J. Marks, "The Ship of Theseus and the Philosophy of Identity" Guest: Walter Myers III, Mind Matters News, April 10, 2025. [Web Page, Web Page Cache, Transcript, Transcript Cache, Audio, Audio Cache.]

261. Brian Krouse & Robert J. Marks, "Is There a Mind Behind the Math Behind the Material World?" Guest: Douglas Axe, Mind Matters News, April 24, 2025. [Web Page, Web Page Cache, Transcript, Transcript Cache, Audio, Audio Cache.]

262. Robert J. Marks, "The Immortal Mind: An Interview with Neurosurgeon Dr. Michael" Guest: Michael Egnor, Mind Matters News, May 22, 2025. [Web Page, Web Page Cache, Transcript, Transcript Cache, Audio, Audio Cache.]

263. Robert J. Marks, "From Operating Room to Chapel: A Neurosurgeons Journey to Faith" Guest: Michael Egnor, Mind Matters News, June 5, 2025. [Web Page, Web Page Cache, Transcript, Transcript Cache, Audio, Audio Cache.]

264. Robert J. Marks, "Neuroscience, Free Will, and the Soul" Guest: Michael Egnor, Mind Matters News, June 12, 2025. [Web Page, Web Page Cache, Transcript, Transcript Cache, Audio, Audio Cache.]

10 In The News

10.1 Adaptation of Cone Kernel GTFR

Y. Zhao, L.E. Atlas and R.J. Marks II, "The use of cone-shaped kernels for generalized time-frequency representations of nonstationary signals", IEEE Transactions on Acoustics, Speech and Signal Processing, vol. 38, pp.1084-1091 (1990).

1. Use in MATLAB toolbox manual
2. National Instruments Software
3. LabVIEW Software

10.2 Articles in the News

10.2.1 1960-1979

1. "Ohio Explorers Here for Romp & Stomp Corps-Style" Windsock (Newspaper of 2D Marine Aircrapt Wing, May 1965

   > "Some 180 Explorer Scouts from the Cleveland, Ohio are spending their Easter 'vacation' week here getting an insight of the Marine Corpse life and generally broadening their knowledge. "

2. "Scouts Become Marines" Cleveland Press, May 6, 1965

   > "YOU TOO CAN BE A MARINE ... applied to nearly 180 Explorer Scouts from the Greater Cleveland . Council, Boy Scouts of America, during a five-day encampment at Cherry Point Marine Corps Air Station, N. C. "

3. "Garfield Heights Band Plays at (Cleveland Manciple) Stadium" Garfield Hts Leader, December 2, 1965

   > "This Sunday, December 5th, the Garfield Heights Bulldog Band will perform at Cleveland Municipal Stadium during the pre-game and half-time of the Champion Cleveland Browns, Washington Red Skins football game."

4. The Mirror "Over 200 Enter Projects in Science Fair." Winning Garfield Heights High School Science Fair (1968).

   > "Posing for the MIRROR are [seven] winners of the Superior rating. Back row... Robert Marks..."

5. Ohio Academy of Science, Junior Membership, March 13, 1968 (Age:17) [Certificate]

6. State Superior Award, April 6, 1968 (Age:17) [Certificate]

10.2.2 1980-1989

1981

7. William W. Stone,"Transformations in Optical Signal Processing," Applied Optics, vol. 20, No. 15, pp. A143-A144 (1981)

1982

8. "Noteworthy Counselors. Here are 1982's Top Ten Outstanding and Advisors," IEEE Potentials, Fall 1982, pp.44-45

   > "He has been sensitive to providing opportunities for the students to develop their talents for leadership and facing the realities of extracurricular, professionally oriented teamwork. This includes the notion of professional responsibilities.
   >
   > James S. Meditch, Chairman' Dept of Electrical "

1987

9. Brenna Chow, "Faculty Profile: Professor Robert J. Marks II," EE News (University of Washington) Vol II, No. 4, December 1987, pp.1-2

   > "After leaving his office, I had in my bag a complimentary copy of 'Addended Chortles,' a cartoon booklet, and a cassette tape entitled 'Theatre of the Ears: Much Ado About Shakespeare,' a radio play whose plot revolves around a physicist resurrecting 'The Bard' (William Shakespeare). Side B of the cassette contained thirty minutes of original songs written and produced by the same man in his home recording studio. This gentleman also worked his way through college as a disc jockey and talk show host on a 50,000 watt FM radio station. Wait! This doesn't sound like the profile of a logical and reserved EE professor!
   >
   > "On the contrary, cartooning, songwriting, and audio play writing are just some of the hobbies of Professor Robert J. Marks IT, a member of the Electrical Engineering department's faculty since 1977. However, while his hobbies may seem a bit whimsical, his research is pursued with a steady earnestness."

10. "Marks heads local Optical Society chapter; chairs IEEE committee" Data (University of Washington), November 1987

11. Sharon Kasper, "Artificial neural networks model the human brain," The Trend in Engineering, 1987 pp.4,9

    > "Robert J. Marks II, professor and Les Atlas, assistant professor, both of electrical engineering are combining their skills in optical computers and speech recognition to help uncover the secrets of neural networks."
    >
    > "Improved memory with in the actual computer architecture is another advantage of the APNN. The associative memory capability of the artificial neural network could allow the APNN to identify a black and white picture (similar to a digitized pictur e) of the Mona Lisa given only her smile. 'We have a matrix of neurons,' explains Marks. 'that can take on a gray levels. In this matrix every neuron is connected to every other neuron, and each neuron can assume a val ue that relates to a gray level. So, having been given a picture of the Mona Lisa, the gray levels of that picture are imposed on the neurons and the information is stored in the interconnects...and remarkably, if the network is then given only the Mona Lisa's smile, the APNN could then extrapolate the entire face of the Mona Lisa.' "

12. "The Optical Society Of America now has an official Puget Sound Chapter, thanks to the efforts of Robert J. Marks II," The Trend in Engineering, May 1987 p.6

1988

13. "Marks Is first honorary member of Puget Sound Optical Society" Data (University of Washington), November 1988

    > "Robert J. Marks, Professor, EE, has been awarded the first Honorary Membership in the Puget Sound Section of the Optical Society of America for 'his efforts in founding the Puget Sound Section and his excellent performance as the section's first president"'

14. R. Colin Johnson, "Optics And Neural Nets: Marriage Of Convenience," Electronic Engineering Times, January 18, 1988

    > "One paper... described a neural network architecture for optical technology that took but a single presentation for any particular set of data to be learned.
    >
    > "It also was claimed to be very fast sinc e its passive optical feedback used only guided or free space propagation."
    >
    > "The University of Washington professor Robert J. Marks II gave the presentation ..."

15. Sharon Kasper, "Artificial neural networks model the human brain," The Trend in Engineering, Vol. 39, No. 1, Spring 1988, pp.1-2

    > "Robert J. Marks 11, professor, and Les Atlas, assistant professor, both of electrical engineering, are combining their skills in optical computers and speech recognition to help uncover the secrets of neural networks."

"Developing a computer that can deal with such complexity requires an understanding of the human (biological) brain and the way in which its billions and billions of neurons interact."

1989

16. OSA Fellows, Optics News September 1989

    "For contributions to image recovery and synthesis, optical processing, and electro-optical neural networks"

17. "Council on Neural Networks formed," EE News (University of Washington), Vol. 4, #2 (December 1989) p2.

    "At their November Meeting, the Technical Activities Board of the IEEE, consisting ofthe presidents of the 37 societies and councils ofthe IEEE, approved formation of the IEEE Council on Neural Networks (CNN). The CNN will be the focus of all neural network activity in the IEEE, including the publishing of the new journal IEEE Transactions on Neural Networks and coordination ofthe largest conference in the world on the topic, the International Joint Conference on Neural Networks.

    "At the first meeting of the Administrative Committee of the CNN, UW EE professor Robert J. Marks II was elected the first president of the CNN."

10.2.3 1990-1999

1990

18. Herb Rauch, "The Inauguration of a New Publication," IEEE Transactions on Neural Networks, Vol. 1, No. 1 (1990), p.1

    "The creation of a new publication is an immense undertaking, and we thank the many people who have made it possible. In particular. Bob Marks. President of the IEEE Neural Networks Council, has provided valuable leadership and steady support."

1991

19. "Scientists create thinking computers to forecast loads" Puget Power & Light Co. Newsletter (1991)

    "A think tank consisting of university professors and technical experts from inside and outside of PG&E laid the foundations for developing a "smart" electrical distribution system that will be a key piece of the utility of the future."

"To create the vision and begin prioritizing some of the needed early research, experts from within PG&E and outside the company were brought in. 'We brought in a group of experts from around the U.S.,' explained Steve Krein. 'The list includes Dr. Lotfi Zadeh, a professor at U.C. Berkeley who's been called 'the father of fuzzy logic,' Dr. Robert Marks, the president of the EEE neural networks society, Dr. Roger Howe, who is co-director of the sensors lab at U.C. Berkeley, Dr. John Grainger, the director of the Electric Power Research Center at North Carolina State, and others."

20. "INNS, IEEE to End Meet Agreement," Intelligence, The Future of Computing, Vol.7, No. 10, February 1991

"Werbos received word that the IEEE's (Institute of Hectrical and Electronic Engineers) neural network council administrative committee had moved by vote to end the joint meeting agreement with INNS after meetings to be held in 1993."

"Robert Marks of the U of WA/Seattle, who's patent #849,940 appeared in the January, 1990 issue of INTELLIGENCE, spoke of the vote on behalf of the IEEE neural net council. He noted that the council may eventually become a full society within the IEEE structure. He said that the vote to dissolve the agreement because the focus of interest of the neural net council was expanding.

"Asked whether the vote was final, Marks said: 'Yes. It is final. You could see that now we [the two organizations] are divorced. But that doesn't mean that we might not live together again in the future. And, if you consider the conferences to be like our children, there might be more in the future. Further negotiations will determine the future nature of the IEEE/INNS relationship.' "

21. Hill Williams "Power Matchup," Seattle Times, June 17, 1991

"It was man against machine... [T]he computer, programmed in eerie similarity to a human brain, had performed impressively."

"The computer made its own predictions during the test period, from November through March. It was one of the Pacific Northwest's first trials of what's known as a neural network in which a computer can train itself by learning from its own mistakes."

" 'It's an exciting technology, the ability (of the network) to gain wisdom from experience,' said Robert Marks, a professor in the UW's department of electrical engineering. The department is one of the nation's leaders in development of neural networks. Neural networks are an attempt to imitate the human brain, described by one expert as 'the most complicated and sophisticated thing on the planet.' "

" 'A problem with neural networks is that they take a long time to train," Marks said. "You have to show them what to learn thousands and thousands of times.' "

22. John Swensen, "Computer Learning Shapes Up," Journal American, June 21, 1991.

    "Researchers at Boeing Computer Services say an emerging technology called neural networks may help them save asubstantial amount of money on each new commerciai aircraft part made by Boeing engineers."

    "Neural networks are similar to artifical intelligence, but with a key difference. Robert Marks, professor of electrical engineering at the University of Washington and president of a neural-network engineering group, explained the difference between the two technologies with this example: To teach a neural network to distinguish between a bush and a tree, one would show it a bush and a tree and another bush and another tree and so on until it learned the difference. To teach a so-called 'expert system' using artifical intelligence, one would feed it a set of rules describing a bush and a tree, such as, 'A bush is a small squatty thing which ... ' and so on."

23. Ming Koh, "Everyone likes it hot! Pizza Unites EE's at IEEE Pizza Feed," EE News (University of Washington), Vol. 5, #4 (March 1991) p1

    "Professor Bob Marks of the EE department did a fine job of running the evening's program and introducing the various speakers. He once took the opportunity himself to briefly describe the activities of the IEEE and the benefits of being a member."

24. "The Specialties," IEEE Spectrum, January 1991, p.79

    "Artificial neural networks remain the most exciting topic in the field of computational sciences, maintained Robert J. Marks II, president of the IEEE Council on Neural Networks. Meanwhile, however, they 'are still seeking an application identity,' he said. 'Currently, the bulk of interest is being focused on artificial neural networks as classification and regression machines trained by example. Such networks have been proposed and preliminarily applied in fields as diverse as electric power load forecasting, medical diagnosis, mortgage brokering, explosives detection, speech recognition, remote sensing, and racehorse handicapping.' The short-term success of the networks will be determined by their performance relative to other cutting-edge techniques and to more conventional approaches, he said, adding that in recent studies 'in most cases, the artificial neural network has performed quite well.'

    "But although the 'modular and parallel structure and, in some cases, the highly fault-tolerant characteristics of artificial neural network architectures remain quite attractive,' Marks cited some problems. 'The most widely used artificial neural networks, for example, don't scale well. They typically yield a diminishing performance return as the size of the net grows,' he observed. 'Possible solutions include modularization or a more general algorithmic breakthrough.' As for their current use as classification and regression machines, he pointed up significant training problems. 'Current popular training procedures, for example, remain painfully slow and many require floating-point precision, prohibiting analog implementation,' he said."

25. Decisions Systems International (DSI) Newsletter, Artificial Neural Networks Short Course Announcement, Monaco, (February 1991)

    "Dr.Marks is a foremost international authority I on Anificial Neural Networks. He is currently professor in the Department of Electrical Engineering at the University of Washington. He was the Chair of IEEE Neural Networks Committee and was the co-founder and first chair of IEEE Circuits and Systems Society Technical Committee on Neural Systems & Applications. Professor Marks was also elected the first President of the IEEE Council on Neural Networks."

26. Optical Systems Lab, Texas Tech University (1991) (flyer)

    "'I found the research to be on the cutting edge, and I thoroughly enjoyed my interactions with the OSL faculty, I wish people everywhere were like the people of Lubbock' Bob Marks, Ph.D."

1992

27. Bryon Taylor, "Alumnus takes his research beyond the ivory towers," Rose-Hulman Echoes, Vol.1991-1992, Summer, 1992, p.16.

    "Robert J. Marks 11 thrives in higher education, but don't go building him any ivory towers. He is not one to limit his activities to his lab.

    "The 1972 electrical engineering graduate is a teacher, researcher, editor, businessman, song writer and cartoonist. In his spare time, he was able to return to campus this spring to receive a Distinguished Young Alumnus award."

    Marks is co-founder of the Christian Faculty Fellowship at the University of Washington and he serves as faculty adviser to the college's Campus Crusade for Christ."

28. "Dr. Marks receives Award," Garfield Hts. Leader, May 14, 1992.

    "Jack and Lenore Marks attended their son's award presentation by his alma mater, Rose Hulman Institute of Technology in Terre Haute, Indiana...

    "Dr. Marks was presented a Distinguished Alumni Plaque for having distinguished himself among his peers, for having used his education for the betterment o mankind and for bringing credit to his alma mater."

29. Rose-Hulman Honors and Awards, May 2, 1992 - Distinguished Young Alumni Award.

    "A professor of electrical engineering at the University of Washington, Marks has been recognized for his work by IEEE. In 1984, he was honored with the IEEE Centennial Medal and Certificate. He was an IEEE Distinguished Lecturer in 1991-92. He also is a fellow of the Optical Society of America.

Marks has published over 100 journal and proceeding papers in the areas of signal analysis, detection theory, signal recovery, optical computing, signal processing, fuzzy systems and artificial neural processing. He has two patents in the field of neural networks."

30. "Dr. Robert Marks receives Distinguished Alumni Award" The Glenville Democrat, May 14, 1992, Volume 88. Number 20, p.7.

    "Dr. Robert J. Marks II, son of Jack and Lenore Marks of Garfield Heights, Ohio., formerly of Sand Fork, has been presented a Distinguished Alumni Award in ceremonies held at Rose Hulman Institute of Technology in Terre Haute.

    "Mr. and Mrs. Marks and Dr. Marks' uncle and aunt, Junior and Justine McHenry, also formerly of Sand Fork, attended the presentation ceremonies in Terre Haute.

    "He has lectured or taught short courses throughout the United States and in Europe, Asia and Mexico. This year he is scheduled to lecture in a number of cities both in and outside the United States including Beijing, Moscow and Madrid.

    "In 1984 he was honored with the Institute of Electrical and Electronics Engineering Centennial Medal and Certificate. He was an I.E.E.E. Distinguished Lecturer for 1991- 1992 and is Editor-in-chief of I.E.E.E. Transactions on Neural Networks. He has two patents in the field of neural networks."

31. "The Specialties," IEEE Spectrum, January 1992, p.63

    "Robert J. Marks II, president of the IEEE Council on Neural Networks, calls the networks an extraordinary engineering tool, which is here to stay. They are already currently viable in a number of applications and useful, dedicated hardware is available. A promising area, he said, is the coupling of neural networks to fuzzy systems. 'Layered perceptrons [feedforward artificial neural networks] can be taught fuzzy membership functions from raw data. Rules are thereby empirically learned.'

    "A related discipline, Marks pointed out, is the genetic algorithm and associated evolutionary programming. The terminology, he said, 'relates only loosely to the biological counterpart, not unlike reference to 'rabbit ears' or an 'electronic eye.' Genetic algorithms perform a highly parallel search of use in, say, the design and optimization of neural network architectures.' But, Marks emphasized, as a technology, genetic algorithms and fuzzy nets are where neural networks were about a decade ago."

32. "Photos courtesy of Bob Marks" IEEE CoNNections, Volume 2, #1, February 1992

33. Russell C. Eberhart, "President's Message", CoNNections: The Newsletter of the IEEE Neural Networks Council, Vol.2, No.4, December 1992, p.3.

> "I also believe that I share the award with many people in the NNC who 'kept the faith' and worked hard to make the conference a reality, such as Prof. Robert Marks, who has consistently helped with international activities,"

34. Wesley E. Snyder, "From Russia ... With Hope", CoNNections: The Newsletter of the IEEE Neural Networks Council, Vol.2, No.4, 1992, p.4

> "Congratulations and thanks are due to many people: Witali Dunin-Barkowski, the general chair, and his colleagues in Russia; Bob Marks, former NNC president and current editor of the Transactions on Neitral Nerworks; who was international chair; Dmitry Kaplan of the University of Washington who handled the (very complicated) finances of the conference, and doubled as translator and guide for Bob and me;"

35. J.C. Bezdek, "Guest Editorial," IEEE Transactions on Neural Networks, Vol. 3, No. 5, September 1992, p.641.

> "Thus, it seems appropriate at this point to fitst thank the NNC (in particular, Russ Eberhart, Bob Marks, Pat Simpson, and Mike Roth) for their interest, enthusiasm, and support."

36. Kathleen Dugan, "PUNK SIGNAL PROCESSING?" EE News (University of Washington), Vol. 6, #3 (Feb 1992) p5.

> "Other researchers and theorists have brought a significant amount of insight into the theories, including Professor Marks(two dimensional transform theory)"

37. Russell C. Eberhart, "President's Letter", CoNNections: The Newsletter of the IEEE Neural Networks Council, Vol.2, No.1, February 1992, p.3

> "As I take over the Presidency of the IEEE Neural Networks Council, I reflect over the past two years under the leadership of Bob Marks. His guidance was creative, yet even-handed. He always considered all the sides of a question, but wasn't afraid to make hard decisions when they were needed. He paid attention to every administrative detail, but never lost sight of the big picture. And he insisted on the highest standards of integrity and service to the members. I hope I can do as well."

38. Colin Wiel, "Don't Miss the First FLANNIG Invitational Roundtable," Fuzzy Logic and Neural Network Interest Group (FLANNIG), Vol. 1, No. 2 , September 1993, p.1

> "On Thursday, Oct. 14th, FLANNIG will host a roundtable discussion titled 'Applying Fuzzy Logic' featuring a panel of fuzzy login practitioners from companies within Washington. Dr. Bob Marks, professor of Electrical Engineering at the University of Washington, will moderate the discussion."

39. "Market to Market," Pacific Economic Review Magazine, Summer 1993, p.4 (About the business *Financial Neural Networks*

"Finacial Neural Networks (FNN) Inc. of Kirkland Washington is co-sponsoritn a project with the Wasshington Technology Center (WTC) to improve its current artificial neural network-based software package used to predict performance of the Standard & Poor 500."

40. Wesley E. Snyder, "From the Editor", CoNNections: The Newsletter of the IEEE Neural Networks Council, Vol.2, No.1, February 1992, p.16

    "On behalf of the Council I'd like to offer thanks to Mike Roth, who is stepping down as editor of the IEEE Transactions on Neural Networks. Rather than taking a well deserved rest after servlng as NNC 1991 President, Bob Marks, is succeeding Mike as the third editor of the Transactions."

41. Russell C. Eberhart "PRESIDENT's MESSAGE: INNS and IEEE: An end to an era" IEEE CoNNections, Volume 2, #2, May 1992

42. James C.Bezdek, "Conference Report: IEEE FUZZ-IEEE,1992" IEEE CoNNections, Volume 2, #2, May 1992

    "...it seems. appropriate at this point to first thank Russ Eberhart, Bob Marks, Pat Simpson and Mike Roth for their interest enthusiasm and support for the conference. "

43. Russell C. Eberhart "President's Message" IEEE CoNNections, Volume 2, #4, September 1992

    "I also believe that I share the award with many people in the NNC who "kept the faith" and worked hard to make the conference a reality, such as Prof. Robert Marks, who has consistently helped with international activities, "

1993

44. IEEE Fellow, IEEE Neural Networks Council: "1993 Fellows" , CoNNons ections: The Newsletter of the IEEE Neural Networks Council, Vol.4, No 1, March/April 1994, pp.4-5

    "For leadership in, and contributions to, the field of neural networks"

45. IEEE Fellow, IEEE Power Engineering Society: IEEE Power Engineering Review, v.14, #2, 1994, Cover

46. "IEEE Fellows," Proceedings of the IEEE World Congress on Computational Intelligence, (1994)

47. "IEEE CAS Fellow Profiles 1994", IEEE Circuits and Systems Society (CAS)

48. Wendy Bannister, "Roundtable Brings Fuzzy Logic Into Focus" Fuzzy Logic and Neural Network Interest Group (FLANNIG), Vol. 1, No. 3 , December 1993 , pp. 1-2.

"We recently conducted a round table discussion of applying fuzzy logic to real life problems Dr. Bob Marks of the University of Washington lead the questioning of the five member panel. The experience of our panel members ranged from creating software to explore fuzzy logic to making hardware en bedded fuzzy systems, and from control systehs of large manufacturing kilns to the braking of airplanes. The panel members, with the direction of Dr. Marks, offered commentary on the stability of systems, eased training, problems encountered, and the possible future of fuzzy systems."

49. Russell C. Eberhart, "President's Message", CoNNections: The Newsletter of the IEEE Neural Networks Council, Vol.3, No 2, July 1993, pp.1-2.

    "The Council's next conference is the Virtual Reality Annual International Symposium (VRAIS), being held in Seattle, Washington, in September. Tom Furness, Tom Caudell, Bob Marks and the rest of the organizing committees have been working hard to make this, the first IEEE-sponsored conference focused on virtual reality, an event you won't want to miss if you are working on or interested in the field."

50. "Hard working AdCom members labor under the gaze of Jack London and Marks Twain image caption

51. "Hard working AdCom members labor under the gaze of Jack London and Marks Twain image caption, IEEE CoNNections, Volume 3, #2, February 1993

52. Russell C. Eberhart "President's Message IEEE CoNNections, Volume 3, #4, December 1993

    "By the time we became a Council in 1990, with Bob Marks at the helm, we were initiating activities in fuzzy systems and evolutionary computation. "

53. "Conference Reports: IJCNN 93 Nagoya IEEE CoNNections, Volume 3, #4, December 1993

    "The technical programs were prepared by the Program Co-Chairs, Prof. K.Fukushima ,Prof. R.J. Marks II, Dr. H. H. Szu, and Prof. N.Sugie. "

1994

54. "1993 IEEE Fellows IEEE CoNNections, Volume 4, #1, March-April 1994

    "Congratulations to the following members of the Neural Networks community who were elected to Fellow status in the IEEE. The nominations of Bob Marks and Shiro Usui were evaluated by the Awards Committee of the Neural Networks Councils."

55. "TNN Associate Editors IEEE CoNNections, Volume 4, #1, March-April 1994

"RobertMarks, Editor of the IEEE Transactions on Neural Networks has appointed the following Associate Editors "

10.2.4 2000-2009

2003

56. Marks receives NASA Tech Brief Award, Oct. 13, 2003

"Tech Briefs, a NASA magazine reporting innovative engineering design and manufacturing solutions, has recognized Dr. Robert J. Marks, Distinguished Professor of Electrical Engineering at Baylor University, with an award for innovations reported in a paper, 'Minimum Power Broadcast Trees for Wireless Networks.'

"The NASA Tech Briefs Award recognizes new technology that relates to current or future NASA's aeronautical and space activities. Marks, along with his co-innovators, was cited for developing new technology that contributes to the mission of the Jet Propulsion Laboratory and the National Space Program."

2006

57. Richard D. Christie, "A Century of Innovators: The Centennial History of the Department of Electrical Engineering at the University of Washington" 1895-2005 [Link]

"Arriving on campus in 1977 was Robert Jackson Marks II, B.S.E.E. 1972, M.S. 1973 Rose-Hulman Institute of Technology, Ph.D. 1977 Texas Tech University. Appointed Assistant Professor, Bob Marks was the first pure signal processor to appear in the Department. Prior to his arrival, faculty in various areas had dealt with signal processing as a part of the larger problems they studied, rather than considering it as an area in its own right. As bandwidth and computational capacity increased, the signal processing area became broad and deep enough to stand on its own. Bob Marks dealt with optical information processing, image processing, and signal analysis."

"1984 was the centennial year of the Institute of Electrical and Electronic Engineers (IEEE). To celebrate the occasion the IEEE awarded 1,984 Centennial Medals. Four faculty in the department were awarded Centennial Medals: Professor Irene Peden, Professor Akira Ishimaru, Professor and Chairperson Jim Meditch and Professor Robert Marks II."

"In 1987 a curriculum revision created by Bob Marks and his committee was put in place. There are indications that this revision was driven to some extent by the Accreditation Board for Engineering and Technology (ABET). In the core, the Fundamentals of Computer Operation and Organization course, EE 371, became an engineering fundamentals course, ENGR 275,

nominally taught in the sophomore year. This freed up some credits for Electrical Engineering electives. The choice between EE 372, Introduction to Microprocessors, and EE 374, Data Structures, now became one course, EE 370, Introduction to Digital Systems and Computers. The core remained 44 credits, although four of those were now engineering fundamentals instead of EE."

"The Trend in Engineering reported on several faculty research programs in 1988. Professor Yongmin Kim was working with Professor Alan Nelson of Bioengineering on 3D display of the human spine. Associate Professors Les Atlas and Bob Marks were working in their Interactive Systems Design Laboratory on alternate projection neural networks (APNN) for image recognition, with funding from several sources."

"In Spring 2003 Professor Robert J. Marks II left the department to return to his native state of Texas and Baylor University. Marks had been the first pure signal processor in the Department when he arrived in 1977 and had done much research in the area of neural network applications to signal processing. He had formed a productive partnership with Professor Mohamed El-Sharkawi and together they operated the Computational Intelligence Applications Laboratory, or CIA Lab. Professor Marks was an outspoken advocate of rigor and selectivity in the graduate program and faculty promotion and tenure. He had directed an undergraduate curriculum revision in 1987 and was a member of the committee that redrafted the College faculty promotion and tenure guidelines."

"

58. "Engineering research seeks to replicate natural behaviors," Baylor Research Tracks, June 6, 2006.

"Dr. Robert Marks, Distinguished Professor of Electrical and Computer Engineering, recently received a grant from the Office of Naval Research to support his work on the behavior of swarms.

"Swarm behavior is commonly observed in the natural world, where insects like ants, bees and termites are able to build intricate structures without any central control or supervision. While it might seem that the tiny creatures are exhibiting highly intelligent behavior, Dr. Marks says the behavior is actually driven by simple rules governing the action of individual insects. Taken together, these rules result in emergent, and often unexpected behaviors. To illustrate the way simple rules can influence swarm behavior, Dr. Marks asks students in his classes to look around the room and randomly choose two other students, then challenges the class to predict what will happen when everyone stands up and takes slow steps to position themselves between the two others. The answer, that students end up clustered in the center of the room, isn't readily apparent.

"While this example shows the challenge of predicting behaviors based on

rules, Dr. Marks says the inverse problem beginning with a desired swarm behavior and crafting rules that will produce it is even more difficult.

" 'We use computer simulations to devise swarms and set them in motion,' he said, 'then see which rules get closest to the behavior we want. Then we can repopulate the swarms that work best and make slight modifications so the fitness of the behavior gets better and better.'

"Swarm behavior has implications in a variety of areas, from logistics to communication to military applications. In his current project, Dr. Marks will work with graduate student Jon Roach and Dr. Benjamin Thompson, a Baylor alumnus (B.S. '00) currently working as a research associate and heading a department in the Applied Research Lab at Penn State University. They'll seek to design swarms that mimic another behavior found in nature agents' changing roles in response to outside stimuli.

" 'If an ant colony is attacked, worker ants become soldier ants,' he said. 'When a bee finds flowers, it returns to the hive and does a dance to recruit other bees to accompany it back to harvest the flowers. We are looking at ways to use this property in the design of swarms.' "

2007

59. Anika Smith, "Banned Item of the Year," ID the Future. October 15, 2007 ... [Podcast]

    "On this episode of ID the Future, Casey Luskin celebrates Banned Books Week by nominating Dr. Marks's Evolutionary Informatics Lab as the Banned Item of the Year."

60. Casey Luskin,"Banned Item of the Year: Dr. Robert Marks' Evolutionary Informatics Website," Evolution News & Views, 071003

    "Last year John West nominated Of Pandas and People as Banned Book of the Year after the ACLU tried to have it banned from Dover Science Classrooms. We are again celebrating Banned Books Week, and it is fitting to note that Baylor University is also observing Banned Book Week.

    "Baylor's Banned Books Week events page states, 'What do authors Harper Lee, F. Scott Fitzgerald, John Steinbeck and J.K. Rowling have in common? They have all written books that were challenged and banned by libraries in the United States.' Although his work in question here is not a book, Dr. Robert Marks also has something in common with those authors: someone has banned his ideas. As we have recounted extensively here on Evolution News & Views, a Baylor University administrator originally ordered Dr. Marks to 'disconnect this web site immediately' because he had 'received several concerned messages this week about an [ID the Future Podcast] interview and web site dealing with evolutionary computing associated ID.' Dr. Marks' website discussing his research that challenges Darwinian evolution was then banned from Baylor webspace without his knowledge or

permission, and Baylor has yet to restore the website to its server. Thus, I would like to nominate Robert Marks' Evolutionary Informatics Website as the banned item of the year for 2007. Banned Books week is supposed to be a celebration of tolerance and diversity, so in that spirit it seems fitting to discuss some of the research papers that Dr. Marks formerly had posted on his Baylor Evolutionary Informatics Lab website:

"William A. Dembski and Robert J. Marks II, 'Conservation of Information in Search: Measuring the Cost of Success' "

"William A. Dembski and Robert J. Marks II, 'Active Information in Evolutionary Search' "

61. William Dembski "Robert Marks's Evolutionary Informatics Lab," Uncommon Descent, 2 June 2007

    "Robert J. Marks II... has just put his new Evolutionary Informatics Lab online [EvoInfo.org]"

62. email from Dean Ben Kelley

    ""Bob:

    "I have received several concerned messages this week about an interview and web site dealing with evolutionary computing associated ID. Please disconnect this web site immediately and Cheryl will arrange a time for us to meet immediately upon my return. I am teaching in the I5 program in Shanghai this week.

    "Thanks,
    Ben Kelley"

63. William Dembski, "Paper and Website: 'The Jesus Tomb Math' ", Uncommon Descent, July 12, 2007

    "As I announced a few weeks ago on this blog, Robert Marks and I have been collaborating on some papers on the mathematical foundations of ID at the Evolutionary Informatics Lab (these papers are currently under review with mainstream peer-reviewed journals)"

    "We have also just finished a paper debunking the statistics of James Cameron et al. (go to www.jesusfamilytomb.org), who have claimed both in a documentary on the Discovery Channel and in a book titled The Jesus Family Tomb that the pattern of names in a tomb found outside Jerusalem matches names in Jesus' family so closely that it is highly probable that this is in fact the family tomb of the New Testament Jesus. Since 'Jesus son of Joseph' is buried there, this would indicate that Jesus himself is buried there. The implication that the Resurrection is a hoax is immediate.

    "Prof. Marks and I show that the statistics cited by the Jesus Family Tomb people are bogus. See our paper."

64. Casey Luskin, "Well-Informed: Dr. Robert Marks and the Evolutionary Informatics Lab," Intelligent Design, the Future, July 20, 2007

> "In today's episode of ID The Future, Casey Luskin interviews Dr. Robert Marks about his work in evolutionary informatics at Baylor University. Marks explains that evolutionary informatics seeks to emulate evolution on a computer, allowing for new engineering designs to be developed. Unlike Darwinian evolution, this process does not advance gradually, and requires a certain amount of external information to be fed into the computer before the process can begin; in other words, the systems must be designed before the evolution can begin. This contrast fueled Marks' interest in intelligent design, and has led him to critically analyze a number of evolutionary computer programs that claim to prove Darwin's theories"

65. William Dembski "Casey Luskin interviews Robert Marks concerning his new Evolutionary Informatics Lab," Uncommon Descent, 20 July 2007

> "Here's a fun interview with my friend and colleague Robert Marks. I hope you catch from the interview the ambitiousness of the lab and how it promises to put people like Christoph Adami and Rob Pennock out of business"

66. Ben Stein, "Expelled: No Intelligence Allowed Blog," Expelled

> "When a 'Baptist' University pulls the plug on Evolutionary Informatics Lab because of its links to intelligent design proves the antagonism to ID. The Baylor University administration shut down Prof. Robert Marks's Evolutionary Informatics Lab because the lab's research was perceived as linked to intelligent design (ID).
>
> "Robert J. Marks II, Distinguished Professor of Electrical and Computer Engineering at Baylor, had hoped that a late-August compromise would save his lab, but the University withdrew from the previous offer. While President Lilley was not at the meeting, an insider senses his hand in the affair, noting that Lilley was the only person with the authority to overturn what the Provost, who was at the meeting, agreed to."

67. Casey Luskin, "William Dembski Addresses Forthcoming Intelligent Design Research that Advances ID and Answers Critics," Evolution News & Views, July 22, 2007

> "Our recent podcast interview with Robert Marks, Distinguished Professor of Electrical and Computer Engineering at Baylor University, discusses his new Evolutionary Informatics lab at Baylor University."
>
> "With the formation of Baylor's Evolutionary Informatics Lab just this month and work by me and my colleague Robert Marks on the conservation of information (several papers of which are available at www.evolutionaryinformatics.org), I think ID is finally in a position to challenge certain fundamental assumptions in the natural sciences about the nature and origin of information. This, I believe, will have a large impact on science."

68. *Expelled: No Intelligence Allowed* Blog, August 21, 2007

> "A distinguished science professor at a major American university has weighed in on Iowa State University's denial of tenure to pro-ID astronomer Guillermo Gonzalez, expressing astonishment at the result. According to Dr. Robert J. Marks, Distinguished Professor of Electrical and Computer Engineering at Baylor University:
>
> " 'I went to the Web of Science citation index which is the authority on citations. Only journal papers, not conference papers, are indexed. There are lots of Prof. Gonzalez's papers listed. My jaw dropped when I saw one of his papers has 153 citations and 139 on another. I have sat on oodles of tenure committees at both a large private university and a state research university, chaired the university tenure committee, and have seen more tenure cases than the Pope has Cardinals. This is a LOT of citations for an assistant professor up for tenure. The number of citations varies with discipline and autocitations are included in the tally, but this is a LOT of citations for an Assistant Professor. A lot.' "

69. Sam Hodges "Baylor easing up on Intelligent Design advocates,"Dallas News Religion, August 23, 2007

70. Lynn Vincent "Baylor plays fair on ID-supporting research," World Views, August 23, 2007

> "Four years ago, distinguished professor of engineering Robert J. Marks left his longtime position at a secular school to help Baylor University achieve its aim: To become a top-tier research institution without compromising its distinctly Christian worldview. But when Marks recently created a lab dedicated to evolutionary informatics then published his findings on a university website, some Baylorites didn't like it."

71. "Baylor plays fair on ID-supporting research," World Views Daily News, August 23, 2007

> "Four years ago, distinguished professor of engineering Robert J. Marks left his longtime position at a secular school to help Baylor University achieve its aim: To become a top-tier research institution without compromising its distinctly Christian worldview. But when Marks recently created a lab dedicated to evolutionary informatics then published his findings on a university website, some Baylorites didn't like it.
>
> "Some members of the Baylor community took issue with Marks' conclusions, which place limits on the scope of Darwinism and offer scientific support for the theory of intelligent design. These ID opponents, who remain unidentified, complained to Dean Ben Kelley of the School of Engineering and Computer Science, who promptly pulled the plug on Marks' lab and took down the accompanying website.

"But Marks' story, so far, has a better ending than that of mathematician William Dembski, whose Michael Polyani Center at Baylor also studied Intelligent Design."

72. Mark Bergin, "Crisis averted," World Magazine, August 25, 2007

"Robert J. Marks fully endorses the vision of Baylor University. The distinguished professor of engineering left his longtime position at a secular school four years ago to help Baylor realize its ambitious aimnamely, to achieve the status of a top-tier research institution without compromising its distinctly Christian worldview.

"To that end, Marks recently created a lab dedicated to evolutionary informatics, the study of whether Darwinian processes like random mutation and natural selection can generate new information. He published his findings on a university-hosted website, believing the research to be both top tier and consistent with Baylor's Baptist heritage.

"But some members of the Baylor community took issue with Marks' conclusions, which place limits on the scope of Darwinism and offer scientific support for the theory of intelligent design. These ID opponents, who remain unidentified, complained to Dean Ben Kelley of the School of Engineering and Computer Science, who promptly pulled the plug on Marks' lab and took down the accompanying website."

"Marks has no intention of following his friend's departure. And thanks to a two-hour meeting Aug. 9 with Dean Kelley and Baylor Provost Randall O'Brien, he also now has no need to leave. With attorneys for both sides present, Kelley agreed that Marks was free to resume work in the informatics lab on his own time and repost his website, provided a disclaimer accompany any ID-advancing research to make clear that the work does not represent the university's position.

"Marks told WORLD he considers the situation 'wonderfully resolved' and expressed his continued enthusiasm for the school's vision and 'the commitment of Baylor to the Lordship of Jesus Christ.'

"Marks' attorney John Gilmore said the resolution with school officials stemmed from the willingness of all parties to approach each other with respect, an atmosphere often lacking during Dembski's ordeal seven years ago. Gilmore was quick to warn that opposition to ID research at Baylor may still lie ahead, but he is persuaded that it will not originate with the school's top brass: 'I was concerned at one point that the shutting down of Professor Marks' website was the beginning of an institutional purge of intelligent design at Baylor. I came away from that meeting absolutely convinced it's not.'

"Provost O'Brien insisted that the initial shutdown of Marks' lab and website was nothing more than an effort to comply with university policy, which forbids professors to create even the impression that their personal views represent Baylor as an institution. O'Brien told WORLD that the university's

stance on origins is inherently theistic given its commitment to Christian truth, but that many faculty disagree on the merits of ID.

" 'We hire only committed Christians at Baylor,' he said, before noting that one professor at the school is Jewish, the lone exception to the rule. 'Therefore, we have no one on our faculty who believes in atheistic evolution. We have many professors who believe in theistic evolution. We also have a number of professors who advocate intelligent design.' "

"'The long journey Baylor is attempting cannot happen without a few bumps in the road, bumps that can often be addressed through good faith dialogue among believers with differing views,' Marks said. 'In the current matter, that is what happened.' "

73. Mike Gene, "Do It On Your Own Time," Telic Thoughts, August 28th, 2007

74. O'Leary "Baptist University pulls plug on Evolutionary Informatics Lab - links to intelligent design fatal," Uncommon Descent, September 1, 2007

    "Yesterday, the Baylor University administration shut down Prof. Robert Marks's Evolutionary Informatics Lab because the lab's research was perceived as linked to intelligent design (ID).""

75. "Weird Situation at Baylor Gets Weirder," The Austringer, 01 Sep 2007

76. Sal Cordova, "My retreat from the public view," Uncommon Descent, 01 Sep 2007

    "I have been accepted into a graduate program at Johns Hopkins University. I attempted to apply both at Hopkins and at Baylor. I was attempting to work with Dr. Robert Marks at the evolutionary informatics lab. I got the sense Baylor was putting Dr. Marks in their gunsights and that they would also put me indirectly in their gunsights as well if I worked at the informatics lab."

77. "R.J. Marks II EXPELLED?," molecular B(io)LOG(y), September 2, 2007

78. posted by Denyse O'Leary for Bill Dembski, "Backgrounder to Robert Marks's lab shutdown: Baylor revokes Dembski's research fellowship 2006," Uncommon Descent, 3 September 2007

    "On Thursday (12.07.06) I learned it was definite that Baylor University was revoking a postdoctoral fellowship that I held in the Department of Electrical and Computer Engineering. Last month (11.06) I was appointed as Senior Research Scientist in that department to work on a project in information theory with Prof. Robert Marks. That project was funded through a grant that he procured specifically for me to work with him. Here are the facts:

    "(1) Robert Marks , Distinguished Professor in the Department of Electrical and Computer Engineering, procured a small grant from the LifeWorks Foundation so that I could work with him on the Baylor campus. The grant

was to extend for two years. Robert Marks and I have been working on a project in information theory since the spring of 2005.

"(2) This grant and the invitation to work with Prof. Marks was entirely at his initiative. I had worked at Baylor from 1999-2005 as Associate Research Professor in the Conceptual Foundations of Science. During that time my work on intelligent design was continually vilified at Baylor and I personally was ostracized from much of the Baylor community. Nonetheless, during that time I always found the engineering faculty congenial, who invited me regularly to give special lectures on intelligent design to their students. In the past, I've had postdoctoral fellowships at MIT, Princeton, University of Chicago, etc. At these institutions, I always found that senior faculty members can hire any qualified person to work with him, no questions asked. Thus, despite my controversial history at Baylor, I felt that my place in engineering and Robert Marks's lab would be secure. Hence my willingness to accept Prof. Marks's offer to work with him back at Baylor.

"(3) Having procured the grant from Lifeworks, Robert Marks had it processed through normal administrative channels. At no point in the process did the Baylor administration raise any flags. The documentation on the grant clearly specified the work to be done and my role (by name as a third-party beneficiary) in it. Ultimately President John Lilley of Baylor signed off on the grant, sending a letter with his signature to the Lifeworks Foundation thanking them for it (I have a pdf scan copy of that letter).

"(4) My appointment as Senior Research Scientist in Baylor's Department of Electrical and Computer Engineering began November 2006. The dean and department head were aware of my presence in the department and for one month raised no objection. I was given a small windowless office in the engineering building (Rogers 305A), which I planned to use once or twice a week. I had no teaching duties this was strictly a research position. Also, I had access to the Baylor library and online journals.

"(5) My day-job is as Research Professor in Philosophy at Southwestern Baptist Theological Seminary , from which I derive my salary and benefits. I commute to Ft. Worth for that job two to three times per week. In procuring a grant for me to work with him, Robert Marks was fully aware of that position at Southwestern. Moreover, my immediate superior in Southwestern's School of Theology, Prof. Douglas Blount, was aware that I had this appointment at Baylor. Neither saw any conflict of interest in my being at both Baylor and Southwestern (more on this in point (9)).

"(6) On Monday (12.04.06), I was called into Ben Kelley's office (the dean of Baylor's School of Engineering and Computer Science) at 7:00am in the morning. Robert Marks attended the meeting. Dean Kelley informed us that there were concerns with my being again on campus (I had been on faculty at Baylor from 1999 to 2005) and that I might need to be let go 'for the good of the School of Engineering and Computer Science.' Dean Kelley declined to answer who was raising these concerns (Robert Marks pressed him twice

on this point). Nor did Dean Kelley elaborate on the nature of the concerns, though he did mention that resources to the School of Eng/CompSci might be cut on account of my presence there. At no point did he bring up my connection with intelligent design (ID) as a reason for concern. Nor did he question my qualifications to work in the engineering school (in fact, he commended my mathematical sophistication).

"(7) On Tuesday (12.05.06) there was a meeting of Baylor's Faculty Senate President John Lilley and Provost Randall O'Brien were in attendance. At that meeting, President Lilley remarked that my appointment was to be revoked and that the grant Robert Marks procured for me to work with him would be returned to the LifeWorks Foundation. The reason given was that a 'technicality' had been missed in the processing of the grant (no elaboration at that time of what this technicality was). On Wednesday (12.06.06) , Dean Kelley confirmed that Baylor would be refunding the grant to LifeWorks and that Provost Randall O'Brien concurred with this decision.

"(8) On Thursday (12.07.06) Robert Marks and another distinguished professor of engineering at Baylor, Walter Bradley, met with Dean Kelley in one last effort to persuade him not to pull the plug on my appointment (earlier in the week they had written forceful detailed letters urging that I be permitted to remain in the engineering school). The 'technicality' that had been missed in the processing of the grant was at this meeting finally divulged: Dean Kelley and Jim Farison (the head of the Department of Electrical and Computer Engineering) had not been properly notified that I would be joining the Department of Electrical and Computer Engineering. But they had not raised any objection the whole prior month (my name and title were prominently displayed on my office door as well as in front of the suite of offices of which it was a part). Moreover, when Robert Marks offered to 'reprocess' the grant, Dean Kelley informed him that this was not an option and that I was too great a 'liability' for Baylor. He did not elaborate on why I would be a 'liability.'

"(9) On Friday (12.08.06) Baylor claimed finally to have found a good reason to remove me, namely, a policy that forbids postdocs from having full outside employment (which I do with my job at Southwestern Seminary). On examining the BUPP (Baylor University Personnel Policy and Procedures http://www3.baylor.edu/BUPP), one finds no such policy. Regardless, whether this was a formal or informal policy, the president of the university had signed off on a grant which listed me as a third-party beneficiary. The university had a legal obligation to honor its commitments (my attorney indicated that I could sue Baylor it didn't). Instead, the university decided to return the money for the grant simply so that I would no longer be associated with Baylor.

"(10) Later on Friday (12.08.06) I received an email from Dean Kelley indicating that he needed to talk to me about clearing my desk and returning my keys. I asked him to send me a formal letter to indicate when my appoint-

ment officially ends and the reasons for its ending I received such a letter as an email Monday, 12.11.06, stating that I had been terminated Friday 12.08.06 but giving no reasons for my termination.

"(11) On Saturday (12.09.06), prior to any official notification that my position with Baylor was over, my Baylor ID card no longer worked to take my family to the cafeteria. Also, on that day, my Baylor email address (William_Dembski@baylor.edu), which had worked since 1999 (it had never zeroed out even in my year-long absence from Baylor since June of 2005) now yielded the following response to people who attempted to send email to it: 'Recipient address rejected: Account Disabled.' I had been erased.

"(12) Sometime in December or January, Baylor sent back to the LifeWorks Foundation the entire amount of the grant that Robert Marks had procured for me to work with him. Question: Has Baylor throughout its history ever returned grant money and, if so, under what circumstances?"

79. "Another example of Atheists, er, Baptists against ID," The Atheocracy, September 4, 2007

80. PZ Myers, "Baylor episode is getting wider circulation," September 4, 2007

81. Philosopundit "More ID Controversy at Baylor," Typepad.com, September 04, 2007

    "From the hiring of William Dembski to the tenure case of Francis Beckwith my alma mater is a hot bed of intelligent design controversy. Now, I see there's another one over an engineering professor, Robert Marks II.

    "When I was at Baylor, at least, one or two of the philosophy professors were sympathetic with intelligent design. Once, I remember in class we were discussing the relationship between Aristotle's 'metaphysical biology' and his ethics in After Virtue and the professor mentioned something like 'some people think teleology is coming back in biology.' In retrospect I believe he was referring to intelligent design. The year after I finished up there that same professor was, if I'm not mistaken, influential in bringing Dembski to campus. I also took a course with that professor on the politics of higher education and the role of religion in higher education at religiously affiliated universities."

82. "A funny thing happened on the way to the laboratory: Another example of how the process is rigged against Intelligent Design," vere loqui: Observations in Defense of the Obvious, September 04, 2007

83. William Dembski "Chronicle of Higher Education reports on Evo-Info Lab controversy," Uncommon Descent, 4 September 2007

84. "Censorship or Intolerance?" Southern Baptist in NC, September 5, 2007

    "I remember well when the movie 'The Last Temptation of Christ' was removed from the library at Southeastern Baptist Theological Seminary. The

calls of censorship rang from the rafters of academia. When Dr. Lewis Drummond became the first conservative at SEBTS he asked Dr. Billy Graham to preach the inaugural sermon. As a young Christian I literally witnessed seminary students, supposedly called by God, protest Dr. Billy Graham speaking in a chapel service. Then, some of these same students, placed yellow dye in the fountain in protest of the faculty that left and were then replaced by the incoming administration.

"Why tell about this incident? It was during this time that I heard about conservatives being intolerant views they did not agree with and they would censor debate. Well, after reading this article here, my call is to Baylor University."

"Where is the outrage at the censorship taking place in academia? Where is the call to the accrediting agencies about this undoubtedly open expression of intolerance and the shutting down of academic freedom? We are not speaking about a professor that has lied about his credentials and is imposing fundamental landmarker beliefs in a leading liberal divinity school. We are seeing the censorship of a world-class expert in the field of evolutionary computing.

"My only question is this. Where is the outrage in the academy?"

85. "Informatics Lab Grows," Professor Smith's Weblog, September 5th, 2007

    "On the heels of my post on Dr. Marks and the Evolutionary Informatics lab, it appears that the lab is growing by one member. Dr. William F. Bassener is joining the ranks. This is welcome news. Dr. Bassener has already been rather prolific in his career with a book and numerous peer-reviewed articles as well as some more in progress. ID science is attracting some serious talent."

86. BOTNIK, "Academic Freedom Expelled from Baylor University," molecular B(io)LOG(y), September 5, 2007

87. Erin Roach "I.D. rift hits Baylor again," Baptist Press, Sep 5, 2007

    "WACO, Texas (BP)–Baylor University officials ordered the shutdown of a personal website of one of a handful of the school's distinguished professors because of anonymous concerns that the site, hosted on the university's server, supported Intelligent Design.

    "Robert Marks, distinguished professor of electrical and computer engineering at Baylor, launched a website called the Evolutionary Informatics Lab in June to examine whether Darwinian processes like random mutation and natural selection can generate new information.

    "Marks' conclusions, as explained on the website, placed limits on the scope of Darwinism and offered scientific support for Intelligent Design.

    "In July, a podcast interview with Marks appeared on a website run by the pro-ID Discovery Institute, and a week later Benjamin Kelley, dean of

engineering at Baylor, told Marks to remove the Evolutionary Informatics website immediately.

" 'This is a big story, perhaps the biggest story yet of academic suppression relating to ID,' William Dembski, a research professor in philosophy at Southwestern Baptist Theological Seminary, told Baptist Press.

" 'Robert Marks is a world-class expert in the field of evolutionary computing, and yet the Baylor administration, without any consideration of the actual content of Marks' work at the Evolutionary Informatics Lab, decided to shut it down simply because there were anonymous complaints linking the lab to Intelligent Design,' Dembski said.

"In response to the dean's order to remove the Evolutionary Informatics website, Marks requested a meeting with Baylor legal counsel to resolve the matter. Six days before the scheduled Aug. 9 meeting, Kelley entered Marks' Baylor webspace and, without his consent, removed all references to the Evolutionary Informatics Lab, according to a timeline Dembski sent to BP.

"The Aug. 9 meeting involved John Gilmore, an attorney who advised Dembski in 2000 and now represents Marks, Baylor Provost Randall O'Brien, Kelley and Baylor attorneys including Charles Beckenhauer, chief counsel for the school. Baylor officials asked that Marks add a disclaimer to his website and remove anything that could imply the lab is a Baylor initiative.

" 'Randall O'Brien signs off on the EIL site going back up and closes the meeting with prayer,' Dembski's timeline states."

" 'You have to understand, in the current academic climate, Intelligent Design is like leprosy or heresy in times past,' he said. 'To be tagged as an ID supporter is to become an academic pariah, and this holds even at so-called Christian institutions that place a premium on respectability at the expense of truth and the offense of the Gospel.'

"Dembski said he knows of several faculty members at Baylor who support Intelligent Design, but they are mostly younger faculty who don't have tenure and don't speak up on the topic. An old guard at Baylor, he said, supports secularization.

" 'John Lilley, in attempting to pacify that old guard, and perhaps because of a sense of foreboding about how Baylor might be perceived in the wider university culture if it were seen as supporting Intelligent Design or as even allowing it merely a presence, has therefore decided to come down hard against it,' Dembski said."

" '... [Marks] was a star in his department at the University of Washington in Seattle for 26 years before Baylor recruited him, and now Baylor is subjecting him to treatment that even so 'liberal' and 'secular' a place as UW would find unconscionable,' Dembski added. 'Yes, there are academic freedom issues here, but at this point the issue is one of plain decency.'

" Robert Crowther of the Discovery Institute's Center for Science and Cul-

ture told Baptist Press the institute is watching the Marks situation from an academic freedom standpoint.

" 'We're deeply concerned that the administration at Baylor University has really not shown any support for academic freedom or freedom of scientific inquiry in shutting down a website and a research project of one of their distinguished faculty,' Crowther said. 'We find that very troubling. It does show a certain trend at Baylor.'

"Crowther said he believes Intelligent Design has become such a controversial issue in academia because of the scientific threat it poses. The Scopes Trial should have settled the issue, he said, but discoveries since then have altered the discussion.

" 'What has changed is the science. We know things now and there are new discoveries being made all the time that are leading a number of scientists to not just question Darwinian evolution but to actively pursue research into Intelligent Design," Crowther said. "The thing that is driving this really is the science. We wouldn't be having the debate if there wasn't something going on in science that was causing a lot of questions to rise from most of the scientists.' "

88. William Dembski, "Baptist News reports on the Evo-Info Lab Controversy," Uncommon Descent, 5 September 2007

89. Robert Crowther, "Academic Freedom Expelled from Baylor University," Evolution News & Views, September 5, 2007

    "Unfortunately for Robert Marks, Distinguished Professor of Electrical and Computer Engineering at Baylor, he didn't keep his views to himself. Perhaps he was still under the misperception that tenured professors and proven researchers could still pursue scientific inquiry without fear of institutional reprisal.

    "Suffering from a delusion of academic freedom last year, Marks decided that research related to evolution and intelligent design, specifically the informational generative capabilities of Darwinian evolution, could be an interesting and fruitful subject for scientific investigation. Marks teaches signal processing and imaging intelligence, his current research is on computational intelligence, fuzzy systems and neural networks, and he has a recently published book on related subjects published by no less than Oxford University. Tying together all of these subjects, one of his biggest areas of research and study is evolutionary computing, which has to do with emulating evolution on computers and is a robust and growing field of engineering.

    "Marks discussed the subject of evolutionary informatics in an interview conducted by CSC's Casey Luskin on ID The Future back in July. He described evolutionary informatics as basically conducting simulated evolution on computers. For better or worse Dr. Marks mentioned that he was working with William Dembski on some of his research into information and evolution

computing. Just mentioning Dembski these days at Baylor is grounds for dismissal apparently or at least for dismissal of your life's work."

"Dr. Marks has gone the extra mile in trying to accommodate any legitimate concerns Baylor administrators may have had about his evolutionary informatics website–even agreeing to put a disclaimer on the site making clear that it represented his views as a faculty member, not the university as a whole. But Baylor administrators have now spurned Marks' efforts to accommodate them, apparently reneging on a compromise brokered last month by Marks' attorney. Not only has Baylor deleted Marks' website about his evolutionary informatics research, its lawyer is now outrageously charging Marks with misconduct in creating it and implying that Marks has no academic freedom to pursue research in evolutionary informatics as a faculty member at Baylor.

"Under pressure from the administration, Marks agreed to rename the project 'Evolutionary Informatics Group' since calling it the 'Evolutionary Informatics Lab' bothered anonymous complainers at Baylor because they said it connoted a physical presence. Of course, a 'lab' in science circles often refers to a group of scientists participating in related research and collaboration at differing locations. Bickering over whether or not it was a lab probably seemed a silly thing to a researcher like Marks, and so he agreed to change the name. Of course, for the anti-ID thought police in Baylor's administration anything less than the complete annihilation of any research related to intelligent design wasn't good enough. Changing the name didn't go far enough. The work itself had to be stifled. After all, it's not the name that is truly threatening, it is the research that can't be allowed to progress."

90. William Dembski, "Discovery Institute Issues Press Statement Concerning Evo-Info Lab," Uncommon Descent, 6 September 2007

91. Darin M. Wood, "Academic Freedom at Baylor University?" On my mind today, September 06, 2007

    "The surprising thing is that Baylor University, the oldest university in our fair state and, at least traditionally, a school of religious heritage, has engaged in a war against Intelligent Design. I was always under the impression that one of the fundamental purposes of higher education was to teach one to think critically. To do so means to critically evaluate all possible options. Of course, to do that means one has to have all the options available! To discredit one is, definitively, NOT academic freedom."

92. Bradford, "Updating Robert Marks and Baylor," Telic Thoughts, September 06, 2007

    "It should be noted here that Marks had received a grant from an outside organization that was administered through Baylor University to do this research. And that grant had been approved by the President of the University

himself. Interestingly, the involvement of William Dembski caused Baylor to return the grant."

"Think about that. When Guillermo Gonzalez was denied tenure what was the most plausible argument put forth by anti-IDists? Remember how Gonzalez's alleged failure to secure grants was cited? It's about money right? Wrong. Sometimes those underlying personal views of the world, that people hold so near and dear, motivate them to take all sorts of anti-academic, anti-science and anti-intellectual actions that are otherwise anethema. Baylor, you are a case study."

93. William Dembski, "Baylor's Main Argument Against the Evo-Info Lab Reply to Lori Fogleman," Uncommon Descent, September 06, 2007

"In her remarks to the Baptist Press, Lori Fogleman (well beloved Baylor sports personality who regularly comments on 'Inside Baylor Sports' for the Lady Bears) offers the following argument against allowing Robert Marks's Evolutionary Informatics Lab to continue at Baylor:

> "This isn't about the content of the website. Really the issue is related to Baylor's policies and procedures of approving centers, institutes, products using the university's name,' Fogleman said. 'Baylor reserves the exclusive right to the use of its own name, and we're pretty jealous in the protection of that name. So it has nothing to do with the content but is all about how one goes about establishing a center, an institute, a product using the university's name."

"So she is saying that the problem was procedural Robert Marks did not follow proper procedure for his lab to be approved and permitted on the Baylor server. But this argument does not stand. Consider the following:

"(1) Robert Marks has another research entity on the Baylor server: 'The Baylor University Time Scales Group' (note the Baylor URL: web.ecs.baylor.edu/faculty/marks/Research/TimeScales). This research group (a collaboration between engineering and mathematics) has been allowed to proceed unimpeded by Baylor, using its name and absent any disclaimer. Is Baylor now, to maintain a foolish consistency, going to take down that site as well? Is it going to require disclaimers when previously it didn't? Note that Prof. Marks, by way of compromise, was willing to rename the 'Evolutionary Informatics Lab' the 'Evolutionary Informatics Group,' but this too was unacceptable to the Baylor administration."

"(4) Throughout this controversy it needs constantly to be borne in mind that the Baylor administration went into Robert Marks's personal webspace not because they had any impartial assessment of the merits of the research and judged it to be so substandard or outside the pale that it didn't deserve to be on the Baylor server but solely because anonymous (i.e., to this point unnamed) critics linked the research of the lab to intelligent design. If one actually reads the research papers on which Robert Marks and I collaborated,

one would see that they fall squarely within the fields of information theory and evolutionary computing. They are under review with standard journals in the field. They are part of an ongoing conversation about the power of evolutionary processes. Benjamin Kelley, the dean of engineering at Baylor, who removed the Evolutionary Informatics Lab website from Robert Marks's space on the Baylor server, does not have the expertise to assess the work of the lab a fact he admitted to me back when I was a senior research scientist at Baylor briefly last year. The provost, Randall O'Brien, has his expertise in theology; the president, John Lilley, has his expertise in music. None of them had even the faintest trace of knowledge about the actual work of the Evolutionary Informatics Lab. Lori Fogleman is therefore correct about this removing the Evolutionary Informatics Lab website from the Baylor server was not about content. The Baylor administration removed it simply because of guilt by association."

"(5) Controversy has not kept Baylor from lending its name to at least one website on the Baylor server, namely, Marc Ellis's Center for Jewish Studies. Ellis, like Robert Marks, is a distinguished/university professor at Baylor; unlike him, Ellis is not a Christian, and unlike most of his fellow Jews, seems to side more readily with the Palestianians than with the Israelis. Moreover, he rubs shoulders with Norman Finkelstein, who claims Jews are exploiting the 'holocaust industry.' On the Center for Jewish Studies website, which is carried on the Baylor server, Ellis has a page titled 'Great Thinkers.' Among the great thinkers listed are Martin Luther King Jr., Mahatma Gandhi, and Dorothy Day. Also included among the great thinkers is Marc Ellis, depicted with a half-tone, half-lit photo, and captioned with 'Does a world without struggle about God understand the image of solidarity and solitude any better than those who always and everywhere know who God is?' There is no disclaimer about Baylor product branding on any of these pages of the Center for Jewish Studies. So, in regard to the 'Great Thinkers' page, are we to understand that Baylor is happy to place Ellis in the same company as King, Gandhi, and Day?"

94. Anika Smith, "Baylor University Denies Research Scientist's Academic Freedom," Evolution News & Views, September 6, 2007

"'Baylor University has proven yet again that academic freedom has been thrown off campus and academic persecution is now the norm,' said Discovery Institute's Casey Luskin in reaction to Baylor University's deletion of a professor's research website, which focused on evolutionary systems and informatics. 'It is simply unconscionable that a major university would so trample a scientist's right to freedom of scientific inquiry,' "

" 'What has happened to Professor Marks is censorship, pure and simple,' added Luskin.

"Discovery Institute is encouraging Baylor alumni and Texas residents to write to the University's board of regents and demand that the university

reinstate academic freedom and protect the rights of scientists and scholars to pursue their research without fear of reprisal."

95. William Dembski "Baylor Public Relations on Marks Evo-Info Lab in Free Fall," Uncommon Descent, 7 September 2007

    "The Baylor President, Provost, Dean of Engineering, and Baylor legal counsel need to get their story straight"

96. Baylor U. Shuts Down Prof's ID Website, CR (Church Report) Daily, Sep 07, 2007

    "Officials at Baylor University in Waco, Texas, ordered the shutdown of one of the school's distinguished professors' personal websites because the site, hosted on the university's server, supported Intelligent Design. Robert Marks, distinguished professor of electrical and computer engineering at Baylor, launched a website called the Evolutionary Informatics Lab in June that offered scientific support for Intelligent Design."

    "Robert Crowther of the Discovery Institute's Center for Science and Culture said ID has become such a controversial issue because it challenges traditional science. 'We know things now and there are new discoveries being made all the time that are leading a number of scientists to not just question Darwinian evolution but to actively pursue research into Intelligent Design. ... We wouldn't be having the debate if there wasn't something going on in science that was causing a lot of questions to rise from most of the scientists.' "

97. O'Leary, "The Great Escape A tribute to Bob Marks," Uncommon Descent, 8 September 2007

    "What does Bob Marks want? He wants the right to run computer simulations at Baylor that might (possibly) reduce confidence in Darwinian evolution."

    "Last night, my mom and I were watching a video of one of my favourite movies - The Great Escape. Suddenly, some of the dialogue seemed startlingly relevant to the struggle of scientists like Marks.

    "Listen, as the German Colonel Von Luger explains to the Allied prisoners of war:

        "We have in effect put all our rotten eggs in one basket, and we intend to watch this basket carefully. Very wise. You will not be denied the usual facilities. Sports, a library, a recreation hall, and for gardening we will give you tools. We trust you to use them for gardening. Devote your energies to these things. Give up your hopeless attempts to escape. And, with intelligent cooperation, we may all sit out the war as comfortably as possible."

"What institutions like Baylor want is precisely that - faculty who will just 'sit out' the war between rampant materialist atheism and all non-materialist traditions, in the comfort of a Christian environment.

But Group Captain Ramsey responds,

> "Colonel Von Luger, it is the sworn duty of all officers to try to escape. If they cannot escape, then it is their sworn duty to cause the enemy to use an inordinate number of troops to guard them, and their sworn duty to harass the enemy to the best of their ability."

"Ramsey's reply is the proper duty of the Christian (or other non-materialist) academic in these times.

"It is also the only safe one. There is no surprise, really, in the fact that today's academic environment is quickly losing touch with the goal of intellectual inquiry. As Mario Beauregard and I show clearly in The Spiritual Brain, materialists do not believe in the reality of the mind. In that case, it is more humane as well as easier to just program the young meat puppets to be whatever is needed, and sideline any mis-programmed puppets who interfere.

"Only a non-materialist tradition - in which intellect functions as a cause of events - can responsibly support intellectual freedom.

"A Christian you say? Well then, do not be a good prisoner of your Christian campus. Be a Bob Marks. BE a problem!"

98. HERMAGORAS "With Friends like Dembski (again)," INTELLIGENT DESIGN IS NOT SCIENCE, September 8, 2007

> "PZ and I seem to be more on Marks's side than Dembski. From the first, he has made things worse. From announcing the superpower of the EIL before they'd published anything ('it promises to put people like Christoph Adami and Rob Pennock out of business'), to the absolutely stupid hoax letter – which I still think must have been a dream, it was so deliciously mismanaged – to his focus on negative media attention now, he's got to be making Marks more and more isolated. I wonder if he cares about that, or if it's just that he's got an unfailingly tin ear."

99. DRUDGE RETORT, "I.D. rift hits Baylor again," September 8, 2007

> "Baylor University officials ordered the shutdown of a personal website of one of a handful of the school's distinguished professors because of anonymous concerns that the site, hosted on the university's server, supported Intelligent Design"

100. Aristotle, "Baylor University Shuts Down Professor's Private Site for Challenging Evolution," A Faithful Rebel, September 08, 2007

> "There is a growing controversy over the action of Baylor University in shutting down a personal web site of one of their most distinguished professors.

The only crime is that the professor dared to challenge Darwinian evolution. His scientific conclusions supported Intelligent Design."

"This is perhaps one of the most blatant examples of a violation of the principle of academic "freedom" in the history of U.S. education. That a professor would be ordered to remove his own private web site because his scientific conclusions question the scope of Darwinian evolutionary theory shows that evolution, much like global warming, has become a dogma for the scientific community. They are not even willing to question it.

"It's certainly not good science. Baylor ought to be ashamed, and Kelley should apologize to professor Marks."

101. William Dembski, "Of Groups and Labs at Baylor," Uncommon Descent, 8 September 2007

"You might wonder whether Prof. Robert Marks is the only faculty member at Baylor who has a 'group' or a 'lab' not blessed by Baylor administration. The other day I mined a bunch of cases here at UD where the terms 'group' and 'lab' are used at Baylor, almost certainly without the Baylor administration's blessing or knowledge."

"Here are some that I found in a few minutes of googling the Baylor server: (i) The Robert R. Kane Research Group (chemistry); (ii) Rene Massengale Research Group (biology); (iii) The Klausmeyer Research Group (biochemistry); (iv) Jeffrey Olafsen's Nonlinear and Nonequilibrium Dynamics Group, aka Nonlinear Dynamics Laboratory (physics); (v) The Stanford Lab (Matthew Stanford's lab in neuroscience)."

Well, there's more:

"The Baylor University Time Scales Group" (note the Baylor URL: web.ecs.baylor.edu/faculty/marks/Research/TimeScales) just got a big NSF Grant and is finishing another. No one with that group ever asked anyone at Baylor whether it was okay to form this group or put it on the Baylor server. It's something research groups do. And no one at Baylor is upset about it.

"Robert Marks has another research group on the Baylor server with Randall Jean: The Microwave Applied Metrology Lab (note the Baylor URL: web.ecs.baylor.edu/faculty/jean). Prof. Marks does research with Prof. Jean. It has been posted with no changes since the first year Marks got to Baylor 2003.

"Prof. Marks's new department chair (electrical and computer engineering), who started this fall 2007, is Prof. Kwang Lee. Prof. Lee moves to Baylor from Penn State where he ran The Power Systems Control Laboratory (www.ee.psu.edu/faculty/lee/lee1.html). It's still at Penn State. Given what Baylor did to Prof. Marks's Evolutionary Informatics Lab, why should Prof. Lee risk moving his lab to Baylor? Question: Was that lab okayed by Penn State? I'll bet it wasn't.

"At the University of Washington, where Prof. Marks was on faculty for 26 years, he ran The Computational Intelligence Applications Lab (note

the acronym: CIA Lab). Prof. Marks ran it, with no approval from anybody, with Mohamed El-Sharkawi. They wrote numerous papers together and got millions in grants for this lab. El-Sharkawi still runs the lab at cialab.ee.washington.edu. Here's the kicker: When Prof. Marks first came to Baylor, he called his research effort 'The CIA Lab' it's still mentioned at web.ecs.baylor.edu/faculty/marks/Marks/Bob/Bob2004.htm. Note that Baylor and The CIA Lab are listed right next to each other. Prof. Marks used 'CIA Lab' as the entity under which he conducted his research at Baylor for several years. You'd think if Baylor got mad at Prof. Marks for anything, it would be for placing his research under 'The CIA Lab.'

"THIS IS WHAT RESEARCH PROFESSORS AT RESEARCH UNIVERSITIES DO!!! To attract funds, research professors form groups and labs because there's a synergy in numbers that enables research to attract funding and flourish. That's how the game of 'supply side academics' gets played. Interestingly, no one publicly criticizing Prof. Marks at Baylor (President, Provost, Dean) has ever attracted a cent of research funding for their own scientific work/scholarly activities. (Prove me wrong!) The President, John Lilley, is in music. The Provost, Randall O'Brien, is a Baptist Pastor. And Prof. Marks's Dean, Benjamin Kelley, has a teaching, not a research, background. In particular, Kelley has admitted that he does not understand the work of the Evolutionary Informatics Lab.

"It's infuriating that none of the critics of the EIL at Baylor has offered a single comment about the substance of the papers they removed from Prof. Mark's server. NO ONE!"

102. Tim Woods, "Web site sparks new intelligent design battle at BU," Waco Tribune-Herald, September 09, 2007

"A Baylor University professor is fighting university officials to have the school restore his personal Web site in a battle some link to academic freedom and intelligent design.

"About a week after informing distinguished professor of electrical and computer engineering Robert Marks that his Evolutionary Informatics Lab site would need to be taken down, Benjamin Kelley, Baylor's dean of engineering, ordered the site be removed without Marks' permission, according to Marks' attorney, St. Paul, Minn.-based John Gilmore.

"The site, which was on a university server, has been down since early August."

"In taking the site down, Kelley 'unilaterally shut down this venue of academic freedom,' Gilmore wrote in a letter to Baylor general counsel Charles Beckenhauer on Thursday.

"According to Gilmore, as well as a series of e-mails between Beckenhauer and Gilmore, Baylor said it took the site offline until sufficient disclaimers and minor changes were made to the site, which would make clear that the evolutionary informatics work is not endorsed by the university or supported

by university resources. Gilmore said that he and Marks have been amenable to Baylor's request for a disclaimer and that they believe the real issue is one of academic freedom.

" 'I don't think they wanted to take yes for an answer,' Gilmore told the Tribune-Herald on Wednesday. '(The disclaimer) might not have satisfied the absolutists who don't want anyone at Baylor to think, even on their own time, about I.D. and its related issues. . . . Baylor has an obligation to defend Bob Marks' position. Unfortunately, they've been taking the position of his persecutors. . . . It's viewpoint discrimination.'

"Gilmore also said Baylor might be causing themselves more trouble than they hoped for by dragging their feet in restoring Marks' Web site.

" 'Somebody wants a crisis,' Gilmore said. 'It's not us, but somebody wants a crisis and I can't, for the life of me, understand it. If the goal is not to draw attention to intelligent design at Baylor and keep it under the radar, this is having precisely the opposite effect.' "

"Gilmore, however, says that Marks, who spent 27 years at the University of Washington before coming to Baylor three years ago, has never tried to represent his work as being Baylor-related. He says the parties agreed at an Aug. 9 meeting, attended by Beckenhauer, Gilmore, Marks, Kelley, provost Randall O'Brien and engineering department chair Kwang Lee that 'a disclaimer would be put on the Web site and that it would then go back online as the provost had promised at the close of the meeting.' "

"Dembski, who has collaborated with Marks on research projects and admits that he has become somewhat of a polarizing figure at Baylor, says he is convinced, despite Baylor's denials, that Marks' site was taken down because of its connection with intelligent design.

" 'It's not the university's place to put restrictions on it,' Dembski said. 'I've been at Notre Dame, Princeton, Cornell, the University of Chicago, MIT, and it's just unimaginable that they would mess with a distinguished professor about this. . . . It's just outrageous. If the full story comes to light on this, it's going to look terrible for Baylor. . . . I think what we're talking about here are restrictions on academic freedom.' "

"Gilmore and Dembski, who was represented by Gilmore during the battle over the Polanyi Center, said they believe Baylor president John Lilley overruled what he says was an agreement after the Aug. 9 meeting to put Marks' site back online.

" 'The president is the only one who would have the authority to overrule the provost,' said Dembski, who is a fellow at the Discovery Institute. 'Why didn't it stick? I would have to say it's the president.' "

"Barry said that Lilley would not comment on the matter"

"Regarding the allegation that Lilley overruled an Aug. 9 agreement, Barry said, 'That seems to me to be highly subjective. I'm not sure on what grounds Mr. Gilmore (and Dembski) make that conclusion.'

> Dembski also said that he found at least five labs or groups set up by Baylor faculty that contained no disclaimers stating that the work is not related to Baylor in any way. 'Why is the rationale so different?' he said. 'It's because this is intelligent design and intelligent design is so controversial.' "

103. Robert Crowther "Baylor University Accused of Viewpoint Discrimination in Suppression of Pro-Intelligent Design Scientist," Evolution News & Views, September 9, 2007

104. "Expelled Filmmakers Want to Talk to Baylor President About University's Crackdown on ID Scientists" Evolution News and Views, September 9, 2007

> "Academic persecution has long been a serious problem for intelligent design advocates in academia. And you don't even have to be an ID proponent to get in trouble, you can simply be in trouble for expressing doubts about Darwinian evolution."

105. William Dembski "Baylor Academic Discrimination Crisis Makes Sunday Front Page of Waco-Trib," Uncommon Descent, 9 September 2007

> "PZ Myers of Pharyngula has stood up on the side of academic freedom at Baylor University for Robert Marks, II."
>
> > "Baylor episode is getting wider circulation Posted on: September 4, 2007 3:07 PM, by PZ Myer"
> > "The story of the Robert Marks debacle has now made the pages of The Chronicle of Higher Education. If the account is accurate, I'm going to do something you'll only rarely see: I'll take the side of the creationist.... The problem is that Baylor was more than a little ham-fisted in intruding on Marks' academic freedom. I categorically reject Marks' whole philosophy and I'd probably call him delusional, but it is the professor's job to talk freely about wacky ideas if he wants. A web page that can be shared (and laughed at) is a reasonable part of the commitment to public communication, and I don't think Baylor should restrict it. Even if the professor is a bit of an embarrassment, and the subject is a sore spot for the university..."""
>
> "PZ Myers has previously demanded: 'The IDists love to quote me, because I am rather militant in my opposition to their lies. . . .The only appropriate response should involve some form of righteous fury, much butt-kicking, and the public firing of some teachers, many school board members, and vast numbers of sleazy, far-right politicians I say, screw the polite words and careful rhetoric. It's time for scientists to break out the steel-toed boots and brass knuckles, and get out there and hammer on the lunatics and idiots.'
>
> "Were Myers to fully support objective science, would he not insist on the most rigorous examination of Evolution to ensure that it is the most robust parsimenous theory possible, without even the perception of a flaw? Would

he not welcome the strongest critique Marks could make? Who knows, Myers may yet affirm our full unalienable rights of speech, religion and academic freedom as preserved by the First Amendment, with equality for all - even for theories diametrically opposed to his.

Gentlemen, Start your engines - and lets make level the playing field so that the best theory wins."

106. "3rd Strike for Baylor" l3ruceWayneBlog, September 9, 2007

"The big story on ID right now is Baylor University (which ironically means 'unity within diversity') and its shutting down of Prof. Robert Marks' (who is a distinguished Professor of Electrical and Computer Engineering) research lab on 'evolutionary informatics,' due to anonymous complaints about its ties with ID."

107. Professor Smith's Weblog, "Science Blog of the Year?" September 9, 2007

"I surfed over to the lion's den today to check out what PZ Myers is up to. He's the reigning science blogger of the year. I had to go to the second page, through 20 posts before I found one about science. This is a pretty clear indication that Darwinism are not really about science. Here, you have one of its most outspoken advocates and he can't even find time to write about science in the last 20 posts?"

"Some people who've asked about my anonymity should take note of Marks' situation. He's a full professor, actively recruited to Baylor after a distinguished career, and he's *still* trampled on."

108. Robert Crowther, "'So, now everyone in Times Square knows about Expelled too," September 10, 2007

"Maybe Expelled's producers should rent some billboards in Waco."

109. William Dembski, "Baylor Forces Professor to Shut Down Site," September 10, 2007

"Here's the Syracuse University student paper weighing in on the Baylor Academic Freedom Crisis one wonders when the Baylor student paper, The Lariat, is going to have something to say about this."

110. Nicole Loring, "Baylor forces professor to shut down site," The Daily Orange, September 10, 2007

"Just before the 2007-2008 academic year began, Baylor University shut down a personal Web site, dedicated to the theory of intelligent design, of distinguished professor Robert J. Marks II.

"A Baptist university in Texas, Baylor is now entrenched in a legal battle with the electrical and chemical engineering professor, who claims his academic freedom was violated when his Web site was shut down without his knowledge.

"The site in question, Evolutionary Informatics, cites its mission as 'investigating how information makes evolution possible.' The site featured links to Marks' personal publications and presentations on intelligent design.

"Attorney John Gilmore, who is representing Marks, said it all began when the professor gave a podcast interview with the Discovery Institute, a renowned pro-intelligent design organization that often attracts attention for its stance on evolution.

" 'As a result of this interview, people called and complained. A week later, it was removed," Gilmore said of the Web site."

111. Claire St. Amant, "New intelligent design conflict hits BU," Baylor Lariat, September 11, 2007

"Baylor has received the national spotlight once again for another controversy involving intelligent design research. Dr. Robert Marks, distinguished professor of electrical and computer engineering, posted what university officials are calling "unapproved research" on his personal Web site hosted by Baylor's server. The research, which concerns informatic computing and the evolutionary process, was conducted as part of Marks' Evolutionary Informatics Lab. Baylor shut down the site in early August, shortly before a scheduled meeting to discuss the issue with Marks; his attorney, John Gilmore; Baylor General Counsel Charles Beckenhauer; Provost Dr. Randall O'Brien; and dean of engineering Benjamin Kelley – whom Gilmore credited with shutting down the site. President John Lilley did not attend.

" '(Kelley) did not give my client the benefit of a meeting or a phone call,' Gilmore said.'

"Barry said when publishing research on Baylor Web sites, professors can either have the backing of their department, school or dean, or decide to work independently of the university and identify it as such. Marks was working independently of the university.

"Gilmore said he thinks other faculty Web sites without disclaimers are left alone because of their content and Marks is being discriminated against because his site deals with intelligent design.

"Despite university representatives' dismissal of this claim, many are calling the incident an infringement of academic freedom and discrimination against intelligent design.

"The Baptist Press quoted former Baylor professor William Dembski, a research professor in philosophy at Southwestern Baptist Theological Seminary, as saying this is 'perhaps the biggest story yet of academic suppression relating to ID.' "

" 'We offered to put the disclaimer that is used at the (Association of American University Professors) Web site,' Gilmore said. "That doesn't seem to be enough for Baylor.' "

> Luskin said he would like to see this issue resolved by allowing Marks to post his research with a disclaimer on the Baylor server.
>
> " 'Baylor should let Dr. Marks have the academic freedom to do research and talk about it on his Web site without any undue constraints,' he said. "It isn't that complicated.' "

112. William Dembski, "Only 'Approved Research' on our site! And who gives approval?" Uncommon Descent, 11 September 2007

> "The Baylor University student newspaper, the Lariat, finally has a piece about the academic discrimination case involving Prof. Robert Marks and his Evolutionary Informatics Lab (EIL). The story introduces an interesting new twist: now the problem with the EIL site is that it doesn't contain 'approved research.' And who is supposed to approve Prof. Marks's research? His dean, Benjamin Kelley, who has admitted that he doesn't understand it? And by what criteria does or doesn't such research get approved? How about this criterion: If it's about intelligent design and promises to lower the university's prestige and undercut departmental funding, it does not constitute 'approved research.' The Baylor administration seems to have no clue what a can of worms they are opening here. In effect, they no longer have a research university."

113. Denyse O'Leary, "So where ARE the Friends of Robert Marks? Of intellectual freedom at Baylor?" Uncommon Descent, September 11, 2007

> "The latest Baylor explanation of why Prof. Robert Marks' evolutionary informatics website was taken down is that he wasn't doing 'approved research.'
>
> "There is no precedent for this notion of 'approved research' at Baylor which is most likely why the Baylor administration did not cite it earlier. They have just thought the idea up and are taking it out for a spin.
>
> "This is the latest in a variety of explanations. The original one turned on anonymous complaints. Another cited proprietary 'Baylor branding.' Till now, none cited a doctrine of 'approval.'
>
> "Actually, if the Baylor administration were being honest, only one good explanation would be necessary. The story wouldn't keep changing.
>
> "The 'approved research' slogan may have resulted from careful thought among the Baylor PR staff. It's pretty good because most of us know what we would DISapprove. (Porn, racism, medical quackery, et cetera.) So Prof. Marks becomes associated with distasteful stuff.
>
> "And, all is well, right?
>
> "No, it isn't."
>
> "What the Baylorites are saying when they mutter to the media about 'approved' research is that, had they known what Marks was doing, they would not have approved. They would have found a way to stop him. That's all."

114. Gil Dodgen, "Baylor, Marks, Faust, and Selling One's Soul," Uncommon Descent, Uncommon Descent, September 11, 2007

> "There is an ancient legend about a man named Faust, who sold his soul for temporal selfish gain and self-aggrandizement. Although the immediate but ephemeral rewards were intoxicating, the ultimate consequences were hideous.
>
> "The legend of Faust has inspired much art, music, and theater over the centuries. The reason is obvious: There is a fundamental truth and lesson to be learned.
>
> In the Marks case, Baylor has sold its soul for temporal selfish gain and self-aggrandizement the antithesis of what its Baptist tradition teaches."

115. Robert Crowther "Where's Sharon Begley When We Need Her?" Evolution News & Views, September 12, 2007

> "Returning to Newsweek after a five year stint as a science writer for the Wall Street Journal, Sharon Begley posted a blog piece yesterday about Darwinist biology professor Richard Colling. Colling teaches at a small Nazarene university in Illinois and, according to Begley, has come under fire by church leaders because he is a theistic evolutionist and authored a book called Random Designer.
>
> > "Anger over his work had been building for two years. When classes resumed in late August, things finally came to a head. Colling is prohibited from teaching the general biology class, a version of which he had taught since 1991, and college president John Bowling has banned professors from assigning his book."
>
> "Two years? Robert Marks' evolutionary informatics website was barely online two months when Baylor admins gave it the heave-ho. Granted, private religious institutionsunlike state universitieshave the right to enforce doctrinal beliefs as part of their First Amendment freedom. Of course, if Colling's universitylike Baylor Universityhas claimed that it guarantees academic freedom, then that is another matter. If Colling's academic freedom has been hindered then that needs to be corrected. We support academic freedom, obviously, for Darwinists as well as Darwinist-skeptics."
>
> "The cases of academic persecution against Darwinists are few and far between can you name even three? whereas IDers unfortunately find themselves attacked from all sides, and all too often. Sternberg, Leonard, Wells, Bryson, Crocker, DeHart, Kenyon, Behe, Marks, and the list goes on and on and on."

116. Cody Cobb, "Let academic freedom ring," Baylor Lariat, Sept. 13, 2007

> "Dr. Robert Marks should be free to pursue his research on intelligent design, and I say that as an ardent opponent of intelligent design.

> "As long as Baylor doesn't front the bill and Marks puts up a disclaimer on his site, academic freedom should be reason enough to let the Web site remain on Baylor's servers."

117. Steve F, "Evolutionary Informatics lab," Internet Infidels, September 14, 2007

> "There's been a bit of a kerfuffle recently about the Evolutionary Informatics lab "

118. Eric Rasmusen "The Robert Marks Academic Freedom Case at Baylor," Eric Rasmusen's Weblog, September 14th, 2007

> "Baylor University is clearly infringing on academic freedom when it tries to shut down Professor Robert Marks's pro-intelligent-design website, located here with the disclaimers the professor put on in response to Baylor's complaints that people might think Baylor officially approved of his research. I wish there were more publicity about this kind of thing."

119. William Dembski, "The Baylor Board of Regents," Uncommon Descent, 14 September 2007

> "President John Lilley of Baylor appears to have made up his mind that Prof. Robert Marks's Evolutionary Informatics Lab has no place at Baylor. There is only one court of appeal now, the Baylor Board of Regents, who can reverse Lilley's decision and even remove Lilley as president. Here is the list of board members. I encourage readers of UD to contact them (respectfully) and share their concerns about this gross violation of academic freedom."

120. "EIL Grows Again," Professor Smith's Weblog, September 14, 2007

121. Paul, "Can Intelligent Design and Academic Freedom Co-exist?" WeekInScience.com, 2007-09-14

122. O'Leary, "Baylor closes ranks, defends Darwin against all lines of evidence," Uncommon Descent, 14 September 2007

> "Baylor's move to shut down Prof. Robert Marks's exposure of Darwinism as the Enron of biology is a harder line than the institution took seven years ago.
>
> "Curiously, the 2000 report on the Polanyi Center (long closed) had actually proclaimed,
>
> > " the committee wishes to make it clear that it considers research on the logical structure of mathematical arguments for intelligent design to have a legitimate claim to a place in current discussions of the relations of religion and the sciences."

"Presumably, Baylor honchos don't think that any more.

"Is that because Bob Marks can actually do it now?

"Bill Dembski tells me that the shutdown committee had never suggested that he couldn't put such papers on his own site."

123. "Editorial: BU opens old wounds with Marks," Baylor Lariat, Sept. 14, 2007[Newspaper Layout]

"The problem began when Dr. Robert Marks, distinguished professor of computer and electrical engineering, posted research relating to intelligent design on his personal Web site hosted by Baylor's server.

"Marks had no disclaimer on his site disassociating the research from that conducted under Baylor approval, so university officials shut down the site and then met with Marks to discuss the terms under which the site would go back up.

"It still hasn't gone back up, and conspiracy theories are flying about infringement of academic freedom and administrative hypocrisy.

"It would be nice to get to the bottom of this."

"Marks is a distinguished professor pursuing research in his field, and he deserves not only academic freedom, but also the common courtesy of honest and open communication. The Baylor administration has only further exacerbated the situation by not being straightforward about why they don't want to be affiliated with Marks' research in the first place.

"Baylor administrators are free to regulate their stamp of approval on Web sites, but if they plan to do so, they should follow this policy across the board."

124. "I.D. rift hits Baylor again," Answers In Genesis, September 15, 2007

"We're saddened to report on a recent administrative action at Baylor University (a Baptist school) in Texas, where administrators ordered a professor's personal website be shut down because of 'anonymous concerns' that the site supported ideas associated with the intelligent design movement (IDM).

"Baylor's record on dealing with academic freedom, particularly as it concerns intelligent design the IDM, is now all the more odious. In 2000, Baylor removed intelligent design theorist William Dembski, now at Southwestern Baptist Theological Seminary, because Dembski refused to rescind a statement supporting Intelligent Design as a legitimate form of academic inquiry.

"The professor under fire this time is Robert Marks, distinguished professor of electrical and computer engineering, who launched a website called the 'Evolutionary Informatics Lab' in June to study whether natural selection can use chance mutations to generate new information. Marks's conclusions, as explained on the website, placed limits on the scope of Darwinism and offered scientific support for Intelligent Design, explains Baptist Press.

"The debate, surprisingly, does not concern the validity of Marks's research, but rather Baylor's policies and procedures of approving centers, institutes, products using the university's name,according to Lori Fogleman, director of media communications at Baylor. In July, after giving an interview to the IDM-promoting Discovery Institute, Marks was asked by Baylor engineering school dean to remove the website. In response, Marks requested a meeting for discussion, but just shy of a week before the scheduled meeting, all references to the Evolutionary Informatics Lab on Marks website were forcibly removed."

"There are several points to take away from this sad news. First is the obviousthat even many Christian schools (some effectively Christian in name only) have become founts of Darwinism. Second, all too well known is that despite evolutionists' cries that virtually all scientists agree wholeheartedly with Darwinism, such cries are untrustworthy when academicians are afraid to speak out with their criticisms because of the harsh consequences associated with those that do. Even questioning Darwinism, let alone actually voicing support for the intelligent design movement or true biblical creation, can doom one's reputation a priori in science fields. Despite this fact, hundreds of scientists have signed an official statement dissenting from Darwinism, in addition to the many scientists who go beyond accepting the tenets of the intelligent design movement and accept, specifically, the Bible's account of creation."

"But ultimately, the saddest lesson to learn from this story is the attitude many including, apparently, some Christian academia are not even willing to fairly consider the creation/evolution issue. Apparently, Baylor's leadership is so frightened of standing against secular dogma that in dealing with Marks, it did not even consider the validity of the ID research presented."

125. Mark Bergin, "Not so fast. Baylor's treatment of an ID-advancing research lab has shifted from friendly to fire," World Magazine, September 15, 2007

"Last month, as John Gilmore flew home from Waco, Texas, after apparently resolving a dispute at Baylor University over a faculty member's website supporting intelligent design, the Minnesota attorney sipped a glass of wine, looked out the window, and wondered to himself, "Was this too easy?" Turns out, it was. On Aug. 9, Baylor officials had agreed that distinguished engineering professor Robert Marks could repost his evolutionary informatics website on the Baptist school's server spaceif a disclaimer made clear that any research advancing intelligent design does not represent an institutional position. Less than two weeks later, Gilmore received an email from Baylor general counsel Charles Beckenhauer detailing considerable further alterations Marks needed to make before reposting his site.

"Among the demands:

- ◇ Delete the title "The Evolutionary Informatics Lab" from the top of every page.

- ◇ Delete the name and email address of a Baylor graduate student assisting Marks with his research.
- ◇ Post at the bottom of every page and the top of the home page a 108-word public-relations statement denying any institutional support for the research and extolling Baylor's commitment to academic freedom.

Finding such demands excessive, Gilmore replied to Beckenhauer reminding him of the Aug. 9 meeting in which Baylor Provost Randall O'Brien and Dean Ben Kelley of the School of Engineering and Computer Science had accepted a far simpler arrangement: 'I believe you have overreached here in order to pacify those at Baylorand outside of Baylorwho complained to Dean Kelley and who most certainly won't be pleased that the website will go back up in any form.' "

126. "UD Invites Readers to Write to the Board of Regents at Baylor" September 16th, 2007

127. Beth Mull, "Baylor University: Stifling Academic Freedom?" ICR, September 16th, 2007

> "Baylor University is wrangling once again with the issue of Intelligent Design. The affiliate of the Baptist General Convention of Texas is reported to have shut down a professor's personal website because of anonymous complaints that the site could be construed as supporting Intelligent Design as a field of scientific inquiry."
>
> "An interview with Dr. Marks appeared in July on the pro-Intelligent Design website of the Discovery Institute, and a week later the Dean of Engineering at Baylor, Benjamin Kelley, reportedly told Dr. Marks to remove his website."
>
> "In an August 9th meeting between concerned parties, Baylor officials requested that Dr. Marks add a disclaimer to his website to clarify that it was not affiliated with the university. Provost Randall O'Brien reportedly indicated that The Evolutionary Informatics Lab site could resume operation, but less than two weeks later Baylor attorney Charles Beckenhauer contacted Dr. Marks' lawyer with additional "fixes" to the site, leading to speculation that university president John Lilley was overriding his provost's prior agreement."
>
> "Discovery Institute's Casey Luskin commented, 'It is simply unconscionable that a major university would so trample a scientist's right to freedom of scientific inquiry." The Evolutionary Informatics Lab, now cleansed of any association with Baylor, is currently being hosted outside of the university's auspices.
>
> "Baylor's website describes the university's mission as educating men and women for leadership and service "by integrating academic excellence and Christian commitment within a caring community." How is either of those

goals 'excellence or commitment' served by clinging to evolution at the cost of academic freedom? "

128. "How do evolutionary processes create information?" Panda's Thumb, September 16, 2007

129. Mark Chu-Carroll, "A Glance at the Work of Dembski and Marks," Goodmath, 9/17/07

> "Both in comments, and via email, I've received numerous requests to take a look at the work of Dembski and Marks, published through Professor Marks's website."
>
> "There's two ways of looking at this work: on a purely technical level, and in terms of its presentation.
>
> "On a technical level, it's not bad. Not great by any stretch, but it's entirely reasonable. The idea of it is actually pretter clever. They start with NFL. NFL says, roughly, that if you don't know anything about the search space, you can't select a search that will perform better than a random walk. If we have a search for a given search space that does perform better than a random walk, in information theoretic terms, we can say that the search encodes information about the search space. How can we quantify the information encoded in a search algorithm that allows it to perform as well as it does?
>
> "So, for example, think about a search algorithm like Newton's method. It generally homes in extremely rapidly on the roots of a polynomial equation - dramatically better than one would expect in a random walk. For example, if we look at something like y = x2 - 2, starting with an approximation of a zero at x=1, we can get to a very good approximation in just two iterations. What information is encoded in Newton's method? Among other things, it's working in a Euclidean space on a continuous, differentiable curve. That's rather a lot of information. We can actually quantify that in information theoretic terms by computing the average time to find a root in a random walk, compared to the average time to find a root in Newton's method.
>
> "Further, when a search performs worse than what is predicted by a random walk, we can say that with respect to the particular search task, that the search encodes negative information - that it actually contains some assumptions about the locations of the target that actively push it away, and prevent it from finding the target as quickly as a random walk would."
>
> "That's the technical meat of the paper. And I've got to say, it's not bad. I was expecting something really awful - but it's not. As I said earlier, it's far from being a great paper. But technically, it's reasonable."
>
> "So as much as I'd love to trash them, a quick read of the paper seems to show that it's a mediocre paper, with an interesting idea. The writing sucks: it was written to try to make a point that it can't make technically, and it makes that point with all the subtlety of a sledgehammer, despite the fact that the actual technical content of the paper can't support it."

130. Regis Nicoll "The Unpardonable Sin in Academia," CrossWalk.com, Sep 17, 2007

> "What do William Dembski, Frank Beckwith, and Dr. Robert J. Marks have in common? All three have been victims of academic suppression at not at Cornell, Stanford or MIT, but at Baylor Universitythe world's largest institute of higher learning in the Baptist tradition."
>
> "...the campus thought police has Robert Marks in its crosshairs. Marks is a Distinguished Professor of Engineering at Baylor who chairs several national and international committees, has authored over 300 technical papers and three books, and has received numerous awards in the field of computational intelligence.
>
> "This past June Dr. Marks launched a website on the Baylor server called, 'Evolutionary Informatics Lab.' The purpose of the lab was to distinguish 'the respective roles of internally generated and externally applied information in the performance of evolutionary systems.'
>
> "Although not an ID site, per se, Evolutionary Informatics was ID-friendly containing quotes by Michael Polanyi and links to publications of ID researchers like William Dembski. That was enough for a group of anonymous complainers to pressure the administration into purging the site from the Baylor system.
>
> In sad irony, the science building where Dr. Marks works bears the words of Paul, 'By Him all things are made; in Him all things are held together.'
>
> Even sadder is the fact that Baylor, as a Christian-based school, is not alone As Casey Luskin of the Discovery Institute explains, 'In the academic world, if you question evolution, you come under attack. There's been a pattern of discrimination against ID all over the nation in the past couple years.' It seems that the one commandment enforced by secular and Christian schools alike is: 'Thou shalt put no other gods before Darwin.' "

131. KAREY QUARTON "INTELLIGENT WEB DESIGN," The Michigan Daily, 9/17/07

> "Baylor University shut down a professor's personal website earlier this week because the page supported intelligent design. College officials said they removed the site from the school's server because the subject matter was "immaterial" and the professor did not follow proper protocol for posting research.
>
> Access to the page was blocked before the professor could discuss the issue with school officials. The professor's lawyer has argued that his client was not given the opportunity to post a disclaimer on his website and that the University's decision to remove the website constitutes discrimination."

132. Emory U. Student Paper, The Emory Wheel Reprints Baylor LariatArticle: "Baylor U. Takes Intelligent Design Website." Tuesday, September 18, 2007

133. Walt Ruloff, Executive producer, Premise Media "BU administration silencing science by design," The Baylor Lariat, Sept. 18, 2007 [Newspaper Layout]

> "It may sound like a crazy question, but it needs to be asked: Does the administration at Baylor believe in God?
>
> "This is a legitimate question in light of the university's heavy-handed actions in shutting down the research Web site of Dr. Robert Marks."
>
> "My team and I (including lawyer, economist, actor, game show host and social commentator Ben Stein) have interviewed dozens of the world's top experts in biology, astronomy, physics and philosophy.
>
> "What we have uncovered in our documentary film, Expelled: No Intelligence Allowed, is an attack on freedom of speech and scientific inquiry that is as frightening as it is appalling. And it's happening right here at Baylor.
>
> "Last month Dr. Ben Kelley, dean of engineering and computer science, shut down Marks' Web site. He apparently had the blessing of President John Lilley. Why? The university put forth a bunch of phony-baloney procedural explanations that don't stand up to scrutiny.
>
> "The truth however, can be found in an e-mail sent to Marks by Ben Kelley in which he told Marks, 'I have received several concerned messages...' about his Web site. These complaints have been kept anonymous. How convenient.
>
> "Here's what's going on: Somebody within the scientific community let Kelley know that Marks was running a Web site that was friendly to Intelligent Design."

134. William Dembski. "Walt Ruloff op-ed on academic suppression at Baylor 'Does the Baylor administration believe in God?', " Uncommon Descent, 19 September 2007

> "Walt Ruloff, the executive producer of the Ben Stein movie EXPELLED: NO INTELLIGENCE ALLOWED, has an amazing op-ed in today's Baylor Lariat, the school newspaper. WOW!"

135. William Dembski "'Expelled: The Movie' attempts to interview Baylor President John Lilley," Uncommon Descent, 19 September 2007

> "According to today's Baylor Lariat (the student newspaper), the producer of the upcoming Ben Stein documentary on suppression of ID (www.expelledthemovie.com) is sending a crew to Baylor to interview President John Lilley and others regarding the removal of Robert Marks's Evolutionary Informatics Lab from Baylor"

136. Claire St. Amant, "ID debate to continue in new film," The Baylor Lariat, Sept. 19, 2007 [Newspaper Layout]

> "Troubled by the Baylor administration's removal of an intelligent design Web site from a Baylor server, a producer from the film Expelled: No Intelligence Allowed is planning a Thursday trip to campus in hopes of meeting with President John Lilley.

"Distinguished professor Dr. Robert Marks' personal research Web site on evolutionary informatics was taken down from a Baylor server last month, and producers of Expelled want to speak to Lilley about it.

" 'We are disturbed with what happened with Dr. Marks," executive producer Walt Ruloff said. "He was working on some really vital research."

137. Pat Sullivan, "Intelligent Design Researcher Censored," September 19, 2007

"Coverage of Baylor University versus Professor Robert Marks has been pretty widespread, especially on ID blogs. A website he had on the Baylor server was shut down. His website reported on his mathematics research regarding the potential limits of Darwinian theory."

"When Baylor officials realized his research potentially questioned evolutionary dogma they simply shut down his website without even informing him. His academic freedom (usually considered sacred) was clearly violated. Even PZ Myers at his Pharyngula blog, a very outspoken, vitriolic critic of ID came out in support of Mark's academic freedom to study and report anything he wished. Good for PZ. (I would point to his blog but it is down right now.)

"It has been argued by evolutionists that there is NO effort to stifle scientists who question Darwinity. But there are many examples, this one the most recent. The controversy has attracted the attention of Ben Stein who is working on a documentary film, Expelled: No Intelligence Allowed. The censorship at Baylor will make it in the film for sure. Dr. Mark's attorney is working on this as well.

"The efforts of evolutionists to censor anything ID is backfiring. For ID scientists to draw inferences of design from their scientific observation is science. The rabid efforts of Darwinists to claim they are idiots who don't understand science simply are illogical. They use an unnatural definition of science to protect their materialistic faith. As long as they control the definition of science they can hide behind their often silly statements. Personally, I think we will continue to see the evolution monopoly unravel."

138. William Dembski "President Lilley has laryngitis," Uncommon Descent, 20 September 2007

"Today's Baylor Lariat (the student newspaper) has an amazing editorial... 'Lilley's two cents are missing"'

139. "Lilley's two cents are missing," Baylor Lariat, Sept. 20, 2007. [Newspaper Layout]

"...one of the most crucial roles a university president must play, especially during times of dispute, is to act as the face of the university. By virtue of his job description, Lilley is the voice of Baylor. Lately it seems he has laryngitis.

"When Baylor was thrust into the national spotlight for shutting down distinguished professor Dr. Robert Marks' intelligent design Web site, representatives from media relations answered questions, not Lilley.

"Of course, the public could hardly expect anything less, considering Lilley's absence from the initial meeting between Marks and a handful of Baylor administrators."

"As your student body, we'd like to hear from you once in a while."

140. Ryan Latham "Baylor right in Marks debacle," Baylor Lariat, Sept. 20, 2007 - Letter to the editor [Newspaper Layout]

141. Forthekids "Baylor takes Lilley to task," Reasonable Kansans, September 20, 2007

"Well, it looks as though Baylor is becoming a bit put off with their President. Yesterday, I posted an article from the Baylor Lariat which was written by the producer of the upcoming movie, Expelled: No Intelligence Allowed. Apparently, his film crew was on it's way to interview President Lilley in regard to the Evolutionary Informatics lab fiasco, but it looks as though he refused to meet with them."

142. Jackie Hyland, "ID talks fail to satisfy," Baylor Lariat, Sept. 21, 2007 [Newspaper Layout]

"The associate producer of the film Expelled: No Intelligence Allowed, Mark Mathis arrived on campus Thursday morning with a camera crew in a last effort to speak to President John Lilley.

"Mark Mathis wished to discuss the decision to shut down a research Web site on Intelligent Design belonging to Dr. Robert Marks, distinguished professor in the electrical and computer engineering department.

"Lilley was unavailable, but Mathis met with director of media relations Lori Fogleman and Dr. Ben Kelley, dean of the school of Engineering and Computer Science."

" 'With Dean Kelley and Lori Fogleman, it's pretty clear to me that both of them were coached by lawyers to continue saying it's not content but procedure," Mathis said.

"Mathis said he asked Kelley and Fogleman several questions about academic freedom and the issue behind Marks' Web site, but he was unable to get a lot of answers.

" 'It seems odd to me that Baylor, which is a Christian university, is uncomfortable with a professor who is doing a research sympathetic to intelligent design,' Mathis said.

"Allentown, Pa., junior Sam Chen is the director of the Intelligent Design Undergraduate Research Center.

"He met and talked to Mathis on Thursday.

"Chen said he thought it was interesting how generic and closed the administration's speech is about this issue."

143. Tim Woods "Film crew presses Baylor officials on intelligent design Web site's removal," Waco Tribune, September 21, 2007

> "Baylor University's recent controversy regarding a professor's intelligent design-related Web site took a dramatic turn Thursday when a film crew went to President John Lilley's office, hoping to speak to him about what they deem academic suppression.
>
> "But Lilley was out of town."
>
> "Mathis said Stein and the film's producers believe Baylor's removal of distinguished engineering professor Robert Marks' Web site devoted to evolutionary informatics a concept Marks' collaborator, William Dembski, termed 'friendly' to intelligent design from its server is an example of academic suppression. While Baylor officials have said the site was removed for procedural reasons, namely the absence of a disclaimer separating the university from involvement in Marks' research, Mathis believes it was taken down because of its content.
>
> " 'To us, it seems pretty obvious what's going on with Professor Marks' Web site. . . . To us, that's academic persecution and suppression,' Mathis said. 'What is the problem with tenured, distinguished university professors pursuing a scientific idea? What's wrong with that? It's especially interesting in the case of Baylor, in that this is happening at a Christian university.' "
>
> "Outside Baylor's Pat Neff Hall, which houses Lilley's and Fogleman's offices, Mathis pressed the issue of academic suppression with Fogleman.
>
> " 'This had everything to do with the fact that (Marks' site) was friendly to intelligent design, didn't it?' Mathis asked Fogleman.
>
> " 'I just know that right now there is a discussion between the parties . . . and it will be resolved to mutual satisfaction,' Fogleman replied.
>
> " 'The content of the site has nothing to do with this,' Fogleman later said, again stressing Baylor's stance that it is a procedural matter.
>
> "Mathis then asked Fogleman about whether or not she is allowed to openly refer to intelligent design. 'You will not say intelligent design.' Is that forbidden? You keep saying content.' . . . You haven't said (intelligent design) and it stuck out to me,' Mathis said. 'You guys are holding your cards so tight . . . Are you not allowed to say it?'
>
> "Fogleman responded, 'I am allowed to say it, (but) I'm not saying it because you're asking me to.' "

144. William Dembski, "MEDIA COVERAGE: Baylor, Robert Marks, and the EvoInfo Lab," Uncommon Descent, 21 September 2007

> "September 14th marked the end of the first wave of media attention in the Baylor administration's censoring of Prof. Robert Marks's Evolutionary Informatics Lab (now on a third-party server at www.EvoInfo.org). With the coming to campus of a crew from Ben Stein for his forthcoming movie/documentary EXPELLED: NO INTELLIGENCE ALLOWED,

things have ramped up and the second wave has begun (see all the local newspaper coverage cited below).

"Where are we now? Baylor President John Lilley remains the problem he continues to dig in his heels and won't let the Evolutionary Informatics Lab back on campus. Nonetheless, the people speaking to the press in his stead (e.g., Lori Fogleman and Randall O'Brien) are now back to claiming that the problem was 'procedural' (previously they had introduced the category of 'approved research' research in evolutionary informatics presumably constituting unapproved research). Also, they are saying that there is a 'deal in the works' (see the front-page story in the Waco Tribune, 9.21.07, link given below).

"How there can be a deal in the works when the administration has made clear that Prof. Marks's work on evolutionary informatics is entirely on his own time and may not be characterized as a group or lab on the Baylor server remains a mystery. Baylor is positioning itself as a 'reasonable party' trying to work things out, but in fact they are simply playing a waiting game until this second wave of media interest dies down, after which the removal of Prof. Marks's website from the Baylor server will be quietly forgotten. What the Baylor administration needs to do is apologize to Prof. Marks and restore his site with no more restrictions than any one else on the Baylor server faces."

145. William Dembski "Baylor President John Lilley Responds," Uncommon Descent, 21 September 2007

"Peter Irons, it appears, has been corresponding with President Lilley of Baylor, writing him on Wednesday, September 19, 2007 to alert him about the crew of EXPELLED that was coming to campus (Irons continually forwards me emails):

> "Also, the Discovery Institute, of which Dembski is a Fellow, has announced on its website that a producer of a still-in-production film called 'Expelled' will visit your campus tomorrow (Thursday) with a request to interview you for this film. Pretending to be an 'objective' account of the evolution/intelligent design controversy on various campuses, the film is in fact a highly biased project, devoted to showing the 'persecution' of intelligent design advocates. I'm sure you will not agree to meet with Walt Ruloff, the film's producer, but I did want to warn you in advance about his deceptive intentions. Mr. Ruloff, by the way, convinced the Baylor Lariat editors to run an opinion piece by him in which he questioned whether Baylor faculty and administrators believe in God. Can you believe this?"

"Irons forwarded me President Lilley's reply:

> "Subject: RE: Professor Dembski's attacks on you
> From: "Lilley, John M."

Date: Wed, September 19, 2007 5:34 pm
To: pironsATweber.ucsd.edu
Peter, thanks for your email. It is greatly appreciated. I shall not take the bait on the movie. I greatly regret the difficulty that Dembski has created. John "

"I contacted President Lilley (also copying the provost and others at Baylor) about whether these actually are his words:

"Date: Thu, 20 Sep 2007 11:29:06 -0500
To: John_LilleyATbaylor.edu, pironsATweber.ucsd.edu
From: "William A. Dembski"
Subject: Fwd: RE: Professor Dembski's attacks on you
Cc: Randall_O'BrienATbaylor.edu, Ben_KelleyATbaylor.edu,

Dear President Lilley,
Peter Irons, a professor at one of the University of California campuses, continually forwards to me email communications, ostensibly between him and others. He's forwarded to me several putative emails from you. I'd like to confirm whether the exchange below is genuine before I blog on it.
If it is genuine, I would point out that any difficulties you may be experiencing over your suppression of ID-related research at Baylor are of your own creation. My role in this has merely been to shine some light.
Best wishes,
Bill Dembski"

"Twenty-four hours later still no disconfirmation from Baylor that Lilley wrote what Irons forwarded to me."

146. Robert Crowther, "Baylor President Stays Mum on University's Suppression of Intelligent Design," Evolution News & Views, September 21, 2007

"The Baylor student newspaper continues to report on the story of the shut down of distinguished professor Robert Marks' evolutionary informatics website due to aonymous complaints that it was pro-intelligent design. Baylor president John Lilley refused to speak with Expelled filmmakers about the suppression of intelligent design scientists and scholars. Filmmakers had to settle speaking to a public relations reprsentative and the Dean of Marks' school."

' "With both of them it was really limited because they have a certain line they are holding, which the issues are all about procedures and not about the content,' Mathis said, 'and all the information we have seen says that that's not true.' "

' "With Dean Kelley and Lori Fogleman, it's pretty clear to me that both of them were coached by lawyers to continue saying it's not content but procedure,' Mathis said."

147. "Thou Shalt Put No Other Gods Before Darwin," Vital Signs Blog, September 21, 2007

148. Gil Dodgen, "Real Simulations, Cartoon Simulations, and Evolutionary Informatics," Uncommon Descent, 22 September 2007

> "Computer programs that purport to validate the grand claims of Darwinian (i.e., chance and necessity) biological evolution are a hoot."
>
> "Interestingly, investigating the validity of evolutionary simulations is one of the things Marks and Dembski have been doing with their evolutionary informatics research. In the case of an evolutionary program called ev, they demonstrated that all but 8.8 bits of information out of a total of 131 were smuggled into the program, and then it was squandered with an evolutionary algorithm. It turns out that random queries outperform the evolutionary algorithm by over 10,000 . I believe Dembski and Marks have plans to conduct a similar analysis of Avida.
>
> "Avida and ev are cartoon simulations.
>
> "Of course, this is what got Marks in trouble at Baylor. There is no need to investigate the validity of evolutionary simulations, because we know in advance that Darwinian mechanisms explain everything in biology."

149. Gary Ramsey "Call it censorship at Baylor," Waco Tribune, September 24, 2007

> "Robert Marks' Web site was hosted on Baylor servers (as professors are permitted to use). However, after someone objected, Baylor took Marks' Web page down.
>
> "This was in direct violation of an agreement hammered out just days before that included Marks changing the title of the material and featuring a disclaimer that it represented his views only and not Baylor's.
>
> "This censorship is based not on poor scholarship or bad data but on a disagreement about the research's conclusions.
>
> "The conclusions were not deemed to be particularly favorable to the notion that Darwin was right and no intelligence was required in the creation of the world and everything in it.
>
> "A Baylor spokesman said that taking the page down has nothing to do with content and everything to do with rules relating to Baylor's official endorsement of ideas. Right.
>
> "That Baylor would be so unbold as to cower before those who advocate a secular society must give its supporters pause."

150. Gary Ramsey, guest column: "Call it censorship at Baylor," The Waco Tribune, September 24, 2007

> "Baylor University literally has censored a 'distinguished instructor' who has been conducting computational studies of what Darwinian evolution can and cannot accomplish.

"Robert Marks' Web site was hosted on Baylor servers (as professors are permitted to use). However, after someone objected, Baylor took Marks' Web page down.

"This was in direct violation of an agreement hammered out just days before that included Marks changing the title of the material and featuring a disclaimer that it represented his views only and not Baylor's. This censorship is based not on poor scholarship or bad data but on a disagreement about the research's conclusions.

"The conclusions were not deemed to be particularly favorable to the notion that Darwin was right and no intelligence was required in the creation of the world and everything in it."

"A Baylor spokesman said that taking the page down has nothing to do with content and everything to do with rules relating to Baylor's official endorsement of ideas. Right."

151. Robert Crowther, "Op-ed in Waco Paper Highlights Baylor Univeristy Censorship of Intelligent Design Website," Evolution News & Views, September 24, 2007

"The Waco Tribune Herald today published an op-ed, keeping the spotlight on Baylor University's crusade to stifle research questioning Darwinism or supporting intelligent design.

"Aside from the fact that they got both the author and the professor's name wrong (Mark Ramsey is the author, Robert Marks is the professor), the op-ed continues to showcase the censorship used by the Baylor administration to suppress intelligent design."

152. "Creationist Mini-Museum to Come to Wisconsin Dells," Globe Lens, September 24, 2007

"As Wisconsin Dells Events reported, private collector Bill Mielke hopes to establish an artifact display in the Dells area showing humans and dinosaurs were contemporaries"

"Meanwhile, everyone else seems to be talking about the Robert Marks fiasco at Baylor... Although Baylor president John Lilley may have finally made a peep, he can't hide for long now that Baylor's own student newspaper is criticizing him and his faculty"

153. O'Leary, "Why Bob Marks's lab got trashed," Uncommon Descent, 25 September 2007

"Here's what I think of the whole mess (and I am not an American and do not live anywhere near Waco or Baylor and have nothing but trouble to expect from either side in this matter.):

"The Voices of the Baylor Bears have figured out one thing for sure: Bob Marks knows precisely what is rotten in the state of Darwinism.

"So a vast army rushes to aid Baylor's quest to be the Protestant Notorious Dame, or whatever it wants to be (forgive me if I forget).

> "The Bears can't afford to have their obsequious little Baptist university expose the Darwin mess. Then they will not get the rewards handed out to all those who keep their traps shut tight.
>
> "Traps must be shut tight in a world dominated by materialism, where Top People actually believe in that ol' Darwinian magic.
>
> "Oh, you know, mud to mind and all that, in a zillion easy steps. Or maybe a zillion zillion easy steps, or ... heck, what's another few powers of ten ... bring em on ..."

154. Anika Smith, "Troubling Signs at Baylor University," ID the Future, September 25, 2007

> "On this episode of ID the Future, Anika Smith takes a look at an emerging pattern of academic suppression and viewpoint discrimination at Baylor University. Baylor's recent removal of distinguished professor Robert Marks' website is only the most recent example of this trend, which spans from college campuses to government institutions and beyond."

155. Raymond Takashi Swenson, "Baylor betraying its mission," Baylor Lariat (Studet Newsapaper) Sept. 25, 2007. [Newspaper Layout]

> "I am amazed that a university purporting to be connected to a church is so scared about the idea of intelligent design that they feel they must suppress its discussion.
>
> "Even more, does Baylor suppress all original speculation about scientific questions and only allow publication of scientific ideas that are widely endorsed as 'orthodox'?
>
> "If so, then it is guaranteeing that it will never be a first-rate research institution, because the really groundbreaking original insights are by definition outside the mainstream."

156. Raymond Marc Carrier, "Marks can publish findings," Baylor Lariat (Studet Newsapaper) Sept. 25, 2007. [Paper Layout]

> "When and if Marks ever does viably challenge Darwin, he will surely publish his findings. Or are all peer-reviewed scientific journals run by atheists?"

157. Raymond Mark Moore, "Bible is proven scientifically," Baylor Lariat (Studet Newsapaper) Sept. 25, 2007. [Paper Layout]

> "This is a country where we allow different opinions. If there is another side of the argument, let's hear it. Don't be offended by another side, respect the other side just like religions, countries, etc. respect each other."

158. Robert Crowther, "New York Times' Cornelia Dean: Wrong on Evolution, Intelligent Design and Expelled," Evolution News & Views, September 27, 2007

"The New York Times periodically exhibits a questionable nose for news. What rises to the level of news for the science writers at the Times aren't instances of scientific censorship or persecution of scientists. Today, complaints by Darwinists allegedly featured in a forthcoming (and as of yet unfinished, according to the filmmakers themselves) film, Expelled, that documents the persecution of scientists who question Darwin, is considered news by the Times' science staff.

"What about real news related to the debate over evolution and intelligent design? The Times has a snobbishly selective olfactory sense, it seems.

"Has the Times reported on the attacks on the academic freedom of distinguished professor Robert Marks, who had his research website on intelligent design shut down by Baylor University?"

159. TBC Staff, "BAYLOR UNIVERSITY," The Berean Call, September 28, 2007.

"We're saddened to report on a recent administrative action at Baylor University (a Baptist school) in Texas, where administrators ordered a professor's personal website be shut down because of "anonymous concerns" that the site supported ideas associated with the intelligent design movement (IDM).

"Baylor's record on dealing with academic freedom, particularly as it concerns intelligent design the IDM, is now all the more odious."

160. "Baylor University," The Berean Call, September 28, 2007

"We're saddened to report on a recent administrative action at Baylor University (a Baptist school) in Texas, where administrators ordered a professor's personal website be shut down because of 'anonymous concerns' that the site supported ideas associated with the intelligent design movement (IDM)."

"The debate, surprisingly, does not concern the validity of Marks' research, but rather 'Baylor's policies and procedures of approving centers, institutes, products using the university's name,' according to Lori Fogleman, director of media communications at Baylor. In July, after giving an interview to the IDM-promoting Discovery Institute, Marks was asked by Baylor's engineering school dean to remove the website. In response, Marks requested a meeting for discussion, but just shy of a week before the scheduled meeting, all references to the Evolutionary Informatics Lab on Marks' website were forcibly removed."

"Should we be surprised? Dembski, the previous victim, offers a fairly chilling perspective on academic freedom when it comes to disagreement with Darwin:

" 'You have to understand, in the current academic climate, Intelligent Design is like leprosy or heresy in times past. To be tagged as an ID supporter is to become an academic pariah, and this holds even at so-called Christian

institutions that place a premium on respectability at the expense of truth and the offense of the Gospel.' "

161. Regis Nicoll "From Galileo to Robert J. Marks," BreakPoint 9/28/2007

> "'It's simply unconscionable that a major university would so trample a scientist's right to freedom of scientific inquiry.' (Casey Luskin, attorney)
>
> "Dr. Robert J. Marks is a distinguished professor of engineering at Baylor who chairs several national and international committees, has authored over 300 technical papers and three books, and has received numerous awards in the field of computational intelligence."
>
> "This past June Dr. Marks launched a website on the Baylor server called 'Evolutionary Informatics Lab.' The purpose of the lab was to distinguish 'the respective roles of internally generated and externally applied information in the performance of evolutionary systems.' "
>
> "In sad irony, the science building where Dr. Marks works bears the words of Paul, 'By Him all things are made; in Him all things are held together."'

162. World Net Daily on "Expelled: No Intelligence Allowed," Uncommon Descent, September 29, 2007

163. Mark Ramsey, "Et Tu, Baylor U?," TexasInsider.org October 1, 2007

> "Baylor University has made tremendous strides in the past several years in working toward the vision of 'Baylor 2012'. In the beginning of the first 'Imperative' of Baylor 2012, a vision of critical thinking is stated.
>
> " 'Baylor will seek to maintain a culture that fosters a conversation about great ideas and the issues that confront humanity and how a Christian worldview interprets and affects them both.'
>
> "While Baylor has made progress towards many 2012 goals, it just took a giant leap backward on this keystone concept, which has academic freedom for students and faculty as its foundation.
>
> "Baylor has literally censored a 'distinguished instructor' who has been conducting computational studies of what Darwinian evolution can and cannot accomplish. His website was hosted on Baylor servers (as professors are permitted to use). However, some still mysterious (and anonymous) person or persons objected to the content of his website.
>
> "Baylor's administration literally took one of his web pages down."
>
> "Is Baylor Consistent?"
>
> "The geology department's statement on evolution is instructive. It includes numerous pages, several in direct conflict with clear teaching of most Baylor parents' and students' beliefs."
>
> "Authorities listed as 'suggested reading' include Stephen J. Gould (the most vocal atheist in America until his death), Richard Dawkins (the most vocal living atheist on the planet who openly mocks all religion and whose 'weasel'

computer program is a joke compared to Professor Marks' work), and Eugenie Scott, director of the National Center for Science Education, a so-called think-tank devoted (and partially publicly funded) to promoting evolution and discrediting non-evolutionary beliefs."

"Some 'conversation'."

"Professor Marks, Baylor students and faculty, and yes, Baptists, deserve better."

164. Bruce Chapman, "Who is Anti-Science?" Family Action Organization, October 1, 2007

> "Today, the persecutors of scientific dissidents are not in the Church, but in the academy. At Baylor University, an intelligent design project that is not even directly funded by grants, has its website shut down by the university."

165. Casey Luskin, "Credibility Gap: Baylor Denies Robert Marks' Situation Has Anything to do with Intelligent Design," Evolution News & Views, October 1, 2007

> "The Waco Tribune reported that 'Baylor vice president for marketing and communications John Barry denied that the matter has been drawn out because the content is related to intelligent design.' Does Baylor University actually expect us to believe that this has nothing to do with ID? William Dembski reports that the initial e-mail sent from Baylor administrator, Dean Kelley, to Dr. Marks explicitly stated that people were complaining about Robert Marks's website precisely because it dealt with ID:
>
> > "I have received several concerned messages this week about an interview and web site dealing with evolutionary computing associated ID. Please disconnect this web site immediately and Cheryl will arrange a time for us to meet immediately upon my return."
>
> "It was this e-mail that preluded Baylor's removal of Marks's website without his knowledge or permission.
>
> "Baylor, of course, provides the usual pretexts that they are treating Dr. Marks like they would any other faculty. This makes it important to dispel Baylor's pretexts for persecuting Dr. Marks on the grounds that he has done something wrong.
>
> "Dr. Marks is an innocent party. He was simply doing his own research, much like any other faculty might do, and he discussed it on a website. After Dr. Marks made the mistake of talking about his research on an ID the Future Podcast, some anti-ID forces at Baylor complained, and Baylor administrators sent Dr. Marks the threatening e-mail above and even took the website offline, without Marks' permission and knowledge."

166. Editorial: "Lilley, Lariat striving for effectiveness," Baylor Lariat, Oct. 2, 2007 [Newspaper Layout]

> "The editorial board met Thursday with President John Lilley, his chief of staff Karla Leeper and vice president of media relations John Barry. This meeting came on the heels of our editorial, 'Lilley's two cents are missing,' which called for administrative transparency, more direct access to the president and direct responses to important, university wide issues."
>
> "In the case of Dr. Robert Marks, we were assured by Barry that allegations that Lilley was somehow involved in shutting down the Web site are 'categorically false.' "

167. Editorial: "Free to speak, free to read," Waco Tribune, October 03, 2007

> "Baylor librarians are participating in Banned Books Week by scheduling readings from select books that have been purged from library shelves due to public or governmental pressure.
>
> "These include such classics as To Kill a Mockingbird, Of Mice and Men and Lord of the Rings. Of current note is Alms for Jihad: Charity & Terrorism in the Islamic World. A lawsuit caused Cambridge Press to recall all copies of Alms in bookstores and ask that libraries remove it. To its credit, Baylor's library system refused. It is one of the books from which excerpts will be read aloud this week."
>
> "Right now Baylor has a controversy over a professor's Web site about intelligent design. The university pulled it down over concerns that it conveyed Baylor's endorsement of the concept. The professor says that a mutually acceptable disclaimer was composed to address the concerns, but Baylor still won't allow the site."
>
> "Crushing unpopular opinions and censoring information might be the impulse of a tyrannical majority. But the right of the individual to think, read and speak freely is the bedrock of this society. After all, it was formed so many years ago by people who fled oppression.
>
> "Read on."

168. (KSLR) "Baylor University, to their shame, has censored the web pages of a professor who discussed "Intelligent Design" as the explanation for our origin instead of Darwinian evolution. Attorney John Gilmore joins me" October 3, 2007.

169. O'Leary "Banned Books Week - at least one dinosaur survived after all," Uncommon descent, 3 October 2007

> "Friends draw my attention to this Banned Books Week event at Baylor, and this hasty reassurance that we are NOT supposed to think that there is any clear comparison between the suppression of Bob Marks's evolutionary informatics lab and the banning of books. (Hat tip Anarchicharmony's William J. Murray.)"

170. "Speaking of 'Expelled,' a Scientist is Censored," LIFEETHICS.ORG, October 4, 2007

> "Last month Dr. Ben Kelley, dean of engineering and computer science, shut down Marks' Web site. He apparently had the blessing of President John Lilley. Why? The university put forth a bunch of phony-baloney procedural explanations that don't stand up to scrutiny."
>
> "The truth however, can be found in an e-mail sent to Marks by Ben Kelley in which he told Marks, 'I have received several concerned messages...' about his Web site. These complaints have been kept anonymous. How convenient."

171. Aaron, "Free speech? Not for you because you're wrong," October 4, 2007

> "Imagine your a college professor with a website where you post information about your research. Should your website and information be protected only if the college agrees with it? Should controversial research be banned from the professor's webpage? If you're Robert Marks and you are working for Baylor and in the intelligent design related field of evolutionary informatics."
>
> "This is not about whether you agree with ID or not. Thils is about whether you accept academic freedom or not."

172. Dangoldfinch. "Turns out there were other similar episodes by Baylor University," October 4, 2007

> "It seems that even historically Christian' universities are not above fear. Seems that even Baylor University is getting in on the action against professor Bob Marks."
>
> "There's also the story of Guillermo Gonzalez who was denied tenure at Iowa State University"

173. Bob Unruh, "Darwin challenged, research censored. Christian university removes professor's website, data from public view," World Net Daily. October 4, 2007

> "A professor whose research could be the foundation for a major challenge to Darwin's theory of evolution and his historically Christian employer are at odds over that work, with Baylor University ordering Professor Bob Marks' work taken off the Internet."
>
> "Prof. Marks told WND he could not comment since his lawyer and the university are in negotiations over the situation. And Baylor spokeswoman Lori Fogleman said there are 'ongoing legal discussions that we hope will be resolved to both party's mutual satisfaction.' However, she told WND she was unaware of a single other instance in which any research posting by any Baylor professor had been treated in a similar fashion."

174. 071005 (BLOG) Jim Lange, "The Inmates Running the Asylum," October 5, 2007

> "A professor at a Christian university (Baylor University) has been forced to remove his research from the internet which challenges Darwin's theory of evolution and helps to further prove the existence of God's design."

"My first reaction to this is that this is like the inmates running the asylum. How can this university operate out of a position of fear like this?"

175. Michael F. Haverluck "Christian University Sides with Evolutionists," CBNNews.com (Christian Broadcasting Network, October 5, 2007

"Despite its Christian background, Baylor University demanded that Professor Bob Marks take his Web site off the Internet because scientific findings posted there challenged Darwinian evolution.

"It is believed that Baylor has succumbed to the bullying of evolutionists who have dominated the field of science in American academic institutions."

" 'As many of you have heard, Marks, a distinguished professor of electrical and computer engineering, has been conducting research that ultimately may challenge the foundation of Darwinian theory,' said Walt Ruloff, the executive producer of Premise Media. 'In layman's terms, Marks is using highly sophisticated mathematical and computational techniques to determine if there are limits to what natural selection can do,' Ruloff explained. 'At Baylor, a Christian institution, this should be pretty unremarkable stuff. I'm assuming most of the faculty, students and alumni believe in God, so wouldn't it also be safe to assume you have no problem with a professor trying to scientifically quantify the limits of a blind,

undirected cause of the origin and subsequent history of life?"'

176. John Hugh Gilmore, "Mob rule, not academic freedom, at Baylor," Waco Tribune-Herald, October 7, 2007... [Unedited]

"To the opponents, intelligent design ID is an intellectual crime. Or so we must assume by the actions of Baylor University.

"As counsel for Baylor Distinguished Professor Robert J. Marks II, I was amazed and discouraged by the controversy surrounding his rather routine yet scientifically exacting Web site that was shut down by the dean of his Engineering Department. This action came after anonymous complaints, but without an opportunity for him to respond beforehand."

177. William J. Murray "Darwin as sacred cow," WacoTrib.org October 8, 2007

"Baylor University's ... Marks is a world-class expert in evolutionary computing. His Web site that Baylor unceremoniously pulled had nothing to do with 'intelligent design.' Rather, it was the faceplate for his evolutionary informatics lab, where he was attempting to run realistic simulations to see if RM&NS [random mutation and natural selection] could actually account for what neo-Darwinists claim."

178. "Lawsuit claims job tied to faith in natural selection: Researcher sues over dismissal because he didn't 'believe'," World Net Daily, December 8, 2007

> "A former researcher for the prestigious Woods Hole Oceanographic Institution is suing the institution, alleging he was dismissed from his position there because he didn't have faith in evolution."
>
> "WND reported earlier the issue had driven a wedge between Baylor University Professor Bob Marks, whose research could be the foundation for a major challenge to Darwinian faith, and his historically Christian employer.
>
> "Walt Ruloff, the executive producer of Premise Media, who worked with actor Ben Stein on a new project called 'Expelled: No Intelligence Allowed,' about the monopoly Darwinian beliefs hold in academia, wrote in the Baylor student newspaper about his concerns."

179. Pat Sullivan, "The Baylor ID vs Evolution Controversy," The Pat Sullivan Blog, October 9, 2007

> "Here is a very good article from the Waco Tribune regarding Dr. Robert Marks. Baylor took down his website because he dared to espouse some of the scientific merits of Intelligent Design based on hi s own research. Baylor University clearly violated the academic freedom of Dr. Marks, persecuting him for questioning Darwinian evolutionary dogma. The fact that this Texas Inquisition has gone on so long is rather amazing to me. It would seem that Baylor would realize how silly it's actions are. It calls widespread attention to the McCarthy-like approach of the Darwinists. It shows Darwinists to be religionists of the worst type."

180. Denyse O'Leary, "When you want the approval of people whose approval you should NOT want..." Uncommon Descent, October 9, 2007

> "On Sunday, Bob Marks's lawyer John Hugh Gilmore wrote an op-ed in the Waco Tribune expressing astonishment at the sheer, manifest vulgarity of the attempt to suppress the Evolutionary Informatics Lab"

181. "Intellectual Insecurity at Baylor" Darwinian Fundamentalism, October 9, 2007

> "It would appear that my comments about the apparent intellectual insecurity at Iowa State (also here) would apply to Baylor as well. And it looks like this intellectual insecurity will get a lot more attention soon, and will really put Baylor on the map"

182. Robert J. Marks II, "Review: EXPELLED: NO INTELLIGENCE ALLOWED," Christian News New Zealand, December 12, 2007

> "I attended a screening of EXPELLED: NO INTELLIGENCE ALLOWED yesterday in Dallas. ... we watched the movie with unwavering interest. Wow. I want everybody to see this important film. I now know where I will do my Christmas shopping.
>
> "John Sullivan, one of the movie's producers, said EXPELLED will open on about a thousand screens in February. This is about the same number of

screens for Michael Moore's last documentary.There is sooooo much great stuff in this movie. Here are some bullets."

"Old B&W movie clips were sprinkled throughout the film. One showed a 1950's middle school bully (Big Science) sitting on the stomach of a victim (ID proponent) pinning his arms back. The bully boy keeps saying 'OK. Now you're on our side. Say you're on our side!' It was hilarious.

"There are also a bunch of short custom animated cartoons. One is an animation of Richard Dawkins frustrated at the low probabilities emanating from a bank of slot machines. The audience roared."

183. Rusty Pugh "Attorney accuses Baylor Univ. of viewpoint discrimination," OneNewsNow.com, October 12, 2007

"An attorney representing a Baylor University professor whose website was shut down because it promoted intelligent design says the Baptist school is guilty of viewpoint discrimination."

"just before the school year began, Baylor shut down the website, claiming Marks had violated university procedure for hosting websites. Attorney John Gilmore, however, says it had nothing to do with procedures – he claims Baylor did not like the professor's intelligent design stance. He is accusing the university of viewpoint discrimination.

" 'No other website that we're aware of has been shut down at Baylor,' says the attorney. 'The dean of his engineering department, who is a good man – but [who] I think had pressure brought to bear on him – shut down his website without any investigation, without any discussion with my client."'

184. Robert Crowther "Lucky for Koonin, he doesn't teach at Baylor," Evolution News & Views, October 12, 2007

"Like Koonin, Michael Behe in his latest book *The Edge of Evolution* shows what evolution can do and what it can't. Professor Robert Marks at Baylor uses the Evolutionary Bioinformatics Lab to showcase some of the limits of Darwinian evolution. Both have suffered serious repercussions. But not Koonin (yet)."

185. Minggu, "Menggoyang Teori Evolusi, Situs Internet Profesor Dibrangus," Hidayatullah.com October 21, 2007

"Hidayatullah.com–Sebuah perguruan tinggi Kristen Baptist di Texas Amerika Serikat, Universitas Baylor, telah melakukan penindasan terhadap kebebasan akademis stafnya, Robert Marks, seorang profesor teknik elektro dan komputer. Kedzaliman ini dilakukan dengan menutup situs internet milik Roberts Marks yang berisi penelitian yang dikerjakannya. Menurut media pemberitaan di Universitas itu, Lariat, 11 September 2007, penelitian di

> laboratorium Informatika Evolusi yang dikelola profesor Marks mencakup komputasi informatik dan proses evolusi[13]"

186. Salvador "$40,000 tuition and salary" ExpelledTheMovie.com, October 31, 2007

> "In the Spring and Summer of 2007, Dr. Robert Marks of Baylor University offered me 2 years tuition and a small salary to work as his research assistant in the Evolutionary Informatics Lab."
>
> "The Informatics Lab was shut down in August by the Darwinists at Baylor when it was evident the scientific research would put certain Darwinist organizations around the country out of business and into disrepute. With the lab shutting down, so went my offer."

187. Intelligent Design Watcher: Kumicit's Blog "Comments on Active Information." November 13, 2007

> "In a recent draft manuscript, Dembski and his coauthor Marks extend the vocabulary with three new terms [1]: endogenous information, exogenous information, and active information."

188. John West, "New Report Exposes Sham of Academic Freedom at Baylor University" Evolution News & Views, November 16, 2017

> "Today's edition of the student newspaper at Baylor University carries a devastating investigative report exposing new details of the university's shameful treatment of pro-ID engineering professor Robert Marks. Anyone who thinks Baylor science faculty have academic freedom to research and write about ID should read this article, which provides extensive documentation of the lengths to which some Baylor administrators will go to censor and shut down open discussion and research about intelligent design."

189. Denyse O'Leary, "Baylor Lariat asks for vote on intelligent design" Uncommon Descent, November 16, 2007

190. Brad Briggs and Grace Maalouf, "BU had role in Dembski return" November 16, 2007... [Newspaper Layout]

> "Baylor's history of controversy surrounding intelligent design has been well chronicled, especially when former professor Dr. William Dembski has been involved. But such was not the case in November of 2006 when Dembski arrived back on campus to work with Dr. Robert Marks, distinguished professor of computer and electrical engineering.

[13]Translation of Indonesian: A Baptist Christian College in Texas United States, Baylor University, has been suppressing the academic freedom of his staff, Robert Marks, a professor of engineering electro and computer. This tyranny is done by closing Roberts Marks's internet site contains the research he did. According to news media at the University, Lariat, 11 September 2007, research in the Evolutionary Informatics lab managed by professor Marks includes computing informatics and evolutionary processes.

> "Baylor was involved in asking for the grant that brought Dembski back, but when his return was made known to the administration, Baylor returned the grant, effectively terminating his position."

191. 071127 Baylor Lariat Editorial: Disclosure lacking in ID dispute, November 27, 2007 [Newspaper Layout]

> "The controversy around intelligent design research came into focus when Dr. Robert Marks, distinguished professor of computer science and engineering, procured a private grant to hire a researcher. His research assistant was Dr. William Dembski, who once ran Baylor's controversial Polanyi Center, which addressed science and religion."

192. World Net Daily,Lawsuit claims job tied to faith in natural selection: Researcher sues over dismissal because he didn't 'believe', December 8, 2007

> "'As many of you have heard, Marks, a distinguished professor of electrical and computer engineering, has been conducting research that ultimately may challenge the foundation of Darwinian theory. In layman's terms, Marks is using highly sophisticated mathematical and computational techniques to determine if there are limits to what natural selection can do,' he wrote. 'At Baylor, a Christian institution, this should be pretty unremarkable stuff. I'm assuming most of the faculty, students and alumni believe in God, so wouldn't it also be safe to assume you have no problem with a professor trying to scientifically quantify the limits of a blind, undirected cause of the origin and subsequent history of life?
>
> " 'But the dirty little secret is university administrators are much more fearful of the Darwinian Machine than they are of you,' he said.
>
> "Here's what's going on: Somebody within the scientific community let [Baylor dean Ben] Kelley know that Marks was running a website that was friendly to intelligent design. Such a thing is completely unacceptable in today's university system even at a Christian institution. Kelley was probably told to have the site shut down immediately or suffer the consequences,' Ruloff said.
>
> "Prof. Marks told WND he could not comment since his lawyer and the university are in negotiations over the situation. And Baylor spokeswoman Lori Fogleman said there are 'ongoing legal discussions that we hope will be resolved to both party's mutual satisfaction.' "

193. Top 10 Darwin and Design News Stories for 2007, December 29, 2007

> "5. Academic Persecution Continues. Last year Richard Sternberg lost his job at the Smithsonian for 'allowing' a pro-intelligent design paper to be published. This year noted astronomer Guillermo Gonzalez was denied tenure at Iowa State University because of his intelligent design affiliations and the Baylor University administration shut down Robert Marks's Evolutionary

Informatics Lab and website for similar reasons. These three tragic stories and others will be exposed in the Ben Stein documentary Expelled: No Intelligence Allowed to appear in theaters nationwide next spring."

2008

194. Baylor Engineering Professor Receives Volunteer of the Year Award, May 28, 2008

> "Dr. Robert Marks, Distinguished Professor of Electrical and Computer Engineering at Baylor University, has received the Volunteer of the Year award from the Dallas Chapter of the Institute of Electrical and Electronic Engineers, the largest professional society in the world. The award was given to Marks by the chair of the Dallas Section of the IEEE at an awards banquet earlier this month.
>
> "Marks received the award in part for his work establishing the Computational Intelligence Society of the Dallas Chapter of the IEEE, and served as the first chair of the society."

195. Robert Crowther, "Access Research Network Announces Top 10 Darwin and Design News Stories of 2007," Evolution News & Views, January 2, 2008

> "Even though scientists should be free to follow the evidence wherever it leads, the 2007 stories about Guillermo Gonzales being denied tenure at Iowa State and Robert Marks having his lab and website shutdown at Baylor University prove that we are not as free as we would like to think."

196. Jocelyn Green "ID Tagged; Faculty member at Iowa State University denied tenure for supporting intelligent design," Christianity Today, Jan 10, 2008

> "When Guillermo Gonzalez, assistant professor of physics and astronomy, was denied tenure at Iowa State University (ISU) in November 2006, department head Eli Rosenberg said the decision had nothing to do with Gonzalez's support of intelligent design. Recently released documents, however, told a different story."
>
> "In August 2007, Baylor University took offline the Evolutionary Informatics Lab website of Robert Marks, who is tenured. He said it was because the lab's research implied there might be a Creator. 'What's at issue here is the ability to bring the idea of the possibility of design into science,' said Marks."

197. Jerry Pierce "Baptist professors featured in new film," Southern Baptist TEXAN, January 28, 2008

> "DALLASTwo professors with ties to Baptist higher education are featured in an upcoming big-screen documentary that aims to expose the scientific establishment's scorn toward academics who question Darwinian evolution.

" 'Expelled: No Intelligence Allowed' is scheduled for theaters in April and stars comedic actor and conservative activist Ben Stein as he travels the world interviewing intelligent design (ID) proponents whose careers have been threatened, as well as prominent neo-Darwinists who hold ID in contempt, including Richard Dawkins, author of the best-selling book 'The God Delusion.'

A rough cut of the film, screened Jan. 10 in Dallas, featured interviews with William Dembski, a research professor of philosophy at Southwestern Baptist Theological Seminary and a leading ID proponent whose books include 'The Design Inference' and 'No Free Lunch,' and Robert Marks, who holds the title of 'distinguished professor of engineering' at Baylor University."

"Marks appears in the film as one of the 'expelled' academics. Although he remains at Baylor as a tenured professor, Baylor officials last year forced Marks to return grant money it received related to ID research and forced his ID research website to an off-campus server.

"Marks appears in the movie with Stein near the Brazos River in Waco. Stein interviewed Marks' engineering dean, Ben Kelley, on film, but attempts to interview Baylor President John Lilley and other administration officials failed.

"Marks said of the film: 'I sat there and I laughed. I laughed because I have seen this atheistic, big-science mafia squad come out and kill the careers of many of my friends. Guillermo Gonzalez, who I knew at the University of Washington. Richard von Sternberg, who I recently met. And to see their motivation and goals so clearly exposed in a Ben Stein sort of dry humor was incredible. I really, really enjoyed the movie. I think it is going to have an enormous impact. I hope it does.' "

198. Jerry Pierce "Q&A: Expelled' producer Logan Craft" Southern Baptist TEXAN, January 28, 2008

"TEXAN: I understand that William Dembski, formerly at Baylor, is in this film, as well as Robert Marks of Baylor. What was your reaction when you discovered the resistance to intelligent design research at places like Baylor or SMU?

"CRAFT: That's no surprise. To me, the long history of religiously founded universities and colleges in the United States is typically one of the ultimate capturing of the colleges and universities by the progressive secularists. I think you see that at Baylor partly. You see that at SMU almost entirely."

199. Jerry Pierce, "Q&A: 'Expelled's' Robert Marks," Southern Baptist TEXAN, January 28, 2008

"The Southern Baptist TEXAN's Jerry Pierce interviewed Robert Marks, a distinguished professor of engineering at Baylor University, regarding his role in the upcoming movie documentary 'Expelled,' starring Ben Stein.

Last summer Marks' research website related to intelligent design (ID) drew enough criticism at the Baptist school that he was forced to move the site to an independent web server, remove Baylor's name from the research and also return private grant money donated to Baylor on Marks' behalf. Prior to his coming to Baylor in 2003, Marks served on the faculty of the University of Washington in Seattle for 26 years. The following is excerpted from the interview.

> TEXAN: First off, what is your faith background?
> MARKS: I have been a follower of Jesus Christ since I was a junior in college. While at the University of Washington I was the Campus Crusade for Christ advisor for 18 years. I knew Walter Bradley, another distinguished professor of engineering at Baylor, an incredible man and one of the heroes in my life. I had heard him speak on the topic of the scientific evidence for the existence of God. I was up for moving on to an endowed chair in Colorado. Baylor was attempting through their 2012 Initiative to be the first institution that pursued research and celebrates a Christian worldview. I heard about that and I decided that was one thing I wanted to dedicate the rest of my career to. For that reason we came down to Baylor in 2003.
> TEXAN: Why is there a conflict over ID at a self-identifying Christian school such as Baylor?
> MARKS: Baylor had a reputation as an excellent teaching university that wanted to jumpstart its research programs. I have my name on about five books and about 300 academic publications. They wanted that reputation. But I realized after I came here that Baylor, with its goals, was attempting to do things that are contradictory and they needed to make decisions. One, they want to be recognized by the world as a critical research institution, and number two, they want to celebrate a Christian worldview. Well, as Christians we are told not to seek the approval of the world. And so as I see it, Baylor is going to come to a place where they will have to make the decision on one side or the otherto be acceptable to the world or to pursue a Christian worldview. So that, I believe, is one of the things that is motivating what is happening right now. There is a two-sphere model of education that says you have science, and you have your faith, and the two shouldn't intersect. You have a quote by the current president (William Underwood) that says the Bible is not a book about science. I claim that saying the Bible is not a book about science is like saying a cookbook is not a book about chemistry. Now, it doesn't address chemistry, but boy, there's a lot of chemistry in a cookbook. And the other thing about the two-sphere modelit is the only mode of Christianity that is acceptable to atheists. So if your goal as a Christian is to be compatible with the world, your only choice is the two-sphere model. I also be-

lieve that any pursuance of truth requires consideration of a creator. And many people try to define science to exclude the possibility of a creator. And if you do that it isn't a pursuance of truth any more.
TEXAN: When did you first realize there might be a conflict between your work in ID and the academic priorities at Baylor?
MARKS: I first thought it was a dislike of Williams Dembski [a leading ID proponent formerly at Baylor and now at Southwestern Seminary]. William Dembski is a polarizing name at Baylor. I actually received a grant from a private organization, a Microsoft millionaire, and the purpose was to bring on Bill Dembski so I could see him a couple of days a week and actually have him in an office here to do some collaboration. Boy, [the Baylor administration] didn't like that. They sent back the money for it. And at the time, I thought it was William Dembski. And later on, when they shut down my website and with other comments that were made, there was no doubtit was indeed intelligent design. There isand this is the topic explored in 'Expelled'there is a Darwinian, atheistic mafia whose purpose is to ruin the careers of anybody who delves into the idea of intelligent design. And we had kept it stealth from them that Bill was involved. Now to be clear, at Baylor it wasn't stealth, as was suggested in a student newspaper article here. It was totally open at Baylor. I had the proposal. Bill Dembski's name was on the proposal. It is amusing that the previous provost actually blamed me for the president signing something [the research grant proposal] he didn't read. We tried other avenues for grant money. The National Science Foundation said it did not fit the direction they were looking for. The Templeton Foundation turned it down as well.
TEXAN: Where does the research stand?
MARKS: The research is ongoing and I'm really excited about it. We do have some papers under consideration for publication in journals. The basic idea of what Bill Dembski and I are working on in evolutionary informatics is, simply put, evolution is modeled as an assembly line where complexity pumps out of the end. And it took a lot of smarts to assemble that assembly line. We've been working on measuring the information that would be required for that. And it's still going on. Through my background, a lot of people say, Boy, this Robert Marks, he's doing things in biology. He has no reason to do anything in biology because he's an engineer.' Well, it turns out engineers have been doing evolutionary computing to design things for years. I've been involved in this area in simulation of evolution.
TEXAN: What's the result so far, in layman's terms?
MARKS: The universe as accepted by science in terms of size and age is not big enough or old enough to explain evolution. There just do not exist the probabilistic resourcesthe idea that evolution has a chance. People in ID have been saying this for a long time, but we're

actually able to measure the information that is required and do it in bitsjust like the same bits that we use in a DVD player, measuring that information content in bitsand the results are astonishing. We have some papers that are being peer reviewed for journals. I did recognize that Bill was a name that was polarizing, so when we submitted these papers we submitted them without Bill's name on them. I don't know if this current publicity that I've gotten because of the Baylor situation is now going to hurt in the peer-review aspects. Currently, we want to do the research. I have actually tried to begin a draft of a book trying to explain the results of our research without the mathematics. I'm an engineer; it's hard for me to write a page without putting an equation on it. Bill, of course, is genius at doing that. He's one of the most talented men I've ever met. But he has the ability to write at a wonderful lay level without getting into all the details. I think that's a ways off, however, because we have a lot of other things to do before that. TEXAN: Where do the negotiations with you, your attorney, and the Baylor administration stand right now?
MARKS: I believe the negotiations as of recently have just reached an impasse. I have moved the evolutionary informatics site onto a third-party server and it's still there. Currently, it's at evoinfo.org, and it includes the paper that was done. Then we've also added other affiliates from other universities who are also helping us with our work.
TEXAN: Have you screened the movie yet?
MARKS: Yes, I have. I sat there and I laughed. I laughed because I have seen this atheistic, big-science mafia squad come out and kill the careers of many of my friends. Guillermo Gonzalez, whom I knew at the University of Washington. Richard Von Sternberg, whom I recently met. And to see their motivation and their goals so clearly exposed in a Ben Stein sort of dry humor was incredible. I really, really enjoyed the movie. I think it is going to have an enormous impact. I hope it does. The producers talked to me prior to the Baylor incident because they knew of my work with Bill Dembski. Then when the website was removed they came to Baylor and attempted to interview the president and a bunch of other people about this. They got some interesting quotes. Although they didn't get to interview the president, they did interview my dean, Ben Kelley. If you'll notice, big science is trying to squash the talking about God in academia. People say ID is religion dressed up in a cheap tuxedo. Well, big science is atheism dressed up in a cheap tuxedo. Their motivation when you scratch the surface is so unreal in terms of propagating their atheism. Richard Dawkins and P.Z. Myers [noted atheistic evolutionists], they are chilling in what they are trying to do.

200. William Dembski, "EXPELLED in Baptist Press," Uncommon Descent, 3 February 2008

201. "INTELLIGENT DESIGN COSTS PROF HIS JOB: Regents reject tenure request without evidence, testimony," WORLD NET DAILY EXCLUSIVE, 02/07/2008

> "Iowa State University regents, who earlier ruled against accepting evidence or hearing testimony from a professor in a dispute over the school's denial of his tenure, now have turned down his appeal."
>
> "According to Robert J. Marks, distinguished professor of electrical and computer engineering at Baylor, he checked a citation index of journal papers, and found one of Gonzalez' research papers had 153 citations listed; another had 139.
>
> " 'I have sat on oodles of tenure committees at both a large private university and a state research university, chaired the university tenure committee, and have seen more tenure cases than the Pope has Cardinals,' he said. 'This is a LOT of citations for an assistant professor up for tenure.' "

202. Tyler DiPietro "The Horowitz Option," February 8, 2008

203. Sam Hodges, "Dembski, Marks featured in 'ID' film," Baptist Press, 6 February 2008

204. JUAN SANCHEZ, "Baptist Professors Dembski and Marks to be Featured in Ben Stein's Expelled," STRAIGHT TO THE HEART, FEBRUARY 9, 2008

205. Shannon Daily, "Professors may develop new test for blood-sugar" Baylor Lariat, February 2, 2008

> "Two Baylor researchers are literally bleeding for their work. The two men, Dr. Randall Jean, an associate professor, and Dr. Robert Marks, a distinguished professor, both in the department of electrical and computer engineering, are working to develop a non-invasive test for blood-sugar levels."

206. Andrew Halloway, "Expelled: New movie exposes persecution of anti-Darwinists," Creation Ministries, 15 February 2008

> "Two Baylor researchers are literally bleeding for their work. The two men, Dr. Randall Jean, an associate professor, and Dr. Robert Marks, a distinguished pro-fessor, bot h in t he department of electrical and computer engineering, are working to develop a non-invasive test for blood-sugar levels."

207. David Klinghoffer "EVOLUTION'S GLASS CEILING," Townhall Magazine, February 26, 2008

> "Experienced scientists who support intelligent design theories literally have to disguise themselves in order to perform their research."

> " 'There are so many bodies by the side of the road that people get the message,' said Robert Marks, who teaches engineering and computational intelligence at Baylor University. One of his research interests is simulating evolution on computers. Without additional information (a/k/a design) being included in the simulation, he finds, the evolutionary process doesn't produce results as Darwin promised.
>
> "Dr. Marks has tenure and was lured away from the University of Washington in 2003, in an attempt by Baylor to upgrade its academic image. His latest book will be published by Oxford University Press. You might think he'd feel secure. Yet when I asked to interview him, he agreed only on the condition that his attorney listens.
>
> "At Baylor, Marks said, he has suffered 'viewpoint discrimination, violation of academic freedom, persecution.' In 2006, Baylor canceled a $30,000 grant Dr. Marks had received, which was intended to let him hire a famous ID theorist, mathematician William Dembski, to assist him. In 2007, the university disconnected a website Marks had put together about 'evolutionary informatics,' featuring ID-related work done by Dr. Dembski and himself."

208. Barbara F. Hollingsworth "America's new blacklist," National Examiner, 2008-03-06. [PDF]

> "A new documentary-style film, 'Expelled: No Intelligence Allowed,' starring Ben Stein, scheduled for release in early April, examines the blacklisting now happening on today's college campuses."
>
> "One can understand, if not condone, persecution of academics who bring up ID on secular campuses. But even though ID would seem to mesh well with Christian colleges' religious world-view, they are no haven for expelled academics. Baylor mathematics professor Robert Marx [sic] explains in the film how he was ordered by his dean to take down an ID-related Web site."

209. George Noory, "Interview with Expelled's producer Mark Mathis," Coast to Coast, August 3, 2008. [Audio #1] [Audio #2]

210. "Expelled! Comments from Southern Baptist Texan Wednesday," Alabaxterblog's Weblog, Mar 12 2008

> "'Expelled' exposes the blacklisting of academics who question the prevailing Darwinian dogma." "The original inspiration came specifically in this subject matter to Walt Ruloff [Expelled co-producer], who is a Canadian. He lives in Vancouver. I used to live in Vancouver, where I studied under a theologian named J.I. Packer at Regent, and Walt and I became acquainted.
>
> "Walt was a very successful technology entrepreneur, founder of a software company. And he was doing some business in Houston and he picked up a 'Wired' magazine in the Houston Intercontinental Airport lounge and he read an article about this debate between evolution and intelligent design. He had always been interested in the subject matter and he got inspired and

> kind of had an epiphany on the flight back to Canada, and he wrote out a treatment on a screenplay.
>
> "And that very beginning, a sort of inspirational moment for Walt, turned into a partnership between John, Walt and myself to explore controversial subject matter related to science and to science and religion. I had been working in New Mexico. I produced and hosted a regionally televised program called 'Church and State with Logan Craft.' And 'Church and State' explored a lot of the controversial social issues and political issues that both religious and non-religious people were interested in. So when Walt and John brought this to me, I was interested because I had been covering a panoply of issues over the years and was very, very aware of the connection between the landmark issues in the culture war and the debate over evolution. So we formed a partnership in 2005, developed the company in 2006 and began filming and acquiring raw material footage in the middle of 2006."
>
> "Marx and Freud have already been contracted, and I think Darwin is on his way to being contracted. And I think that's a good thing."

211. "Expelled! No Intelligence Allowed - now scheduled for April Wednesday, " Alabaxterblog's Weblog, Mar 12 2008

212. "Expelled: New movie exposes persecution of anti-Darwinists," Alabaxterblog's Weblog, Mar 12 2008

> "'Expelled' has received endorsements from evangelical Christian leaders such as J.I. Packer, Chuck Colson and James Dobson. Craft said Premise Media would be screening the film for some Southern Baptists leaders in Houston and Louisville, Ky., soon."

213. Rush Limbaugh, "Ben Stein's Film Blew Rush Away," The Rush Limbaugh Show, March 18 2008. [Audio]

> "Ben Stein has a new movie out. He brought it by my house Friday afternoon to screen it for me. It's called Expelled. It is powerful. It is fabulous. And here's the premise of his movie. The premise is that Darwinism has taken root, taken hold at every major intellectual institution around the world in Western Society, from Great Britain to the United States, you name it. Darwinism, of course, does not permit for the existence of a supreme being, a higher power, or a God. His interviews with some of the professors who espouse Darwinism are literally shocking. The condescension and the arrogance these people have, they will readily admit that Darwinism and evolution do not explain how life began. One of these professors said it might have been that a hyper-intelligence from another planet came here and started our race. This from some professor either in the UK, I forget where it was, but can't be God. These people are so threatened by the existence of God, they will not permit intelligent design to be discussed. Professors

have been fired, blackballed, and prevented from working who have deigned to try to combine the whole concept of evolution with intelligent design.

"Ben Stein's new movie is going to open to a thousand screens pretty soon, it's not out there yet. It's called Expelled. But the point of it is that these people on the left are just scared to death of God. It threatens everything. We, on the other hand, recognize that our greatness, who we are, our potential, our ambition, our desire, comes from God, and as part of our Creation, this natural yearning to be free and to practice liberty. That is how we think this country came to be great. It is how we think this country will continue to be great and to grow."

214. Bob's Bloggersection, "Dealing with Design (from Montgomery's Journey)," TUESDAY, MARCH 25, 2008

215. O'Leary, "Baylor going gently into that good night?," Uncommon Descent, March 31, 2008.

"A Christian research university would be a great contribution. But the temptation to sell out to tax-funded materialism is everywhere.

"Who is surprised when yet another institution is pitching headfirst? Read The Dying of the Light for a scholar's take on the subject."

216. Review of Expelled on *Marketplace*. [Audio]

217. Benjamin Hawkins "Dembski: 'Expelled' exposes hypocrisy," Baptist Press, Apr 4, 2008.

"A controversial documentary set for release nationwide April 18 could foster a cultural shift 'equivalent to the fall of the Berlin Wall,' says William Dembski, research professor of philosophy at Southwestern Baptist Theological Seminary."

" 'This film exposes the hypocrisy of an academic and cultural elite who pretend that they value freedom of inquiry and expression but in fact suppress it when it clashes with their deeply held materialistic convictions,' Dembski said. He and other proponents of ID have suggested that the universe shows signs of having been designed by an intelligent being."

Unlike biblical creationism, ID does not begin with the Genesis account of creation, nor do its proponents attempt to describe the nature of the intelligence that designed the universe. Despite this fact, Dembski noted, 'ID is friendly to Christian theism in a way that materialistic forms of evolution never have been.'

" 'One of the biggest obstacles to people coming to Christ in Western culture is the impression that science has disproved the Bible and Christianity,' he said. 'ID therefore helps to correct this false impression by showing that our best science supports belief in a higher intelligence responsible for life. ID does not give you the Christian God as such, but it puts you in the right ballpark.' "

218. O'Leary "Expelled: 'Denormalizing' the Darwin thugs," Uncommon Descent, April 5, 2008.

> "If I had heard the word 'denormalizing' from a sociology prof, instead of from Ezra Levant, the courageous Canadian lawyer who is working to bring down Canada's unspeakable 'human rights commissions', I would just groan.
>
> "But, 'denormalizing' is a useful term for the Expelled film's potential impact in the United States."
>
> "Expelled is a 100-minute eye-opener. But once your eyes are opened, you are responsible for what you see."

219. Mark Bergin, "A campus divided - ACADEMIA: Baylor promotes Christian scholarship while dismissing Christian scholars," World Magazine, April 5, 2008.

220. O'Leary "Expelled: 'Denormalizing' the accountability gap at Baylor - 3," Uncommon Descent, 8 April 2008

> "If students are distracted by an emphasis on how Christianity is allegedly compatible with Darwinism, they are unlikely to evaluate Darwin's theory on the scanty evidence.
>
> "And their confusion protects them. After all, Baylor is the university that shut down the Web site of a distinguished professor for skeptically investigating evolutionary computing programs. (By the way, so much for teaching students to 'think for themselves.' What good did thinking for himself do Prof. Marks?)"

221. Carl E. Olson "ID vs. "Big Science" On The Big Screen: An Interview with Mark Mathis, Associate Producer of Expelled," Ignatius Insight, April 5, 2008.

> "Ignatius Insight: Are there any secular universities at which there are exceptions to this [attitude against Darwinism]?
>
> "Mathis: Not only are there not any secular universities that are an exception to this, there are very few Christian universities that are an exception to this. One of the men featured in Expelled is from Baylor University, Robert J. Marks. As soon as the head of his department discovered that Dr. Marks had a research program up on the web that pointed toward intelligent design theory in its conclusionsthis is in the fields of mathematics and engineeringhe was told to shut it down immediately. When Professor Marks didn't, the university shut it down for him."

222. O'Leary "Expelled - and Baylor's passion for Darwin - 4," Uncommon Descent, 11 April 2008

223. Christian Ohnimus, "Expelled," That Green Gentleman, SATURDAY, APRIL 12, 2008.

224. John West, " on The NCSE Exposed: Clunky Attack on 'Expelled' Reveals More Than Intended," Evolution News & Views, April 15, 2008

> "The National Center for Science Education has just unveiled its expanded website denouncing the upcoming movie 'Expelled,' but the website's clunky attacks merely provide confirmation that the film's essential thesis is correct: Darwinists really don't believe in academic freedom regarding evolution, and they're more than willing to smear any scientist who disagrees with them.
>
> "The basic thrust of the NCSE's website seems to be the preposterous claim that pro-ID scientists never, ever face harassment, intimidation, or persecution. Not ever! Scientists who claim otherwisesuch as biologist Richard Sternberg, astronomer Guillermo Gonzalez, and Baylor University engineering professor Robert Marksmust be cry-babies or worse."
>
> "The NCSE similarly does its best to cover up the facts about what happened to Baylor University engineering professor Robert Marks, making it appear that the only consequence he faced was the loss of a research website. The NCSE neglects to mention Baylor also forced Marks to return a grant he had received for intelligent design-related research (after the university had duly accepted the grant). The return of the grant meant that Marks was deprived of funding for a post-doc position for pro-ID mathematician William Dembski. The NCSE also neglects to mention that university officials pressured Marks to stop pursuing his intelligent design-inspired research."

225. Doc Noebel, President, Summit Ministries "Expelled, the Movie: Academic Freedom in Jeopardy" Summit Ministries, April 15, 2008

> "Most of us take academic freedom for granted. We assume that freedom of speech applies not only to the political and social arena but also to the halls of education. However, the foundations of freedom are experiencing seismic tremors in the academy. In the area of science education the freedom to pursue the truth where ever it leads is experiencing a major setback. It is the equivalent of a modern-day black-list!"
>
> "Early screenings of the film have uncovered supporters of its message such as Missouri Governor Matt Blunt and radio personality Rush Limbaugh. Marvin Olasky, Editor of World Magazine, wrote in a recent article, "'Expelled,' is perfect for adults and children of middle-school age or above: It should be rated R not for sex or violence but for being reasonable, radical, risible, and right"

226. Robert Crowther, "Expelled World Premiere," Evolution News & Science Today, APRIL 17, 2008.

> "Last night in Dallas the official theater run of Expelled was kicked off with a gala premiere complete with red carpet, film narrator Ben Stein, and the film's main stars, the Expelled scientists. Here's a few pictures."

227. Carl Hoover, "Baylor officials among those demonized in 'Expelled'," Waco Tribune, April 19, 2008

> "Ben Stein's Expelled: No Intelligence Allowed ostensibly looks at academic freedom, or the alleged lack thereof, at schools and universities, including Baylor University, on the issue of intelligent design."

228. Lori Fogleman "Baylor Senior Awarded Prestigious Goldwater Scholarship," Baylor News, April 18, 2008.

> "'Juan Yaquian is a rare intellectual jewel of a student,' said Dr. Robert Marks, Distinguished Professor of Engineering at Baylor and one of Yaquian's mentors. 'His soft-spokenness and humility are wonderful attributes often not characteristic of such genius. He has shown that, given a chance, great things can be accomplished by those from humble backgrounds. Remember the name Juan Yaquian. He is going to accomplish great things for society and our Lord.' "

229. Premier of *Expelled: No Intelligence Allowed*. April 18, 2008

- ◇ Movie: *Expelled: No Intelligence Allowed*
- ◇ "Bad to the Bone" Trailer
- ◇ 7 Minute Trailer
- ◇ "It's Awesome" Trailer[14]
- ◇ Ben Stein interviewed by Bill O'Reilly
- ◇ Ben Stein interviewed by Hannity & Combes
- ◇ Glenn Beck interviews Ben Stein. [Video #1], [Video #2], [Video #3], [Video #4], [Video #5].

230. Denyse O'Leary "Artificial intelligence: A look at things that neither we nor computers can discover," Mindful Hack, April 20, 2008

> "Recently (April 15, 2008), Robert J. Marks II, Distinguished Professor of Electrical & Computer Engineering at Baylor University in Texas, addressed a joint meeting of the local American Scientific Affiliation and the Baylor Society for Conversations in Religion, Ethics and Science, on the limitations of computer models of life and mind:
>
> > "Computing has no theory of everything (T.O.E.). We're uncertain whether physics has a T.O.E. as revealed in M-theory but, due to the genius of Kurt Gödel 75 years ago, smart people like Stephen Hawking are starting to doubt it.
> > "This is because of a new startling mathematical idea from algorithmic information theory (AIT): There exist things that are true that cannot be derived from fundamental principles. Some things are true simply because they are true.

[14]Contains footage of Robert J. Marks

> "Many claim God cannot be proved. (Although I'll show you G"odel's short mathematical proof of God's existence). There are some things we know exist that we can prove we will never know.
> "Most doubt a computer program will ever write a deeply meaningful poem or a classic novel. How about something simpler? Can we look at an arbitrary computer program and decide whether or not it will ever print out the number 3?
> "We can for some programs. But Alan Turing, the founder of computer science, proved it is impossible to write a program to analyze another arbitrary program to tell us whether or not a 3 will be printed.
> "In fact, we can't write a computer program to determine anything another arbitrary computer program will do. (This is called Rice's theorem.) To find out, we need to run the program.
> "We can also prove there are numbers of finite precision numbers a computer can't compute. One of these is Chaitin's number, an astonishing constant between zero and one we know exists.
> "If we knew Chaitin's constant to finite precision - one single number - we could solve many open problems in mathematics. These include the Riemann hypothesis, Goldbach's conjecture and whether or not there is an odd perfect number.
> "Chaitin's constant exists, but we can prove we will never know it. These and other mind bending properties in the field of AIT [artificial intelligence theory] seem too far fetched to be true, but with a minimum of math, I will convince you otherwise."

"Sounds interesting. I have written to ask him how it turned out."

231. John P. Meyer, "Review: 'Expelled: No Intelligence Allowed'bites down hard," KVAL.com, Apr 20, 2008. [pdf]

> "How does one go about commenting objectively on a film like Expelled: No Intelligence Allowed?"

232. Lynn Ngo and Shannon Daily, " 'Expelled' encourages intelligent design discussion, Chen says," The Baylor Lariat, April 22, 2008. [Newspaper Layout]

> "Friday marked the nation-wide opening of the movie Expelled: No Intelligence Allowed."
>
> "Several Baylor professors, including Dr. Robert Marks and Dr. Walter Bradley, both distinguished professors in the engineering and computer science department, were interviewed for the film.
>
> "Marks and Bradley were among the opening night crowd at the Hollywood Theaters.
>
> " 'I thought it portrayed things pretty well as they are that science by decree of entrenched Darwinism has no room for a God hypothesis,' Marks said. 'I

on the other hand think that one cannot pursue truth without consideration of a creator.'

"Marks said if science defines science as void of a creator, then it's not a pursuit of truth.

"Bradley said in an e-mail to The Baylor Lariat there were areas he would have liked to see explored in more detail.

" 'The general thesis that belief in an intelligently designed universe can prevent people from being hired or cause them to lose their job is sadly true in many universities, maybe even in some departments at Baylor,' Bradley said."

233. Stephen Jablonski, "Obviously not objective, 'Expelled' explores academic freedom," The Baylor Lariat, April 22, 2008. [Newspaper Layout]

"If you attend Baylor University, you need to see this movie.

"But first, do a quick research of the following names: William A. Dembski, the Michael Polyani Center, Robert Marks II, Robert Sloan... In fact, brush up on the past ten or so years of Baylor history.

"Whether you agree with Ben Stein and crew's opinions or not, this is a period of Baylor's history that should at least be considered."

234. Expelled Trailer, "It's Awesome" [video]. Trailer photos: [1], [2], [3].

235. Hardy Parkerson, "From Professor Marks," PoliticsLA.com

"Would you do me a favor and go see a movie on Friday, April 18 or that weekend? And take some friends? Here's why."

"The film is endorsed by James Dobson (Focus on the Family), Chuck Colson, Lee Strobel, and Evangelist Luis Palau. The movie 'blew Rush Limbaugh away'. ... Here is an internet endorsement by presidential candidate Mike Huckabee. I've seen a prescreening of the movie - and it is powerful."

236. Harry Forbes and John Mulderig "Expelled: No Intelligence Allowed," Catholic News Service, April 23, 2008.

"...supporters of intelligent design featured here include mathematician David Berlinski, theologian Alister McGrath and Baylor University engineering professor Robert J. Marks II."

237. Jack & Shirley, "Baylor Rejects Intelligent Design," Notes From A Retired Preacher, April 23, 2008

""Baylor University, formerly a great Baptist university in Texas has unveiled their true colors. They have succumbed to the religion of Darwinism by rejecting the concept of Intelligent Design (that the universe in which we live was created by a greater Intelligence). Biblical Christians reject the ridiculous theory of Darwinism and evolution."

"Pray for the students and administration at Baylor."

238. Bob Ellis "Thoughts on Ben Stein's Expelled," Dakota Voice, WEDNESDAY, APRIL 23, 2008.

> "When Baylor University found out Professor Robert Marks believed in intelligent design, they forced him to shut down his website and return grant money. What was this college professor thinking–that he could just think what he wanted, believe what seemed reasonable to him???"

239. James Perloff, "Allow Intelligence!" The John Birch Society, April 24, 2008.

240. Denyse O'Leary, "Things we know but cannot prove - another nail in the coffin of materialism," Mindful Hack, April 25, 2008.

> "Recently, I highlighted a talk that Prof. Robert Marks, distinguished professor of electrical and computer engineering at Baylor University, gave to Baylor's American Scientific Affiliation branch on things we know but cannot prove (and it doesn't matter how big computers get)"
>
> "I asked Marks how it went, and he wrote back to say,
>
> > "This is mind bending stuff. Stephen Hawking, for example, is becoming agnostic in his belief there is a single theory that describes all of physics. There look to be things that are true simply because they are true. They cannot be derived from first principles. And there exist things, like Chaitin's astonishing number between zero and one, that we can prove we will never know. The foundations of algorithmic information theory has been around since the 1930's, but scientists and mathematicians are only recently appreciating its significance.
> >
> > "Algorithmic information theory and string theory make the science fiction I read as a boy seem boring."
>
> I watched Marks's PowerPoint on line, and highly recommend it."

241. Denyse O'Leary, "The fours be with you! ... and double cream, half sugar, please." The Mindful Hack, FRIDAY, APRIL 25, 2008.

> "Here's the number word game called The Four's Be With You, from Prof. Bob Marks's presentation on things computers will never do:
>
> "Spell a number. (Say, t-w-o.)
>
> "Count the letters. (3)
>
> "Spell that number. (t-h-r-e-e)
>
> "Count the letters of that number. (5)
>
> "Count the letters of that number. (f-i-v-e = 4)
>
> "Prof. Marks says, you will always end at four/4 letters.
>
> "Huh? I tried it a few more times:
>
> "Twenty 6
> six 3

three 5
five 4

"thirty-six 8 [I suppose I should not count hyphens]
eight 5
five 4

"Okay, I am trying this one more time. I have work to do:
"one hundred thirty eight [I suppose I should leave out the "and"] 21
twenty one 9
nine 4
"This seems like a good icebreaker, while we wait for late arrivals at a meeting. But you have to wonder about people who figure this kind of stuff out. Like what weren't they doing? (Stocking the shelves? Mending fence? Answering the phone at the Complaints desk? Might explain a lot ...)"

242. Matthew Lickona and Ernie Grimm "Talk About Movies: Expelled: No Intelligence Allowed," California Catholic Daily, April 26, 2008.

243. Don Harper, "Need To See," Raves, Rants & Roses, April 29, 2008.

"RAVE: I don't usually like to advertise movies, but there's one out there you need to see: 'EXPELLED,' starring Ben Stein, and I give him raves for his documentary about so many professors being "expelled" from our major universities' Science Departments (including our beloved Baylor) because of their belief in Intelligent Design behind the creation of our universe as opposed to Darwin's theory that man descended from apes, evolution, etc. "

244. Tim Woods "Battling academic elites for the universe: Q&A with 'Expelled' producer Mark Mathis," Waco Tribune, April 29, 2008

Expelled: No Intelligence Allowed associate producer Mark Mathis took time to speak with the Tribune-Herald on Friday. Here is a Q&A from that discussion:

Q: Expelled opened in the top 10. Are you happy with the early numbers?

A: Yeah, when you look at documentary films, it's pretty rare for any documentary film to debut in the top 10, and certainly on 1,052 screens, which is pretty significant for a documentary film. So, to finish (in the top 10), I think we did exceptionally well.

Q: Was it difficult to get Baylor University professor Robert Marks to speak to you for the film?

A: When we came down, it was following his Web site being shut down and all the big dust-up had already happened and I think at that point he apparently had made the decision that he was going to talk about it. We

wanted him to talk about it, of course, because it's hard to get people to talk. They don't want to talk. Why would I want more of this grief, because the Darwinists are going to come after me in the most strident and vicious ways. Who would want to heap that upon themselves? You've got to be a pretty tough, courageous person to do that. Good for Robert Marks, that he has the courage to stand up for his principles.

245. Tim Woods, "Film puts Baylor dust-up over intelligent design in the cinematic limelight," Waco Tribune, Tuesday, April 29, 2008.

"Baylor University distinguished professor of engineering Robert Marks had strong words for the school in a recently released movie but says he recognizes Baylor is in a difficult position, trying to balance its Christian heritage with lofty research goals.

"Marks is one of several people whose cases are profiled in Expelled: No Intelligence Allowed, a film featuring attorney, actor and political commentator Ben Stein on a quest to expose cases of academic and intellectual suppression.

"Specifically, the film seeks to show that scientists and academics who study the possibility of intelligent design in nature or even the possibility of God, rather than random chance, are being persecuted by scientific elite holding 'neo-Darwinist' world views.

"Marks' involvement in Expelled centers on a Web site about his evolutionary informatics research lab. The research is friendly to the philosophy of intelligent design, Marks says, but is not direct intelligent design research.

"The site, formerly on Baylor's server, was shut down last year by school officials who claimed it lacked sufficient disclaimers that the work was in no way that of Baylor University.

" 'What we say is you have the freedom to formulate your own views and so forth, just make sure that you issue a disclaimer that your particular view does not necessarily express the view of Baylor University,' Baylor Provost Randall O'Brien explained in September, when an Expelled film crew was in Waco trying to talk with President John Lilley. 'We fully endorse the right and responsibilities of academic freedom.'

"In Expelled, however, Marks says he has no doubt the site was shut down because of its relationship to intelligent design.

" 'The fact that this was singled out, let alone shut down, is jaw-dropping,' he says in the film. Baylor spokeswoman Lori Fogleman, who spoke to Expelled associate producer Mark Mathis in September Lilley was out of town said she hasn't yet seen the movie. However, she took issue with Marks' claim the site was shut down because of its intelligent design connection.

"Once a professor fulfills his or her obligation to the school, that person is free to conduct any outside research 'as long as he or she does not represent that work as being connected to Baylor University,' Fogleman said. Marks' site has since been moved to a remote server.

> Expelled, shown locally at Starplex Galaxy 16, 333 S. Valley Mills Drive, has met moderate success both locally and nationally. In its opening weekend, the film grossed nearly $3 million, according to Box Office Mojo, with a healthy per-screen average of almost $3,000."

246. O'Leary, "Expelled at Baylor: Local reaction to film varies," Uncommon Descent, April 30, 2008

247. Richard Kirk, "*Expelled: No Intelligence Allowed*: Reviewing the Philosophical Issues," California Republic, May 2, 2008

> "As expected, Ben Stein's new documentary has been given a chilly reception by most reviewersby folks inclined to sympathize with the moral stylings of Joy Behar and reluctant to express opinions at odds with gray eminences at The New York Times."
>
> ",,, at Baylor University, Engineering Professor Robert Marks II saw his school web site unplugged and grant money revoked when his work on information theory began interfacing productively with ID. These are only two of several examples presented in the film. Collectively, these cases expose a widespread effort to marginalize academics who raise questions about Darwinian theory and to ignore research that suggests what Sir Isaac Newton assumedthat an intelligent designer sustains the cosmos."

248. "Expelled: A Commentary on the Culture," Perservering Pastor, May 2, 2008

249. Robert J. Marks II, IMDb Filmography, May 3, 2008

250. O'Leary, "Baylor Prez Spins Expelled Worries: The God of the Bible is the God of the genome but not of the Evolutionary Informatics Lab," Uncommon Descent, May 4, 2008. [Lilley's Letter]

> "Taking a break from 'Imagining' no heaven, no hell, no Yoko Ono, and no delay till the Expelled DVD comes out, I note where John Lilley, Baylor's president, has seen fit to defend his institution in the light of the unflattering portrait in Expelled.
>
> "Except he doesn't exactly. In the form letter - apparently written to people for whom, in his words, Expelled has been a 'source of concern' - he manages to say nothing at all."
>
> "In short, in his letter, Lilley doesn't address the 'source of concern' at all. He is apparently gambling that the waves created by Expelled will just subside. And anyway, if Baptists don't give to Baylor, who they gonna give to?"

251. David "Baylor and Gomorrah," He Lives, Monday, May 05, 2008.

252. Marie T. Sullivan, "Great Debate ... at a Theatre Near You!" The Chicago Daily Observer, May 7, 2008.

253. "Go See It." The (Re)Publican, May 10, 2008.

> "Yesterday I saw Ben Stein's movie Expelled: No Intelligence Allowed. If it is playing at a theatre near you, you really must go see it. It is informative, entertaining, challenging, even moving."

254. Rev. Bryan Griem, "Movie review *EXPELLED: No Intelligence Allowed*," Christian Answers, April 18, 2008.

> "Touché! 'Expelled: No Intelligence Allowed' has made Ben Stein the new hero of believers in God everywhere, and has landed a smart right cross to the protruding jaw of evolution's elite."

255. "Expelled," Too Conservative, May 20, 2008

> "For those who haven't seen Ben Stein's EXPELLED yet, I highly recommend it."
>
> "A lot of the movie is about Baylor University(where I am attending) where an Intelligent Design Institute was founded and later dissolved."

256. William Dembski, "Baylor President Lilley Fired," Uncommon Descent, 24 July 2008

> "This just in from Christianity Today. Lilley, you will recall, expelled Robert Marks's Evolutionary Informatics Lab from Baylor."

257. JEANNIE KEVER "Citing lost confidence, Baylor regents fire president," Houston Chronicle, July 24, 2008.

258. Rack Jite "Baylor University President John M. Lilley Fired," KicK, Friday, july 25. 2008

259. "Intelligent Design Watcher," Kumicit's Blog, July 26, 2008.

> "Robert Marks, distinguished professor of electrical and computer engineering at Baylor, launched a website called the Evolutionary Informatics Lab in June to examine whether Darwinian processes like random mutation and natural selection can generate new information.
>
> "Marks' conclusions, as explained on the website, placed limits on the scope of Darwinism and offered scientific support for Intelligent Design."

260. O'Leary, "Yes, it's true! The ID Taliban brought about Baylor Prez Lilley's downfall..." Uncommon Descent, July 27, 2008.

> "Apparently, some fans of the ruins of neo-Darwinism think that President John Lilley's departure from Baylor relates to intelligent design."

261. Carrie Sager, "MEET THE MARTYRS: Robert Marks, Pamela Winnick, Michael Egnor." EBSCO,

262. Amazon.com Prerelease of DVD, August 10, 2008. [List]

"Expelled: No Intelligence Allowed Ben Stein, Richard Dawkins, Robert J. Marks II, and Mark Souder (DVD - 2008)"

263. Barbara F. Hollingsworth, "America's new blacklist," DC Examiner, August 13, 2008.

"'Expelled' does an excellent job of exposing the new blacklisting at tax-supported institutions of higher learning, where academic freedom is supposed to be the guiding principle and professors are supposed to be able to follow the evidence wherever it leads."

264. "Ben Stein's Expelled DVD," Fanbolt,

"This year's highly anticipated faith and family release Expelled arrives on DVD October 21 from Vivendi Entertainment. Co-writer and Host, Ben Stein (Ferris Bueller's Day Off, 'Win Ben Stein's Money'), explores the ongoing conflict between advocates of intelligent design and evolutionists."

265. Henk Rijkers "Intelligent Design is 'Streng verboten!', " Katholiek Nieuwsblad, November 4, 2008.

"Professor Robert J. Marks werd aangepakt door zijn universiteit Baylor University, omdat men een verband ontdekte tussen zijn onderzoek en ID."

266. TOM GOODMAN "Stein's 'Expelled' and Baylor University," Get Anchored, Saturday, November 15, 2008.

"Yesterday I saw the Ben Stein film, Expelled: No Intelligence Allowed. Worth watching, especially since it has annoyed all the right people.

"My alma mater–and the school both sons plan to graduate from–is featured in the film. Robert Marks, who holds the title of distinguished professor of engineering at Baylor University has been using highly sophisticated mathematical and computational techniques to determine if there are limits to what natural selection can do."

2009

267. Wintery Knight "New podcasts and video in intelligent design controversy," Salvo Magazine, February 06, 2009.

"Podcast: Dr. Robert Marks and the Evolutionary Informatics Lab: Marks, a Distinguished Professor of Electrical and Computer Engineering, ran afoul of Texas's Baylor University when he started to show that a number of computer programs that seek to prove Darwinian evolution mainly prove that hope springs eternal. The U took his Web site down. He has a paper coming up for publication on this subject, if it is not suppressed."

268. "I'm not close-minded about evolution," Good Word Editing, February 10th, 2009

269. Casey Luskin " 'Expelled Exposed' Exposed: Your One-Stop Rebuttal to Attacks on the Documentary Expelled," Evolution News & Science Today, February 17, 2009

> "'Expelled Exposed' leaves off key facts about the persecution Robert Marks endured at Baylor University and tries to make it sound like his persecution was reasonable (more on this below). In the end, Marks' website was permanently shut down, Baylor pressured Marks to cease his ID-related research, and Baylor even returned grant money given to Marks to hire research assistants his ID-related work. For the full story on Marks that 'Expelled Exposed' doesn't tell you, see:
>
> 'Academic Freedom Expelled from Baylor University'
> 'BU had role in Dembski return'
>
> Ironically, by admitting that Marks's treatment was related to his ID work (they acknowledge it concerned 'the intelligent design material'), 'Expelled Exposed' has admitted precisely what Baylor denied. For details, see 'Credibility Gap: Baylor Denies Robert Marks' Situation Has Anything to do with ID.' "

270. Admin " 'Expelled Exposed' Exposed," Christian News, February 20, 2009.

> "Your One-Stop Rebuttal to Attacks on the Documentary Expelled."

271. Posts on Active Information, QUANTUM NON-LINEARITY, February 28, 2009. [Part #1], [Part #2], [Part #3], [Part #4].

272. Russell Huebsch, "Is Robert J. Marks the Greatest Scientist of Our Generation?" Associated Content, February 25, 2009.

> "2008 saw the release of Ben Stein's 'Expelled: No Intelligence Allowed,' a documentary on the prejudice of Intelligent Design theory in the academic world."
>
> "What I found out is that perhaps the smartest man of the 21st century, helping develop technology like the wireless mouse, is also a creationist and a proponent of what the academic world has label a psuedo-science.
>
> Here a just a few of Dr. Marks' contributions to the advancement of the scientific world. Marks and fellow colleagues, then at University of Washington, developed a sophisticated way of predicting power demands on utility grids using what he calls an "artificial neural network". Usually just called "neural networks", neural networks are essentially just computational models to measure non-linear statistical data.
>
> "In true renaissance fashion Robert Marks also used his genius level knowledge of statistical models to track radioactive seeds in cancerous prostates in real time! Marks and his team would receive the Judith Stitt Best Abstract Award from the American Brachytherapy Society, brachytherapy is radiotherapy where a radioactive source is placed next or inside the area needing treatment.

> "In the area of detection theory, or just the ability to determine whether radio waves are just noise or an actual signal, Dr. Marks and his team described the performance of the Neyman-Pearson optimal detector in non-Gaussian noise using a closed form solution.
>
> "If Dr. Marks had just revolutionized just one field of study he would be considered nothing short of a genius, to earn such high accolades from such a variety of fields of study is an accomplishment that only ranks up there with the likes of Newton and Einstein. Marks even has an award from NASA for helping them develop more power efficient communication amongst wireless arrays!
>
> "As one can see, Dr. Marks has done more with his life in his 50 some odd years on the planet, than a hundred men can do in a life time. The most exciting part is that Dr. Marks still has plenty of time left in his career to revolutionize many more areas of science. Maybe some day you can tell your grandkids that you heard of the genius of Dr. Marks and the Marks family before they became icons of the 21st century?"

273. O'Leary, "Oh No, Ono files: Expelled is #8 in documentaries," Uncommon Descent, 21 March 2009.

> "Anyway, this is how the film is doing in DVD:
> Amazon.com Sales Rank: #294 in Movies & TV (See Bestsellers in Movies & TV)
> Popular in these categories:
> #8 in Movies & TV: Documentary
> #70 in Movies & TV: Comedy
> #8 - that's in the Top Ten in docs. Not bad for a film that so many were determined to destroy. Even St. Yoko Ono wow!"

274. TFN "Science Takes Hit in Texas," Texas Freedom Network, March 27, 2009.

275. William Dembski "ScienceBlogs praises/disses Dembski-Marks paper on Conservation of Information," Uncommon Descent, May 9, 2009.

276. Casey Luskin,"New Peer-Reviewed Scientific Article From William Dembski and Robert Marks Challenges the Creative Mechanism of Darwinian Evolution," Evolution News & Science Today, August 18, 2009

> "A new article titled 'Conservation of Information in Search: Measuring the Cost of Success,' in the journal IEEE Transactions on Systems, Man and Cybernetics A, Systems & Humans by William A. Dembski and Robert J. Marks II uses computer simulations and information theory to challenge the ability of Darwinian processes to create new functional genetic information."
>
> "After assessing various examples of evolutionary searches, Dembski and Marks show that attempts to model Darwinian evolution via computer simulations, such Richard Dawkins' famous "METHINKSITISLIKEAWEASEL"

example, start off with, as Dembski and Marks put it, 'problem-specific information about the search target or the search-space structure.' According to the paper, such simulations only reach their evolutionary targets because there is pre-specified 'accurate information to guide them,' or what they call 'active information.' The implication, of course, is that some intelligent programmer is required to front-load a search with active information if the search is to successfully find rare functional genetic sequences. They conclude, 'Active information is clearly required in even modestly sized searches.' "

277. William Dembski "New Peer-Reviewed Pro-ID Article in Mainstream Math/Eng Literature," Uncommon Descent, August 19, 2009.

> "William A. Dembski and Robert J. Marks II, 'Conservation of Information in Search: Measuring the Cost of Success,' IEEE Transactions on Systems, Man and Cybernetics A, Systems & Humans, vol.39, #5, September 2009, pp.1051-1061.
>
> Our critics will immediately say that this really isn't a pro-ID article but that it's about something else (I've seen this line now for over a decade once work on ID started encroaching into peer-review territory). Before you believe this, have a look at the article. In it we critique, for instance, Richard Dawkins METHINKS*IT*IS*LIKE*A*WEASEL (p. 1055). Question: When Dawkins introduced this example, was he arguing pro-Darwinism? Yes he was. In critiquing his example and arguing that information is not created by unguided evolutionary processes, we are indeed making an argument that supports ID."

278. Clive Hayden "PZ Myers Does It Again," Uncommon Descent, August 20th, 2009.

> "PZ Myers has, once again, railed against something that he doesn't understand at his blog Pharyngula. Hi PZ! Notice that he doesn't actually address the content of Dr. Dembski and Dr. Marks' paper, which you can read here: Conservation of Information in Search: Measuring the Cost of Success, published at the IEEE. Given his argument, he doesn't know how to measure the cost of success, yet claims that Dr. Dembski doesn't understand selection. A bit of advice PZ, the argument presented by Dr. Dembski and Dr. Marks is very sophisticated PZ, your mud slinging isn't PZ, you need to step it up PZ. I know this new stuff isn't ez, but you may want to consider a response that has actual content PZ. Your argument against this peer-reviewed paper is still in its infancy, or, more accurately, still in the pharyngula stage, embryonic in its development.
>
> "Since evolution of the kind PZ subscribes to cannot be witnessed, the argument has moved into genetic algorithms with the advent of computational abilities to determine the affair, and the IEEE is an entirely appropriate place to publish on that subject. We're not going anywhere, we'll give him time to catch up and educate himself to the tenets of the paper's actual content.

> And if/when he does, maybe he'll write another blog, and possibly write one with active information, that is, actual information, or else his argument will never reach it's target."

279. William Dembski, "Evolutionary Informatics as Intelligent Design and not as Theistic Evolution," Uncommon Descent, August 23, 2009

> "The paper on evolutionary informatics by Robert Marks and me that was recently published in an IEEE journal (go here for the paper) continues to generate discussion on the Internet. One criticism is that it at best is consistent with theistic evolution but does not support ID. I think this is a mistake. I've said for over a decade now that ID is consistent with the most far-flung evolutionary change. The key contention of ID is that design in nature, and in biology in particular, is detectable. Evolutionary informatics, by looking at the information requirements of evolutionary processes, points to information sources beyond evolution and thus, indirectly, to a designer. Theistic evolution, by contrast, accepts the Darwinian view that Darwinian processes generate the information required for biological complexity internally, without any outside source of information. The results by Marks and me are showing that this cannot be the case. The paper just published is only the first installment. It essentially lays out our accounting procedure for measuring the information in evolutionary search. We have two forthcoming papers that flesh out our larger project (available at www.evoinfo.org/publications), showing that attempts to account for the information internally, without an external information source, all founder."

280. William Dembski, "The argument just keeps rumbling on ..." Uncommon Descent, August 25, 2009.

> "A curious piece was posted a few days back by Ewen Callaway at the New Scientist (go here). Its focus was on the recent IEEE paper by Robert Marks and me on conservation of information (for the paper, go here). Callaway remarks: 'Even if a paper supporting ID has made it past peer review and no doubt the arguments will rumble on it seems like nothing much has changed.'
>
> "Callaway and his colleagues are welcome to hide their heads in the sand and pretend that nothing has changed. But at the next Dover trial, as the body of peer-reviewed work supporting ID continues to grow (Marks and I have plenty in the pipeline, and there are other labs now getting into the act), it will no longer be possible for the next Judge Jones to dismiss ID for lack of peer-reviewed papers (even at the Dover trial, Jones was mistaken to claim that no peer-reviewed work supports ID).
>
> "Nothing much has changed when a camel first starts sticking its nose into a tent. And nothing much has changed just at the moment something begins to slide down a slipperly slope. Nothing much has changed when a virulent bug first invades a body. But soon enough everything has changed."

281. O'Leary "Uncommon Descent Contest Question 10: Provide the Code for Dawkins' WEASEL Program," Uncommon Descent, August 26, 2009.

> "Special invitation for Richard Dawkins but any civil person is entitled to enter.
>
> "There's been some discussion here and elsewhere whether the the recent IEEE article by Dembski and Marks correctly characterizes Richard Dawkins' famous METHINKS IT IS LIKE A WEASEL program.
>
> "Does the program ratchet correct letters or does it let them vary?"

282. I.D. the Future "Information and Clear Accounting in Evolution," Casey Luskin interviews William Dembski about the Dembski-Marks paper, October 1, 2009 [Audio]

283. Andrew Comings, "BOOK REVIEW - BURIED HOPE OR RISEN SAVIOR," Sharper Iron, October 6, 2009.

> "On February 26, 2007, Oscar-winning film director James Cameron (of Titanic fame) and Emmy-winning host of History Channel's The Naked Archeologist, Simcha Jacobovici, held a press conference in New York City and claimed that they had found the the tomb of Jesus of Nazareth."
>
> "This world, however, is far from perfect, and its inhabitants notorious for their gullibility. So we must defend the Christian hope against those who would seek to take it away. Enter Dr. Charles L. Quarles, professor of religion at Louisiana College, who probably could have written *Buried Hope or Risen Savior* by himself and done an outstanding job. Instead, he assembled an academic 'dream team,' and together they deliver a slam-dunk against the over-hyped documentary and its perpetrators."
>
> "The next chapter was the most daunting for me, as William A Dembski (mathematician) and Robert J. Marks II (rocket scientistreally!) tackle the mathematics behind the claim that 'the probablility that the Talpiot tomb could be other than the tomb of Jesus [is 1 in 600]. Thus, conversely, it is supposed to be highly probablewith probability 599 in 600that this is Jesus' tomb' (p. 113). As they delve into the world of numbers, the non-mathematician's head begins to hurt. The chapter is full of sentences like this one:
>
> > "Since E denotes the naming of a male and F the naming of a female, P(E) = P(E & Person-Named-Is-Male) = P(E — Person-Named-Is-Male) x P(Person-Named-Is-Male) = 231/2,509 x$\frac{1}{2}$ and P(F) = P(F & Person-Named-Is-Female) = P(F — Person-Named-Is-Female) x P(Person-Named-Is-Female) = 80/317 x $\frac{1}{2}$.
>
> "Fortunately for the mathematically challenged, the book includes sections like the one found on pages 127-128, which put the mathematical concepts into regular language and provide helpful illustrations."

284. William Dembski, "New Dembski-Marks Paper," Uncommon Descent, December 7, 2009.

"William A. Dembski and Robert J. Marks II, 'Bernoulli's Principle of Insufficient Reason and Conservation of Information in Computer Search,' Proceedings of the 2009 IEEE International Conference on Systems, Man, and Cybernetics. San Antonio, TX, USA October 2009, pp. 2647-2652."

285. William Dembski, "Deconstructing Avida," Uncommon Descent, December 11, 2009

"Back in 2003 NATURE (vol 423, pp 139-144) published an article by Richard Lenski, Charles Ofria, Robert Pennock, and Christoph Adami titled 'The Evolutionary Origin of Complex Features.' "

"At no point in the paper is ID or any proponent of ID cited. Yet, when co-author Christoph Adami gave a PowerPoint presentation on Avida at a AAAS meeting some time back in Washington DC, his concluding slide showed Behe and his book DARWIN'S BLACK BOX. Moreover, Adami indicated that the whole point of this work on Avida was to refute Behe. Likewise, when co-author Rob Pennock wrote his expert witness report for the Kitzmiller v. Dover case, he claimed that his work on this NATURE article constituted a refutation of Behe.

"The hypocrisy here is breathtaking. On the one hand, we are told that ID is not science. On the other hand, articles in places like NATURE appear that are clearly motivated by ID. And yet, the articles themselves are scrupulous to avoid referencing ID, its proponents, or published writings lest we gain an entry in the Science Citation Index and thus can further strengthen the case that ID is indeed science.

"It was clear to the authors of the NATURE article that the shrill, illogical reviews of Behe that appeared early on would not silence him. But it was also clear to them that addressing him forthrightly in a prominent scientific venue could backfire, indicating that Behe was on to something important even if he was ultimately wrong. Some scientific mistakes are illuminating. If Behe were charged with committing an illuminating scientific mistake, then he would still be doing science (rather than pseudoscience or religion). Hence the subterfuge of not citing him at all the in NATURE article.

"In any case, a thorough deconstruction of Lenski et al.'s article and of Adami's Avida program has been long overdue. That deconstruction is now available:

"Winston Ewert, William A. Dembski and R.J. Marks II, 'Evolutionary Synthesis of Nand Logic: Dissecting a Digital Organism,' Proceedings of the 2009 IEEE International Conference on Systems, Man, and Cybernetics. San Antonio, TX, USA October 2009, pp. 3047-3053."

286. Casey Luskin "Winston Ewert, William Dembski, and Robert Marks Publish Mainstream Scientific Paper Exposing Flaws in Avida Evolution Simulation," Evolution News & Science Today, December 31, 2009.

"In 2003, evolutionary biologist Richard Lenski, philosopher Robert Pennock and others co-published a Nature paper titled "The evolutionary origin of

complex features" reporting results of a computer simulation of evolution dubbed 'Avida.' Though publicly arguing that Avida refuted intelligent design by showing the evolution of irreducible complexity, their paper refused cite the work of Michael Behe or any other ID proponent. Now, Winston Ewert, William Dembski, and Robert Marks expose in a paper in Proceedings of the 2009 IEEE International Conference on Systems, Man, and Cybernetics why Lenski and Pennock's 'Avida' simulation fails to accurately model Darwinian evolution.

Darwinian evolution has no prior knowledge about the search target, but Avida's programmers have intelligently designed Avida by smuggling in "active information" to help the program overcome the handicap of Darwinian blindness. Avida is based upon the premise that its target function ('EQU') will be eventually found simply by building on simpler logic functions. Ewert, Dembski, and Marks call this attempt to model a stepwise advantage 'stair step active information,' observing that 'Avida uses stair step active information by rewarding logic functions using a smaller number of nands to construct functions requiring more.' Significantly, Ewert, Dembski, and Marks find that 'Removing stair steps deteriorates Avida's performance,' quoting from Lenski and Pennock's paper admitting that "where only EQU was rewarded ... none of these populations evolved 'EQU.' Avida is thus designed to evolve, even though its designers don't make that clear. Ewert, Dembski, and Marks thus conclude with the exhortation that, "'To have integrity, computer simulations of evolutionary search like Avida should make explicit ... the prior knowledge that gives rise to the active information in the search algorithm.' "

287. Access Research Network, "Top Ten Darwin and Design Science News Stories for 2009," ARN, December 31, 2009.

> "#1. Intelligent Input Required for Life. In a significant peer-reviewed article in the September 2009 journal IEEE Transactions on Systems, Man and Cybernetics authors William A. Dembski and Robert J. Marks II use computer simulations and information theory to challenge the ability of Darwinian processes to create new functional genetic information. This paper is in many ways a validation of Dembski's core ideas in his 2001 book, No Free Lunch: Why Specified Complexity Cannot Be Purchased without Intelligence, which argued that some intelligent input is required to produce novel complex and specified information."

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288. ARN Staff, "Post details: 2009 Top Ten Darwin and Design Science News Stories," In the News, January 12, 2009

> "Access Research Network has just released its annual "Top 10 Darwin and Design Science Stories" for 2009.
>
> "Gaining top honors on the list was a peer-reviewed article by intelligent design theorists William Dembski and Robert Marks II in the September 2009 journal IEEE Transactions on Systems, Man and Cybernetics. The authors used computer simulations and information theory to challenge the ability of neo-Darwinian processes to create new functional genetic information."

289. O'Leary, "Top ten ID science stories of the year," Uncommon Descent, January 17th, 2010

> ""Well, here are three of the top ten winner stories, and I have inserted some comments, with further stories to follow if you click on the link:
>
> "1. Authors William A. Dembski and Robert J. Marks II use computer simulations and information theory to challenge the ability of Darwinian processes to create new functional genetic information. This paper is in many ways a validation of Dembski's core No Free Lunch: Why Specified Complexity Cannot Be Purchased without intelligence, which argued that some intelligent input is required to produce novel complex and specified information."

290. ID the Future"Meyer and Dembski Breakthroughs Top ID Science Stories for 2009," January 21, 2010. [Podcast: ARN Top Ten]

291. ID the Future, "Graduate Student Challenges Avida in Scientific Paper," March 01, 2010. [Podcast]

292. William Dembski, "Winston Ewert With pro-ID grad students like this, Darwinian profs don't stand a chance," Uncommon Descent, March 4, 2010

293. William Dembski, "New Peer-Reviewed ID Paper Deconstructing the Dawkins WEASEL," Uncommon Descent, March 9, 2010.

> "Winston Ewert, George Montaez, William A. Dembski, Robert J. Marks II, 'Efficient Per Query Information Extraction from a Hamming Oracle,' Proceedings of the the 42nd Meeting of the Southeastern Symposium on System Theory, IEEE, University of Texas at Tyler, March 7-9, 2010, pp.290-297."

294. "The 20 Most Brilliant Christian Professors," College Crunch, March 10, 2010.

> "The professors listed here are all 'brilliant' in the original sense of the wordthey shine brightly among their peers as towering figures in the academic world. In addition, they are all Christians who do not hide their Christianity and see it as significantly impacting their intellectual work.
>
> "We have limited this list to professors who teach in the English-speaking world. A few listed here have officially retired or moved on to other responsibilities, but in each case they keep close ties to the academic world."

"Robert Jackson Marks II (1950-)

"Distinguished Professor of Electrical and Computer Engineering at Baylor University. A founder of the field of computational intelligence (comprising fuzzy sets, neural networks, and evolutionary computing), Marks has published hundreds of articles on an very wide range of problems (everything from optimal detection of non-Gaussian noise to proper placement of radioactive inserts to treat prostate cancer). His work has enormous practical implications that are felt every dayall major North American utilities deliver energy using his work on neural networks. An Christian intent on understanding teleology in nature, Marks founded the Evolutionary Informatics Lab, which publishes peer-reviewed scientific papers supporting the controversial theory of intelligent design."

295. Casey Luskin, "William Dembski, Robert Marks, and the Evolutionary Informatics Lab Take on Dawkins' 'WEASEL' Simulation in New Peer-Reviewed Paper," Evolution News & Science Today, April 8, 2010.

    "A new peer-reviewed paper continues the work published by William Dembski, Robert Marks, and others affiliated with the Evolutionary Informatics Lab... The authors argue that Richard Dawkins' 'METHINKSITISLIKEAWEASEL' evolutionary algorithm starts off with large amounts of active informationinformation intelligently inserted by the programmer to aid the search."

296. Tim Woods "Baylor faculty member named one of '20 Most Brilliant Christian Professors'," Waco Tribune-Herald, April 15, 2010. [Newspaper]

    "Robert Marks, Baylor University Distinguished Professor of electrical and computer engineering, once again finds himself in the spotlight.

    "Less than three years ago, Marks was at the center of an intelligent design-related controversy at the school.

    "But Marks now is being honored for his work, notably his research in the area of evolutionary informatics.

    "CollegeCrunch.org, a college resource Web site, named Marks as one of 'the 20 most brilliant Christian professors.'

    "CollegeCrunch said professors included on the list 'shine brightly among their peers as towering figures in the academic world.'

    "Included are professors from such renowned universities as Johns Hopkins, Harvard, Notre Dame, Princeton, Rice, Stanford, Cambridge and Oxford. The list was limited to professors in English-speaking countries.

297. William Dembski "College Crunch honors Robert Marks for Work on ID," Uncommon Descent, April 15, 2010.

298. KWKT Fox44,"Baylor professor receives recognition," April 15, 2010.

299. "The 20 Most Brilliant Christian Professors," The Book of Doctrines and Opinions: notes on Jewish theology and spirituality, April 17, 2010.

300. Sara Tirrito, "Baylor professor ranked among most brilliant," Baylor Lariat, April 21, 2010. [Newspaper]

> "A distinguished professor in electrical and computer engineering, Dr. Robert Marks' work spans multiple areas, including computer program evolution simulation, swarm intelligence work for the U.S. Navy, intelligent design and information theory.
>
> " Recently, Marks was honored as one of the 20 Most Brilliant Christian Professors by collegecrunch.org. The list includes professors from universities such as Boston, Princeton, Stanford and Cambridge, among others.
>
> " 'It was a complete surprise. I had no idea the list was coming out,'Marks said. 'It's astonishing. That's the greatest sort of thing that can happen, when something comes totally out of the blue. I think the really surprising thing is some of the incredible people on there whose company I keep.'
>
> "Marks' work dealing with aspects of intelligent design has caused controversy on campus in the past, leading to the removal of his evolutionary informatics website from the university's server. However, Marks remains hopeful that Baylor will become more open to controversial research of this type.
>
> " 'They want to be recognized as a research university and also celebrate the lordship of Christ,' Marks said. 'We're told as Christians we should not pursue the recognition of man. Our job should be rather to please our Lord, not man, and this isn't present in every decision that Baylor makes, but certainly in a number of them and will determine whether Baylor will achieve this lofty goal of being a research university that celebrates the lordship of Christ.
>
> " 'I think if there's anywhere in the world there should be a dialogue about the sort of work I'm doing, it should be at Baylor.'
>
> In his time at Baylor, Marks has worked with various professors in the electrical and computer engineering department.
>
> " 'I came to Baylor because of 2012 – they wanted to be a cutting-edge university in terms of research and celebrate the lordship of Christ and I said that's what I want to spend my career doing,' Marks said. 'I spend most of my time actually doing research with other people; that's why I feel that I'm here.'
>
> "Currently, Marks is working on a project with Dr. Charles Baylis, assistant professor of electrical and computer engineering, who said Marks' work stands out because of his desire to honor Christ through his research.
>
> " 'From what I can tell and what I've observed, Dr. Marks is interested in doing his work to bring honor to Jesus Christ. He's committed to following Jesus Christ first and honoring him first and he sees his research as a way

of doing that,' Baylis said. 'I think it's interesting too because I think our mission here at Baylor is so unique. We train our students to first be followers of Christ who happen to be engineers. I think he embraces that role of training students to do that.'

"Dr. Ian Gravagne, associate professor of electrical and computer engineering said that because Marks' work integrates both faith and academics, it can serve as a reminder that faith doesn't have to be abandoned in pursuit of knowledge.

" 'I think it's also important for the world generally to see that from within Christianity can also come some of the greatest intellectual ideas,' Gravagne said. 'That's not a new concept, but I think lately we've sort of forgotten that many of the giants in science and mathematics in the past we're Christians.'

"Marks said he hopes being included on collegecrunch's list will also help show others that faith and intellect can coexist.

" 'I hope this list in general shows there is no reason that a person who is intellectually gifted should not be a Christian,' Marks said."

301. William A. Dembski, "FIRST-PERSON: Vindication for I.D. at Baylor?" Baptist Press, May 6, 2010.

302. William Dembski "Baylor's New President Meets Baylor's New Super-Genius Professor," Uncommon Descent, May 7, 2010.

303. William Dembski, "EVIDENCE FOR GOD now shipping!" Uncommon Descent, June 18, 2010.

"The following anthology, coedited by me and Mike Licona [EVIDENCE FOR GOD], is now available at Amazon.com:

"Here's the table of contents for the science section:"

"17. Evolutionary Computation: A Perpetual Motion Machine for Design Information? Robert J. Marks II"

304. Clive Hayden, "Robert Marks: The 'Charles Darwin' of Intelligent Design," Uncommon Descent, August 5, 2010.

"Evolution was a known concept before Darwin published his Origin of Species in 1859. But Darwin's work on evolution pushed it from obscurity to a widely known and accepted concept. Part of what helped Darwin in pushing through evolution was the credibility he had acquired from publishing lots of specialized scientific treatments (such as an extended treatise on barnacles) before publicly wading into evolution.

"Fast forward to the beginning of the 21st century. Robert Marks has built a career establishing his credibilityas a foremost thinker and researcher on the topic of computational intelligence. He has amassed an enviable publication record and huge set of government research grants. No one can question his scientific bona fides. And now, with his Evolutionary Informatics Lab

(www.evoinfo.org), he is going for broke to establish intelligent design as a scientific research program.

"Just as Darwin made it possible to be an intellectually fulfilled evolutionist, so Robert Marks is making it possible to be an intellectually fulfilled design theorist. Robert Jackson Marks II is THE CHARLES DARWIN OF INTELLIGENT DESIGN!"

305. "The 20 Most Influential Christian Scholars," Super Scholar, September 10, 2010.

"Super Scholar's 20 most influential Christian scholars have profoundly influenced the world by advancing Christian belief, by reconceptualizing it, or even by fundamentally challenging it. In any case, each of the thinkers below has deeply impacted Western culture's self-understanding."

"Robert J. Marks II

"Robert J. Marks II (b. 1950), Baylor University's leading research professor, has emerged as the public face of intelligent design. As the movement's premier scientist, he has been dubbed 'the Charles Darwin of intelligent design.' At one point, his research on intelligent design was removed by Baylor officials from the university's website. Since then he has published seminal work on such themes as whether computers have minds and whether Darwinian processes can generate biological information. He is widely quoted as saying, 'Computers are no more able to create information than iPods are capable of creating music.' His Law of Conservation of Information purports to demonstrate inherent limitations on natural selection, suggesting that the intricate information needed for life requires an intelligent source."

306. "Does Intelligent Design Help Science Generate New Knowledge?" Evolution News & Science Today, November 23, 2010.

"I was recently asked by an evolutionary biologist where ID can help science generate 'new knowledge.' "

"Below are about a dozen or so examples of areas where ID is helping science to generate new knowledge. Each example includes citations to mainstream scientific articles and publications by ID proponents that discuss this research:"

"ID has inspired theoretical research into the information-generative powers of Darwinian searches, leading to the finding that the search abilities of Darwinian processes are limited, which has practical implications for the viability of using genetic algorithms to solve problems. (See: William A. Dembski and Robert J. Marks II, "Conservation of Information in Search: Measuring the Cost of Success," IEEE Transactions on Systems, Man, and Cybernetics-Part A: Systems and Humans, Vol. 39(5):1051-1061 (September, 2009); Winston Ewert, William A. Dembski, and Robert J. Marks II, "Evolutionary Synthesis of Nand Logic: Dissecting a Digital Organism," Proceedings of the 2009 IEEE International Conference on Systems, Man, and

Cybernetics, (October, 2009); William A. Dembski and Robert J. Marks II, "Bernoulli's Principle of Insufficient Reason and Conservation of Information in Computer Search," Proceedings of the 2009 IEEE International Conference on Systems, Man, and Cybernetics, (October, 2009); Winston Ewert, George Montanez, William Dembski and Robert J. Marks II, "Efficient Per Query Information Extraction from a Hamming Oracle," 42nd South Eastern Symposium on System Theory, 290-297(March, 2010); Douglas D. Axe, Brendan W. Dixon, Philip Lu, "Stylus: A System for Evolutionary Experimentation Based on a Protein/Proteome Model with Non-Arbitrary Functional Constraints," PLoS One, Vol. 3(6):e2246 (June 2008).)"

307. Meghan Hendrickson, "Ants go marching: Insect discipline applied to military," The Baylor Lariat, December 1, 2010.

> "According to Dr. Robert Marks, distinguished professor of electrical and computer engineering, there is increasing military interest in unmanned autonomous vehicles. A collection of vehicles can act like a swarm of insects, and Marks and his team are researching to find simple rules the vehicles can follow to enable the military to complete its mission.
>
> " 'Dumb bugs do smart things,' Marks said. 'Bees build intricate hives. Ants build and defend anthills.' Marks explained how ants figure out how to get the Milky Way candy bar someone drops on the sidewalk back to their home by traveling the shortest distance, despite obstacles that prevent that path from being a straight line. 'Using the same algorithm we learn from ants, we can get messages, Milky Way bars, over communication paths to their destination using information packets, ants, in a very efficient way,' Marks said.
>
> "Marks went on to say that social insects are robust and adaptive. He said that even if someone steps on half the ants taking the Milky Way bar to their home, the ants will still complete the task; it will just take longer. He said that ants are individually unaware of the overall task they are performing and they continue to follow their simple rules to complete their mission, without a master controller directing their every move. It is these simple rules that Marks and his team are trying to create for the military.
>
> "Marks' research stems from an idea he learned from his grandfather. 'My grandfather, who had a third-grade education, once told me that man has never done anything that God didn't do first,' Marks said. 'He is right. All of man's engineering designs can be found in nature.' "

308. William Dembski "New Peer-Reviewed Pro-ID Paper in BIO-COMPLEXITY," Uncommon Descent, December 15, 2010.

> "A Vivisection of the ev Computer Organism: Identifying Sources of Active Information by George Montaez, Winston Ewert, William Dembski, Robert Marks"

> "It is naively optimistic to think that Marks' appearance on the College Crunch list vindicates his research on Intelligent Design. Such optimism would be better justified if incoming Baylor president Ken Starr were to reinstate the Evolutionary Informatics Lab's website on the Baylor server and to recognize Intelligent Design as a legitimate area of research for Baylor faculty. That would constitute a true vindication of Marks' work on Intelligent Design. It would also constitute a true validation of Starr's commitment to the full Baylor 2012 Vision."

309. Quinta-feira, "Uma vivessecção do organismo de computador ev: identificando as fontes de informação ativa." Desafiando a NOMENKLZASTURA CIENTÍFICA, December 16, 2010.

310. Bilbo "New Bio-Complexity Paper," Telic Thoughts, December 16, 2010.

311. Casey Luskin "BIO-Complexity Publishes Article Answering Critics Who Promote Tom Schneider's 'ev' Simulation," Evolution News & Science Today, December 23, 2010.

> "A new peer reviewed paper published in Bio-Complexity, "A Vivisection of the ev Computer Organism: Identifying Sources of Active Information," answers that question. Dembski and his coauthors have shown that, contrary to Miller's claim, the ev program is in fact rigged to produce a particular outcome, and that Stephen Meyer's description of ev is precisely correct.
>
> "According to the paper's authors, ev 'exploit[s] one or more sources of knowledge to make the search successful' and this knowledge 'predisposes the search towards its target.' They explain that Ken Miller's credulity towards ev was unwarranted"

312. Hallee the Homemaker, "Creation: Darwinian A Sunday guest post by my brilliant husband, Gregg," Evolutionary Frauds Pt. XVII, December 26, 2010.

> "Five recent examples were interviewed in Ben Stein's documentary, Expelled.
>
> - ◇ Guillermo Gonzalez
> - ◇ Richard Sternberg
> - ◇ Caroline Crocker
> - ◇ Robert Marks
> - ◇ Michael Egnor
>
> "Dr. Robert Marks Ph. D., a tenured 'Distinguished Professor of Electrical and Computer Engineering,' endured what can only be described as nearly stentorian persecution at the hands of Baylor University. Marks' website about his research challenging Darwinism was permanently shut down by the Baylor administration, Baylor pressured Marks to cease his anti-Darwinist research, and Baylor as grant administrators even returned grant money

given to Marks from a third party organization for the purpose of hiring research assistants to assist in his anti-Darwin lab work."

313. Casey Luskin, "William Dembski and Robert Marks Publish (Another) Peer-Reviewed Scientific Paper Supporting No Free Lunch Theorems," Evolution News & Science Today, December 28, 2010.

> "A peer-reviewed scientific paper published in 2010 by William Dembski and Robert Marks of the Evolutionary Informatics Lab supports no free lunch theorems. Published in Journal of Advanced Computational Intelligence and Intelligent Informatics and titled 'The Search for a Search: Measuring the Information Cost of Higher Level Search' "
>
> "Dembski and Marks thus argue that 'successful searches do not emerge spontaneously but need themselves to be discovered via a search.' However, without information about the target, the search for a search itself is still no better than a blind search"
>
> "The implication of course, is that without the ultimate input from an intelligent agent–active information–such searches will fail."

2011

314. David Klinghoffer, "No Peer-Reviewed Support for ID? Darwinists Talk to the Hand, Evolution News & Science Today, January 5, 2011.

> "Another peer-reviewed paper by Dembski and Marks in the Journal of Advanced Computational Intelligence and Intelligent Informatics joins the list of such publications coming out of the Evolutionary Informatics Lab. From the same source, led by computer scientists at Baylor University, comes a peer-reviewed journal article in BIO-Complexity, debunking a computer program supposed to simulate unguided evolution and widely hailed by Darwin apologists like Kenneth Miller. Finally, a paper in the International Journal of Design & Nature and Ecodynamics offers evidence that we live in an 'engineered world.' "

315. William Dembski, "Robert Marks interviewed by Tom Woodward," Uncommon Descent, January 22, 2011. [Podcast]

316. David Klinghoffer "The Universe Is Haunted: Reflections on the 'Nature of Nature'," Evolution News & Science Today, March 18, 2011.

> "The Nature of Nature [is] a massive and massively learned new 900-page volume of essays. In chapter after chapter, proponents and critics of naturalism and Darwinism, scientists and philosophers, hammer away at each other at the highest levels of debate."
>
> "Writing with Baylor University's Robert Marks, a pioneer in the field of computational intelligence, William Dembski states a fundamental law of

nature that explains why, if undirected by an intelligent agent, the inscribing of biological information in the genome should face such impossibly daunting obstacles.

"Stanford mathematician Keith Devlin has suggested that information may be 'a basic property of the universe, alongside matter and energy (and ultimately interconvertible with them).' The Law of Conservation of Information, formulated by Dembski and Marks, says as much in formal terms, holding that information can only be imported into a natural system and shuffled around. Where we find information erupting, as in the genome, much as when we find matter or energy popping into existence at the Big Bang, it must have been seeded there from outside."

"Dembski and Marks define the generation of information as the act of eliminating possibilities. To illustrate, they give the example of formulating a sentence of prose. That task involves sifting the vast space of possible combinations of letters, almost all of them meaningless gibberish, for a combination that yields not only meaning but the meaning you intend."

317. Katherine T. Phan, "Texas Bill Would Protect College Professors Who Question Evolution," The Christina Post, March 19, 2011.

"A new Texas bill would make it illegal for colleges to fire or refuse jobs to professors based on their research on intelligent design or other theories on the origin of life that question evolution."

"In 2007, Baylor University shut down an evolutionary informatics lab by professor Robert Marks after administrators learned he was doing pro-ID research. The lab was forced to move from the university server to a third-party server. The incident was documented in Ben Stein's 'Expelled: No Intelligence Allowed.' "

"HB 2454 requires a two-thirds vote to pass in the House."

318. Claire Berlinski, "Great Expectations: Information Theory and the Maverick Rabbi," *Ricochet*, June 17, 2011. [YouTube video: https://youtu.be/Uc6Ktq0SEB].

319. Paul Benedict, "A Scientific Consensus: Darwinism is Dead," Nolan Chart, July 2, 2011.

320. "From a very discreet conference, offering some frank takes on the bankrupt public Darwin cult," Uncommon Descent, July 5, 2011.

"Some participants were flagged down at the airport afterward. Here are some great interviews (vid) at Ricochet (Claire Berlinski, editor), a 'secret' conference of prominent idea people who are fed up with the cult. These feature Robert Marks and Rabbi Moshe Averick.

"Robert Marks is a professor of engineering at Baylor University, who decided to inquire into the holiness of one of Darwin's relics, the computer programs that supposedly prove him right. For that purpose, he founded

> the Evolutionary Informatics Lab. Marks' dean got wind of it and, on his own initiative, removed the Lab from the university servers, amid howls of glee from the faithful. Here's a reflection on that event: 'The Great Escape: A Tribute to Bob Marks.' "

"TheChortle.com on the Cambrian Explosion," Uncommon Descent, July 22, 2011.

> "Designed to amuse, TheChortle.com has a number of images related to evolution. Here's one of the more recent."

321. "Marilee Marks joins Re-Max" RE/MAX of Texas, September 30, 2011.

322. Natalee Blanchat "The God Dialogues: Christianity is for thinking people and is a reasonable, logical faith," The Battalion (Texas A&M Paper), October 27, 2011. [Newspaper], [YouTube: https://youtu.be/APW8sqWI96E], [Video Excerpts]

> "The God Dialogues: A moderated panel discussion between Christians, Atheists, and Muslims at 8 p.m. Thursday in Rudder 601.
>
> "Representing Ratio Christi and Christianity will be John Ferrer and Dr. Robert Marks; Representing the Atheist and Agnostic Student Group will be Shawn Hanrahan and Abid Mujtaba, and representing the Islamic Study Group will be Emad Mousavi and Shima Mohajeri."

2012

323. "Information: What Is it?," Evolution News & Science Today, January 19, 2012. [Youtube: https://youtu.be/d7seCcS_gPk], [Cache.]

324. johnnyb, "ID Metrics and an Active Information Tutorial," Uncommon Descent, January 20, 2012.

> "One of my favorite parts of ID is the fact that it is creating good tools for biologists to use. ID is often misconceived as a conclusion about whether or not X was designed. Instead, ID presupposes only the *possibility* that something was designed, and that intelligent agents are not mechanistic. In accordance with this, several metrics have been developed."
>
> "The third metric, however, is my favorite. It's a simpler conception, yet very powerful, and is based directly on the No Free Lunch theorems. It is 'Active Information'. Active Information is basically the measurement of how much information a search algorithm knows about the pattern of the search space that it is searching. It is measured by looking at the performance of the search algorithm vs a blind search. The paper describing it is here. This concept has been further applied to measure the amount of active information that is used by the immune system during somatic hypermutation (about 22 bits), and additional research is ongoing to apply it more generally to cells in hypermutable states.

> "Anyway, Active Information has a huge potential in biology to help detect which processes have frontloaded information, and how much information the cell is actually supplying for mutational processes. Anyway, below, Robert Marks gives a *great* lecture on information generally, and ends the lecture specifically talking about Active Information in evolutionary systems."

325. "William Dembski Interview," The Best Schools, January 23, 2012

> "...we are not denying that natural selection operates. Indeed, it does. But we are denying that its range and power are anything like what the Darwinists claim. And the evidence, we would contend, is all on our side. This is probably not the place to rehearse such arguments. I refer readers to The Design of Life. I would also refer readers to an article I coauthored with Bob Marks entitled 'Life's Conservation Law: Why Darwinian Evolution Cannot Create Biological Information.' This paper can be found in The Nature of Nature anthology..."

326. "PEER-REVIEWED & PEER-EDITED SCIENTIFIC PUBLICATIONS SUPPORTING THE THEORY OF INTELLIGENT DESIGN (ANNOTATED)," Evolution News & Science Today, February 1, 2012.

327. Podcast - William Dembski interview "Peer-Reviewed Scientific Literature Building a Compelling Case for ID," ID the Future, February 3, 2012

328. Mario A. Lopez "Dr. Robert Marks, A Scientist Who Questions the Evolution Consensus," American Institute for Technology and Science Education, February 4, 2012.

> "According to a popular blog, AITSE Consortium member 'Robert Marks has built a career establishing his credibility as a foremost thinker and researcher on the topic of computational intelligence. He has amassed an enviable publication record and huge set of government research grants. No one can question his scientific bona fides. And now, with his Evolutionary Informatics Lab (www.evoinfo.org), he is going for broke to establish intelligent design as a scientific research program. Just as Darwin made it possible to be an intellectually fulfilled evolutionist, so Robert Marks is making it possible to be an intellectually fulfilled [intelligent] design theorist.' And AITSE believes he does so with integrity."

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> to be an intellectually fulfilled evolutionist, so Robert Marks is making it possible to be an intellectually fulfilled [intelligent] design theorist.' And AITSE believes he does so with integrity."

330. "Bill Dembski on the Evolutionary Informatics Lab the one a Baylor dean tried to shut down," Uncommon Descent, February 17, 2012.

331. Barry Arrington, "Barr v. Arrington," Uncommon Descent, February 27, 2012.

> "Over at the First Things blog Stephen Barr said that there is no way to compute the probabilities of evolution.
>
> "I disagreed and pointed him to Dembski's and Marks' work at the Evolutionary Informatics Lab. Barr responded by citing a 2003 article by Wesley Elsberry and said the critique of Dembski's work was, if valid, 'very damaging.'
>
> "I responded by pointing out that the Dembski/Marks article to which I had linked was from 2009 and therefore it was not possible for Elsberry to have critiqued it in 2003. Here's where things got interesting. Instead of allowing my response through, the FT moderator deleted it."

332. N'yjustu athugasemdir, "Ritrýndar greinar sem styoja Vitræna hònnun," Mofa Blog, March 4, 2012.

333. Doug Axe, "Applied Darwinism: A New Paper from Bob Marks and His Team, in BIO-Complexity," Evolution News & Science Today, April 4, 2012.

334. "Memo to physicist David Thomas: Make Darwinism work. Get an intelligent agent involved," Uncommon Descent, May 5, 2012.

> ""Heck, Dave will do. Who are we to be fussy?
>
> "Physicist/mathematician David Thomas has boasted that evolution creates information and that he can show this by solving the Steiner tree problem using its powers.
>
> "Steiner tree problem: To connect 5 (or whatever) cities with roads using the shortest combined road length.
>
> "Thomas has challenged,
>
> > "If you contend that this algorithm works only by sneaking in the answer (the Steiner shape) into the fitness test, please identify the precise code snippet where this frontloading is being performed."
>
> "The guys at Evolutionary Informatics Lab (the one the Baylor dean tried to can years ago, remember?) do exactly that:
>
> > "The precise code snippet where this frontloading is being performed' from Thomas's Fortran version of the program is shown below. It ensures that there are at least two interchanges (Thomas

calls them variable points) during the initialization of the population:
NPV = INT(RNDVAL*FLOAT(NVMX-1))+2 ! MINIMUM 2 VARIABLE POINT"

"Robert J Marks II comments: 'In fact, we show the problem attacked by Thomas is pretty lame in comparison with other Steiner tree solutions in the literature.' "

335. William Dembski "Is Darwinism Theologically Neutral? A Reply to Darrel Falk," Evolution News & Science Today, May 9, 2012.

"As I've argued with Robert Marks in a paper titled 'Life's Conservation Law,' even if life is the result of an evolutionary process driven by natural selection, it would have to be a form of selection finely tuned by an environment that is itself finely tuned (see our contribution to The Nature of Nature, edited by Bruce Gordon and me)."

336. William A. Dembski "Conservation of Information Made Simple," Evolution News & Science Today, August 28, 2012.

"Conservation of information, as the idea is being developed and gaining currency in the intelligent design community, is principally the work of Bob Marks and myself, along with several of Bob's students at Baylor (see the publications page at www.evoinfo.org). Conservation of information, as we use the term, applies to search. Now search may seem like a fairly restricted topic. Unlike conservation of energy, which applies at all scales and dimensions of the universe, conservation of information, in focusing on search, may seem to have only limited physical significance. But in fact, conservation of information is deeply embedded in the fabric of nature, and the term does not misrepresent its own importance."

"For a "Made Simple" paper on conservation of information, this is about as much as I want to say regarding a precise statement of conservation of information. Bob Marks and I have proved several technical conservation of information theorems (see the publications page at www.evoinfo.org)."

337. "Kahler- Marks Wedding," Waco Tribune, September 23, 2012.

"Kristopher Thomas Kahler and Marilee Melodie Marks were united in marriage on June 16, 2012, at the Marks River Ranch in McGregor. Pastor Craig Ferrell officiated."

338. Ratio Christi "God the Mathematician," (flyer), Texas A&M, October 5, 2012.

339. Marilee Marks, "Marilee's Take on Waco," November 2012, The Real Estate Insider, November 2012.

340. Sarvesh Kaslay "Intelligent design advocate blends faith, science," The Texas A&M Battalion, November 6, 2012

"The Texas A&M chapter of Ratio Christi aims to strengthen the faith of Christian students at secular institutions nationwide through the use of intellectual investigation and apologetics.

Ratio Christi Latin for 'the reason of Christ' is a global movement that aims to give university students and faculty historical, philosophical and scientific reasons for believing the Christian faith.

"As part of the Science and Faith Speaker Series, Ratio Christi is bringing Robert Marks to help shed light on the connection between God and mathematics with his speech titled, 'God Ever Geometrizes.'

" 'Dr. Marks will provide mathematical proof about the existence of God,' said Jayson Pilosi, chapter director of Ratio Christi at Texas A&M. 'He will try to put across the point that mathematics and God are not in competition, rather they are actually hand in glove.'

Marks is a professor of electrical and computer engineering at Baylor University and a staunch advocate of intelligent design. He has written more than 300 peer-reviewed, technical publications and given several presentations on the relationship between science and faith.

'The reason Ratio Christi chose Dr. Marks is because he is an incredibly gifted and talented individual,' Pilosi said. 'He is very good at making valid references that will help the audience connect to his message. He is good at putting cookies on the bottom shelf so that everyone can reach them.' "

341. Sarvesh Kaslay, "Apologetics speaker looks to prove God through math," The Texas A&M Battalion, November 8, 2012

"The quest to understand the existence of God is one that is largely driven by faith. The majority of the experts in science and its various branches have questioned the theist view of the universe.

"In a speech given on Tuesday by Robert Marks, professor of electrical and computer engineering at Baylor University, he put a spin on the clich and aimed to provide a rational, mathematical basis for establishing the presence of God.

"Ratio Christi, a global organization with the goal of re-establishing a strong and reasoned presence of Christian thinking in academia, invited Marks to give a speech titled 'God ever Geometrizes.'

" 'I was part of the inception of the lecture series and the speakers were already chosen when I jumped on the bandwagon,' said Lauren Simcic, president of the Texas A&M University chapter of Ratio Christi and junior political science major. 'But when I found out what this was about I felt it would make a huge difference on the campus.'

"Marks said the science fiction he read as a boy is boring compared to the mind-blowing mathematics of today's string theory and algorithmic information theory.

" 'These exciting results from mathematics I'll talk about demonstrate that God is awesome,' Marks said. 'Stephen Hawking famously said that any physics theory could never be proven. The best we can do is accumulate evidence. The same is true of proving God and the Lordship of Christ. Apologetics is all about gathering this evidence and Ratio Christi is all about scholarly apologetics. I'm presenting some apologetics viewpoint of mathematics.'

"Marks discussed the possibility of existence of multiple dimensions and that God may exist in one of the dimensions that humans are unable to perceive.

" 'Flatland' by Edwin A. Abbott was a book that made a great impact on me when I was a child,' Marks said. 'The beings in Flatland are all two dimensional, so the existence of a third dimension is oblivious to them. Similarly, there might be a four, five or infinite dimensions in our world but we might be completely unaware of them.'

"Marks also showed a video clip of an episode from 'The Twilight Zone,' a TV series in which a child falls through a portal to another dimension.

"Marks said a higher dimensional entity referred to as God can be infinitely close to humans without being visible, intersect the perceivable universe at will or even be able to see inside a person.

"Extolling the works of mathematicians such as Kurt Gödel and Georg Cantor, Marks discussed the mathematics involving infinite numbers.

" 'The presence of infinite numbers lead to absurdities such as the number of elements in an infinite set of counting numbers is equal to the number of elements in a set of infinite prime numbers,' Marsk said. 'Hence, the universe had to be created by a higher being who is unknowable because infinities lead to uncertainties which are not provable.'

"He also said there are things that are known to exist that will never be proven, citing Chaitin's constant.

" 'Chaitin's constant is a real number that informally represents the probability that a randomly constructed program will halt,' Marks said. 'But at the same time this number is uncomputable, since no halting probability is computable.'

"Julio Ramon, sophomore general studies major, said he found the lecture to be very helpful as it provided an objective view to spirituality.

" 'I am definitely going to look up most of the things that the speaker said in the lecture as the mathematical approach to faith was very interesting,' Julio said.

"The next speaker in line for the Ratio Christi Fall Lecture Series is Walter Bradley, dean of engineering at Baylor University. He will deliver a speech titled 'Is There Scientific Evidence for God?' on Nov. 19."

342. Duane A. Laverty, "WREATHS FROM HERBS," The Waco Tribune, November 11, 2012.

> "Cathy Valentine (front) and Monica Marks, members of the Waco Herb Society, create wreaths from herbs during the club's meeting Tuesday at the Carleen Bright Arboretum in Woodway. Society members brought the herbs from their gardens to make the wreaths."

343. "New Paper in Bio-Complexity: 'Time and Information in Evolution," December 8, 2012.

> "Readers may recall a paper published in 2010 by Wilf and Ewens. A rebuttal to that paper (authors Winston Ewert, William A. Dembski, Ann K. Gauger, Robert J. Marks II) has now been published in Bio-Complexity."

344. Denyse O'Leary "New paper: Was there really enough time for Darwinian evolution?" The Best Schools, December 8, 2012.

> "In 'Time and Information in Evolution,' (BIO-Complexity, 2012), Winston Ewert, William A. Dembski, Ann K. Gauger, and Robert J. Marks II cast doubt on a mathematical model claiming to show that there was enough time for the Darwinian model of evolution"

345. Casey Luskin, "Peer-Reviewed Science: There Isn't Plenty of Time for Evolution'," Evolution News & Science Today, December 13, 2012.

> "The Evolutionary Informatics Lab, headed by Drs. William Dembski and Robert J. Marks, II, has published a number of peer-reviewed scientific papers that assess supposed simulations of evolution. Their team developed a methodology for studying so-called 'genetic algorithms' – computer programs that are intended to simulate the Darwinian process. These programs incorporate 'active information,' which is essentially the amount of information smuggled into a search algorithm by an intelligent programmer to help it find a target. Their methodology calculates the amount of active information in a program, showing that intelligence – not Darwinian evolution – is what is finding the targets of these searches. In a new peer-reviewed scientific paper in the journal BIO-Complexity, 'Time and Information in Evolution,' Winston Ewert, Ann Gauger, along with Dembski and Marks, once again show that a mathematical simulation of evolution doesn't model biologically realistic processes of Darwinian evolution at all. First, a bit about the paper that Ewert et al. are responding to.
>
> "The new paper responds to a 2010 paper in Proceedings of the U.S. National Academy of Sciences (PNAS) titled 'There's plenty of time for evolution,' by Herbert S. Wilf and Warren J. Ewens, a biologist and a mathematician at the University of Pennsylvania. There's little doubt that Wilf and Ewens intended their work to respond to the arguments of intelligent-design proponents. Though lacking any citations to ID literature, the paper's abstract starts off by stating, 'Objections to Darwinian evolution are often based on the time required to carry out the necessary mutations.' They then open the body of their paper by elaborating on these objections "

346. "Our Top 10 Evolution-Related Stories: #6, Peer-Reviewed Science Supports Intelligent Design," Evolution News & Science Today, December 27, 2012.

2013

347. "The 50 Smartest People of Faith," The Best Schools, January 7, 2013.

> "The qualifications for inclusion on our list are twofold:
>
> > (1) Intellectual brilliance, evidenced by a very high level of achievement, whether in the natural sciences, the social sciences, the humanities, literature, the fine arts, or public service; and
> > (2) Religious faith, evidenced either through explicit personal witness or through publicly professed respect for religion.
>
> "This list, then, includes living men and women who are both people of faith and people of exceptional intellectual brilliance and professional accomplishment. It is presented in alphabetical order."
>
> "Marks was born in West Virginia. He was educated at the Rose-Hulman Institute of Technology (BS, Engineering, 1972; MS, Electrical Engineering, 1973) and Texas Tech (PhD, Electrical Engineering, 1977). He taught for many years at the University of Washington, in Seattle. He is currently Distinguished Professor of Electrical and Computer Engineering at Baylor University, in Waco, Texas. Marks, who is Protestant, has made a number of contributions to cutting-edge technology at the interface between electrical engineering and computer science. For example, in 1991 he was the first to apply artificial neural networks to the problem of forecasting power demands by electrical utility companiesa practice that is widespread today. More recently, Marks and colleagues developed an algorithm for the real-time tracking of the placement of radioactive seeds in prostate cancer therapy. In addition, his team developed the first closed-form solution for the NeymanPearson optimal detection of signals in non-Gaussian noise. In 2007, Marks inaugurated his Evolutionary Informatics Lab, a web site dedicated to simulating evolutionary processes. The Labwhich has demonstrated severe constraints on the creative potential of Darwinian-style algorithmswas afterwards shut down by the Baylor University administration, and Marks has since moved it to a private server."

348. Alumni News, Echoes (Rose-Hulman Institute of Technology), Spring 2013, Vol 2013, #2, April 4, 2013

> "Robert J. Marks II (EE; MSE 1973) was named one of the *50 Smartest People of Faith* by thebestschools.org."

349. William A. Dembski, "Before They've Even Seen Stephen Meyer's New Book, Darwinists Waste No Time in Criticizing Darwin's Doubt." Evolution News & Science Today, April 4, 2013.

> "But let's leave aside this direct response to Felsenstein (to which neither he nor Shallit ever replied). The fact is that conservation of information has since been reconceptualized and significantly expanded in its scope and power through my subsequent joint work with Baylor engineer Robert Marks. Conservation of information, in the form that Felsenstein is still dealing with, is taken from my 2002 book No Free Lunch. In 2005, Marks and I began a research program for developing the concept of conservation of information, and we have since published a number of peer-reviewed papers in the technical literature on this topic (note that Felsenstein published his critique of my work with the National Center for Science Education, essentially in a newsletter format, and that Shallit's 2003 article finally appeared in 2011 with the philosophy of science journal Synthese, essentially unchanged in all those intervening years). Here are the two seminal papers on conservation of information that I've written with Robert Marks:..."
>
> "So what's the take-home lesson? It is this: Stephen Meyer's grasp of conservation of information is up to date. His 2009 book Signature in the Cell devoted several chapters to the research by Marks and me on conservation of information, which in 2009 had been accepted for publication in the technical journals but had yet to be actually published."

350. Winston Ewert, "Information, Past and Present," Evolution News & Science Today, April 15, 2013.

> "In addition, Felsenstein claims that 'The Search for a Search: Measuring the Information Cost of Higher Level Search,' by Dembski and Robert Marks, and related papers do not make an argument that the designer needed to intervene in the evolutionary process. This is true, but misunderstands the nature of the argument."

351. "William Dembski and the Intelligent Design Movement," GivingAnAnswer, April 20, 2013. [YouTube: https://youtu.be/MjTo-I8IkwQ]

352. Cornelius Hunter "Evolutionists Are Now Saying They Have Solved the Problem of Evolvability." Darwin's God, Thursday, May 2, 2013.

"Intelligent Design Theory - William Dembski, PhD," IDquest, May 2, 2013. [Youtube: https://youtu.be/VlQOEAOJhVM]

353. Denyse O'Leary "How does life incorporate information?" The Best Schools, June 5, 2013.

354. Denyse O'Leary "Download Cornell papers on origin of biological information free," Uncommon Descent, June 14, 2013.

355. Denyse O'Leary "Robert Marks of the Evo Info Lab on 'Information what is it?'," Uncommon Descent, June 29, 2013.

> "As promised earlier today, here is the vid of Dr Marks on Information and search success:..."

356. Denyse O'Leary, "Open Mike: Cornell OBI ConferenceCan you answer these conundrums about information?" Uncommon Descent, June 29, 2013.

> "To facilitate discussion, we are publishing the abstracts of the 24 papers from the Cornell Conference on the Origin of Biological Information here at Uncommon Descent, with cumulative links to previous papers at the bottom of each page.
> "An excerpt from Introductory Comments by Robert J. Marks II for Section One, Information Theory & Biology:"

357. Denyse O'Leary "Open Mike: Cornell OBI ConferenceNew definition of information proposed: Universal Information," July 1, 2013.

358. Denyse O'Leary "Open Mike: Cornell OBI ConferenceChapter Three on the true cost of a successful searchConservation of information," Uncommon Descent, July 10, 2013.

359. Winston Ewert "Questioning Information Cost," Uncommon Descent, July 12, 2013.

360. Denyse O'Leary, "Open Mike: Cornell OBI ConferenceChapter Four: Pragmatic Information," Uncommon Descent, July 12, 2013.

361. "Denyse O'Leary, "Darwin sure plays a mean pin ball?" Uncommon Descent, July 14, 2013.

362. Denyse O'Leary "Open Mike: Cornell OBI ConferenceChapter Four, Pragmatic information: Conclusion." Uncommon Descent, July 16, 2013.

363. Biological Information: New Perspectives on Amazon.com, August 1, 2013.

364. Denyse O'Leary "ID guys' lasting fame: Their ErdosBacon number!" Uncommon Descent, August 3, 2013.

> "Robert Marks II, a computer science prof and ID theorist at Baylor, decided to have some fun with the Erdos number. The what? number? Well, let him tell it:
>
> > "In films, one's Bacon number is equal to the number of films you are removed from Kevin Bacon. It turns out that Kevin Bacon was in the movie Planes, Trains, and Automobiles. Ben Stein was also in that movie. This means that all of the intelligent design proponents or opponents that appeared in ExpelledExpelled have a Bacon number of two. This includes Bill Dembski, Paul Nelson, Doug Axe, Richard Sternberg, Guillermo Gonzalez, Caroline Crocker, Steve Meyer, Jonathan Wells, David Berlinski, Richard Dawkins, PZ Myers, Michael Ruse, yours truly, etc., etc.
> > "And so?

> "Well, in science, technology, engineering, and mathematics there is the Erdos number, which is equal to the number of papers separating you from the eccentric mathematician Paul Erdos.
> "I have a Erdos number of three. I published with Donald Wunch who published with Haraway who published with Erdos. This means that, since Bill Dembski and I have written a paper together, Bill has an Erdos number of at least four as do all of my fellow co-editors of the recently published Biological Information : Michael Behe, Bruce Gordon, John Sanford and Bill Dembski
> "Now here's where things get exciting!!!
> "One's Erdos-Bacon number is equal to the sum of your Erdos number and your Bacon number.
> "As documented, yours truly has an embarrassingly low ErdosBacon number of five. (I am considering having it engraved on my tomb stone.) Bill Dembski has an ErdosBacon number of six. This is also the ErdosBacon number for Carl Sagan! "
>
> (It's also the ErdosBacon number for Danica McKellar who played Winnie Cooper in The Wonder Years.)"

365. FMS Foundation "Scientific Proceedings Published, Challenging Conventional Neo-Darwinian Theory," Herald Online (South Carolina), August 12, 2013.

> "WACO, Texas, Aug. 12, 2013 /PRNewswire-USNewswire/ – World Scientific Publishing has just released the proceedings of a symposium held in the spring of 2011, where a diverse group of scientists gathered at Cornell University to critically re-examine neo-Darwinian theory. This symposium brought together experts in information theory, computer science, numerical simulation, thermodynamics, evolutionary theory, whole organism biology, developmental biology, molecular biology, genetics, physics, biophysics, mathematics, and linguistics."
>
> "For more information contact Dr. Robert Marks at Baylor University"

366. Casey Luskin "New Scientific Volume, Biological Information: New Perspectives, Challenges Neo-Darwinism, Survives Evolution Lobby's Attempt at Censorship," Evolution News & Science Today, August 16, 2013.

> "The volume Biological Information: New Perspectives is an interdisciplinary volume. For the most part, it comprises papers presented at the aforementioned Cornell conference. The papers are divided into four main sections. The first is on information theory and biology, and was edited by Robert J. Marks, Distinguished Professor of Electrical and Computer Engineering at Baylor University."

367. Springer signed a contract to publish *Biological Information: New Perspectives* but then reneged on the agreement. Here is the ad for the book on the Springer web site, August 18, 2013.

368. Casey Luskin, "On the Origin of the Controversy Over Biological Information: New Perspectives," Evolution News & Science Today, August 19, 2013.

    "Why did Springer first agree to publish the proceedings, and then later illegally cancel the book's publication contract?"

    "Fall of 2009: Springer Invites William Dembski to Submit a Book Proposal"

    "December 2010: 'Biological Information: New Perspectives Conference' Organizers Submit Book Proposal to Springer"

    "February 2012: Darwin Lobby Mounts a Campaign to Scuttle the Book"

    "March 1, 2012: Springer Makes False Claims about the Book in an Inside Higher Education Article"

    "Conspiracy Theories Multiply on Evolution Blogs" "Though eager to paint the 'creationists' as evil, Elsberry's team didn't end up finding anything that showed wrongdoing, however imagined. But Elsberry's call to persecution led to all kinds of silly errands, such as digging up and quoting from Professor Robert Marks's wife's 2011 Christmas letter about their family's trip to Cornell University for the conference"

    "March-December, 2012: Springer Stonewalls, Breaks Its Word, and Sets Up the Book for Failure"

369. Denyse O'Leary, "Open Mike: Cornell OBI Conference Chapter Five Abstract, William F. Basener's 'Limits of Chaos and Progress in Evolutionary Dynamics'," Uncommon Descent, July 19, 2013.

370. Denyse O'Leary, "Open Mike: Cornell OBI Conference Chapter Six Ewert et al on the Tierra evolution program," Uncommon Descent, August 5, 2013.

371. Denyse O'Leary "Open Mike: Cornell OBI Conference Chapter 7Probability of Beneficial MutationAbstract," Uncommon Descent, August 13, 2013.

    "'Multiple Overlapping Genetic Codes Profoundly Reduce the Probability of Beneficial Mutation' by George Montañez, Robert J. Marks II, Jorge Fernandez, John C. Sanford"

372. Denyse O'Leary "Open Mike: Cornell OBI Conference Chapter 7Probability of Beneficial MutationConclusion," Uncommon Descent, August 13, 2013.

373. Denyse O'Leary "Open Mike: Cornell OBI Conference Chapter 8Entropy, Evolution and Open SystemsAbstract," Uncommon Descent, August 20, 2013.

374. Denyse O'Leary "Open Mike: Cornell OBI Conference Chapter 8Entropy, Evolution and Open SystemsAbstract," Uncommon Descent, August 20, 2013.

375. Denyse O'Leary "Open Mike: Cornell OBI Conference Chapter 9Information and Thermodynamics in Living SystemsAbstract," Uncommon Descent, August 21, 2013.

376. Denyse O'Leary "Open Mike: Cornell OBI Conference Chapter 9Information and Thermodynamics in Living SystemsConclusion," Uncommon Descent, August 21, 2013.

377. Casey Luskin "Biological Information New Perspectives Investigates 'Information Theory & Biology'," Evolution News & Science Today, August 21, 2013.

> "The new scientific volume Biological Information: New Perspectives covers many topics related to the origin of information."
>
> "One noteworthy paper in that section is by William Dembski, Winston Ewert, and Robert Marks, 'A General Theory of Information Cost Incurred by Successful Search.' It provides a general explanation of their methodology for measuring 'active information,' or the amount of information that is added to a random search to aid in finding a search target. This foundational paper is theoretical, aiming to establish mathematically that without active information being added, a search can perform, on average, no better than a random search"
>
> "Ewert, Dembski, and Marks have a second paper in the volume titled "Tierra: The Character of Adaptation" where they apply the sort of methodology developed in their first paper. This study looks at Tierra, one of the earliest computerized simulations of evolution, developed by Thomas Ray in 1989."
>
> "As Ewert, Dembski, and Marks explain, in Ray's mind "once evolution (whether biological or artificial) has produced a Cambrian explosion, the rest of evolution should proceed easily." They observe, however, that after 20+ years of people using Tierra, the widely agreed conclusion 'is that Tierra did not produce a Cambrian explosion or open-ended evolution.' They observe that 'Tierran evolution can be characterized as an initial period of high activity producing a number of novel adaptations followed by barren stasis,' and thus ask why Tierra stopped producing new features.
>
> "The author of Tierra sought to create a digital Cambrian explosion whereby the power of the evolutionary process was unleashed. It is agreed that Tierra did not succeed in accomplishing this feat. Rather, the evolutionary activity within Tierra dies after only a transitory period. No Cambrian explosion occurs."

378. Casey Luskin "In BIO-Complexity and Biological Information: New Perspectives, Granville Sewell Defends his Arguments on the Second Law of Thermodynamics," Evolution News & Science Today, August 21, 2013.

379. Casey Luskin "In Biological Information: New Perspectives, Michael Behe finds Loss of Function Mutations Challenge the Darwinian Model," Evolution News & Science Today, August 24, 2013.

380. Denyse O'Leary "Open Mike: Cornell OBI Conference Chapter 10Biological Information and Genetic Theory: Introductory CommentsAbstract," Uncommon Descent, August 24, 2013.

381. Denyse O'Leary "Open Mike: Cornell OBI Conference Chapter 10Biological Information and Genetic Theory: Introductory CommentsExcerpt," Uncommon Descent,

August 24, 2013.

382. Denyse O'Leary "Open Mike: Cornell OBI Conference Chapter 11Not Junk After All Abstract," Uncommon Descent, August 29, 2013.

383. Denyse O'Leary "Open Mike: Cornell OBI Conference Chapter 11Not Junk After AllConclusion," Uncommon Descent, August 29, 2013.

384. The Best Biological Books Reviews Guides and Tips "Biological Information: New Perspectives," November 21, 2013.

385. Dr. L. A.Yahaya "PERSONAL CHARACTERISTICS OF REPUTABLE SCHOLARS," University of Ilorin, Nigeria, November 22, 2013.

> "Academic profession like other essential professions has its demands. For anyone to succeed in the profession, he/ she needs to possess some personal characteristics. The focus of this presentation is to sensitize academic staff, particularly the young academics on the personal characteristics that are required to succeed in academic career. Some notable scholars who possessed the appropriate personality characteristics and that have excelled in academic endavour include: Fransisco Ayala, Abdulhamid Bin Badis, Ali Jabar, Abdul Qader Arnaoot, Peter L. Berger, Benjamin Carson, Hassan Hathont, Francis Collins, Omar Khalidi, Robert J. Marks."

386. "How come theists never get into peer-reviewed journals with their ideas and so called evidence?," Yahoo, December 12, 2013.

387. Casey Luskin "#7 of Our Top-Ten Evolution Stories of 2013: New Scientific Volume Challenges Neo-Darwinism, Survives Censorship Attempt," Evolution News & Science Today, December 26, 2013.

> "Biological Information: New Perspectives"

2014

388. "'Biological Information: New Perspectives' Web Site", January 1, 2014.

[http://www.biologicalinformationnewperspectives.org/]

> "Find out more about our latest scientific publication offering fresh new insights into the origin and nature of biological information!"

389. "Biological Information: New Perspectives" January 1, 2014. [Front], [Book], [Synopsis], [Editors], [Authors #1], [Authors #2], [Order], [Flyer].

390. Ann Gauger, "Biologic Perspectives: BIO-Complexity in Review," January 18, 2014.

391. Jason B. Ladd "Elegant Biology: New Perspectives For Your Information," Fighter Faith, January 23, 2014.

"Biological Information: New Perspectives is the product of a 2011 symposium at Cornell University and explains the findings in 24 scientific papers by 29 scientists"

392. "The 50 Most Influential Scientists in the World Today," The Best Schools, Feb. 2, 2014.

"This article focuses on the 50 most influential scientists alive today and their profound contributions to science. These are scientists who have invented the Internet and fiber optics, challenged AIDS and cancer, developed new drugs, and in general made crucial advances in medicine, genetics, astronomy, ecology, physics, and computer programming.

"In referring to the scientists on this list as "influential," this article attempts to gauge their influence on science as such. In other words, the scientists listed here are influential because of the groundbreaking scientific work they have done and its impact on the world.

"Some scientists are enormously influential as popularizers or culture critics or public intellectuals. In this respect, figures like Richard Dawkins and Lawrence Krauss, or Carl Sagan and Stephen Jay Gould a generation back, come to mind. The scientists on this list, however, are here because of their preeminence as scientists doing science.

"The scientists described here are all creative and brilliant. Many of them are also unusual and interestingcolorful personalities that it would be a pleasure to know!

"As you feast on the names and biographies of the scientists on this list, also check out our article "The World's 50 Smartest Teenagers." Some of the most influential scientists in the future will be drawn from this list."

Robert J. Marks II is the Distinguished Professor of Electrical and Computer Engineering at Baylor University in Waco, Texas. Previously, he was on the faculty of the University of Washington for 25 years. He is a pioneer in the field of computational intelligence (which includes neural networks, fuzzy sets, and evolutionary computing), and was the first president of the Institute of Electrical and Electronics Engineers (IEEE) Neural Networks Council.

[Robert J.] Marks received his PhD in electrical engineering from Texas Tech University. He has over 300 peer-reviewed journal publications. He is also a proponent of intelligent design, holding that certain features of the universe and of living things are best explained by an intelligent cause, not an undirected process such as natural selection.

Marks has made important technical contributions across widely diverse areas, such as the spacing of radium inserts to treat prostate cancer, signal display, remote sensing, optical image sampling, optical computers, and the use of fuzzy logic to control the electrical

> grid (how electricity is delivered today depends crucially on the work of Marks). He has served as a consultant to companies such as Microsoft and Boeing corporation.
> Marks has authored several books including, the Handbook of Fourier Analysis and Its Applications, Neural Smithing: Supervised Learning in Feedforward Artificial Neural Networks, and Applications of Neural Networks to Power Systems, among others.
> Marks has received numerous awards, including the IEEE Distinguished Lecturer twice, once from the IEEE Neural Networks Council in 199192, and again from the IEEE Neural Networks Society in 200203, as well as the Golden Jubilee Medal in 1999 from the IEEE Circuits and Systems Society. He is a fellow of the IEEE.
> In 2007, Marks founded the Evolutionary Informatics Lab at Baylor to study the information-theoretic underpinnings of intelligent design. The research of that lab has produced a steady stream of peer-reviewed engineering publications that are influencing many in the engineering community to accept intelligent design, controversial though it remains, as a legitimate scientific theory.

393. Tara MacIsaac "Scientists With Controversial Views Speak of Blacklisting: How Free Is Science? 'Emotional reaction' from peers when a scientist breaks from conventional thinking," Epoch Times," February 11, 2014.

> "Prof. Robert J. Marks II at Baylor University had tenure before expressing a belief in intelligent design. He said 'I'm academically safe, but the young people, what has happened to them right now in America because of this scientific gulag is really terrible.' "

394. Casey Luskin "Cosmos with Neil deGrasse Tyson: Same Old Product, Bright New Packaging," Evolution News & Science Today, March 10, 2014.

395. DENYSE O'LEARY, "Why would anyone want to understand information theory?" CONNECTING; Negotiating the Virtual World, TUESDAY, 1 APRIL 2014.

> "To be thought a geek? To actually be a geek?
>
> "To understand new media better? How about because information, not matter, may be the basic substance of reality. Sound implausible? Read on. Consider the following questions, asked by Baylor University computer science prof Robert Marks II:
>
> > "When a paper document is shredded, is information being destroyed? Does it matter whether the shredded document is a copy of an un-shredded document and can be replaced?
> > "Likewise, when a digital picture is taken, is digital information being created or merely captured?

> "The information on a DVD can be measured in bits. Does the amount of information differ if the DVD contains the movie Braveheart or a collection of randomly generated digital noise?
> "When a human dies, is experiential information lost? If so, can birth and experience create information?
> "If you are shown a document written in Japanese, does the document contain information whether or not you know Japanese? What if, instead, the document is written in an alien language unknowable to man?"

"The purpose of such questions is to help us see that information is real even though it is immaterial. One consequence of information being immaterial is that it is not measured in any way commensurate with material nature."

396. Casey Luskin "BIO-Complexity Paper: Why Chaitin's Mathematical 'Proof' of Darwinian Evolution Fails," Evolution News & Science Today, April 7, 2014.

> "A new peer-reviewed paper in BIO-Complexity, 'Active Information in Metabiology,' reports on the further investigations of the Evolutionary Informatics Lab into the ability of unguided evolutionary mechanisms to produce new information. This time, authors Winston Ewert, William Dembski, and Robert Marks show that the budding field of metabiology only produces creative outputs through active information – i.e., informational inputs donated by an intelligent source – and does not truly demonstrate that unguided processes can produce new information."

397. iz quotes, April 9, 2014.

> "Science packages theory, places it on a throne, and honors and protects it much like a queen. Engineers make the queen come down from the throne and scrub the floor. And if she doesn't work, we fire her. Robert J. Marks II."

398. "erdos bacon number," SensAgent, April 10, 2014.

> "A person's ErdòsBacon number is the sum of one's Erdòs numberwhich measures the 'collaborative distance' in authoring mathematical papers between that person and Hungarian mathematician Paul Erdòsand one's Bacon numberwhich represents the number of links, through roles in films, by which the individual is separated from American actor Kevin Bacon. The lower the number, the closer a person is to Erdòs and Bacon, and this reflects a small world phenomenon in academia and entertainment."
> "Electrical engineer Robert J. Marks II appeared in Ben Stein's movie Expelled: No Intelligence Allowed. Stein appeared with Bacon in Planes, Trains and Automobiles giving Marks a Bacon number of two. Marks has published with Donald C. Wunch II [24] who published with Frank Harary [25] who has coauthored with Erdòs. Marks therefore has an Erdòs number of three and ErdòsBacon number of five."

399. Lambert M. S. (Russia) "Robert J. Marks II," Bookin.org.Ru, April 10, 2014.

> "Marks has over 300 peer-reviewed technical publications, and is a fellow of the IEEE and the Optical Society of America. An old earth creationist, he is a subject of the 2008 pro-intelligent design motion picture, Expelled: He was the first president of the Institute of Electrical and Electronics Engineers (IEEE) Neural Networks Council (now the IEEE Computational Intelligence Society) and the editor-in-chief of the IEEE Transactions on Neural Networks. Robert Jackson Marks II is a Distinguished Professor of Electrical and Computer Engineering at Baylor University and proponent of intelligent design. Please note that the content of this book primarily consists of articles available from Wikipedia or other free sources online. From 1977 to 2003, he was on the faculty of the University of Washington in Seattle. No Intelligence Allowed. In 2010, he was named as one of the twenty most brilliant living Christian professors."

400. "20 Most Influential Christian Thinkers," Learn Something, April 10, 2014.

> "(Brainz) – This is a list of the most influential Christian thinkers in the world today. Thinkers who have shaped Western civilization and sometimes the practice of Christianity itself."

401. Popstar.com "Robert J. Marks II," April 10, 2014.

402. Texas Tech University "Electrical & Computing Engineering Academy Members," April 10, 2014.

403. yQuotes, "Robert J. Marks quotes," April 10, 2014.

> "Computers are no more able to create information than iPods are capable of creating music."
>
> "Is it wrong to pray for God to make me more successful so that I can be more humble?"
>
> "Saying the Bible is not a book about science is like saying a cookbook is not a book about chemistry."

404. Ratio Christi, "PERSONAL PROFILE, Robert J. Marks, II," April 10, 2014.

405. Casey Luskin "FAQ: Does Intelligent Design Help Science Generate New Knowledge?," IDEA (Intelligent Design and Evolution Awareness Center), April 10, 2014.

> "Below are about a dozen or so examples of areas where ID is helping science to generate new knowledge."
>
> "ID has inspired theoretical research into the information-generative powers of Darwinian searches, leading to the finding that the search abilities of Darwinian processes are limited, which has practical implications for the viability of using genetic algorithms to solve problems. See: William A. Dembski and Robert J. Marks II"

406. Casey Luskin, "Intelligent Design's Utility Is Highlighted in a New Volume, Engineering and the Ultimate," Evolution News & Science Today, April 21, 2014.

> "A 2012 conference at Oral Roberts University, 'Engineering and Metaphysics,' explored how the fields of engineering, mathematics, and computing can contribute to answering scientific questions, including those pertaining to cosmic and biological origins."
>
> "Chapter 7, 'Algorithmic Specified Complexity,' is authored by a familiar team of writers – Winston Ewert, William Dembski, and Robert Marks. They explain that the classical method of detecting design seeks to find complexity and specified information (CSI) in nature. As the authors of this paper write, 'Complexity refers essentially to improbability,' and specification is defined as 'conforming to an independently given pattern.' "

407. William A. Dembski "Politically Correct and Politically Incorrect Careers," The Best Schools, April 27, 2014.

408. Casey Luskin, "Winston Ewert: Irreducible Complexity Remains Unrefuted," ID the Future, YouTube Video, May 17, 2014. [YouTube: https://youtu.be/OMz9HrP0AYM].

409. "Intelligent Design in Action: Informatics," Evolution News & Science Today, June 2, 2014.

410. Brian Thomas, M.S "Powerhouse of Scientists Refute Evolution, Part One," Institute for Creation Research, June 13, 2014.

> "In 2011, the 'Biological Information: New Perspectives' conference was held in which 29 leading design scientists technically assessed critical aspects of Neo-Darwinian theory."

411. Brian Thomas, M.S "Powerhouse of Scientists Refute Evolution, Part Two," Institute for Creation Research, June 16, 2014.

> "In one paper, Dr. Ewert, an electrical and computer engineer, along with mathematician and philosopher William Dembski and computer engineer Robert Marks II, showed that Tierra failed to evolve information in computer simulations, even though its programmer placed unrealistic, evolution-friendly parameters into the software."

412. Brian Thomas, M.S "Powerhouse of Scientists Refute Evolution, Part Three," Institute for Creation Research, June 16, 2014.

413. YouTube: "Powerhouse of Scientists Refute Evolution," June 20, 2014.

414. Matt Webster "Calorie Counting Made Easy," July 7, 2014.

> "A few years ago I asked my wife if she would like an activity monitor for her birthday, to help automatically track her calories. To my surprise she answered, 'Does it automatically track the calories I eat?' I told her that that was crazy and not possible. She replied, 'Then I don't want it!' "
>
> "We are developing advanced sensor technology to make estimation of dietary calories in food as simple as the touch of a button."
>
> "Our team at GE and our collaborators at Baylor University's Electrical & Computer Engineering Department have found calorie estimation to be possible in principle, putting together devices to measure calories in different mixtures of oil, water and sugar."

415. Erik J. Larson "Eugene Goostman Is a Fraud," Evolution News & Science Today, July 9, 2014. [Link.]

416. Time Out Contributers "The 100 best sci-fi movies: scientists," TIME OUT, July 22, 2014.

> "Leading sci-fi experts, filmmakers, science fiction writers, film critics and scientists pick the best sci-fi movies ever made." "Professor Robert J Marks II
>
> (a) AI Artificial Intelligence
> (b) Invasion of the Body Snatchers
> (c) The Matrix
> (d) The Terminator
> (e) Predator
> (f) Dr Jekyll and Mr Hyde (1931)
> (g) Brazil
> (h) 2001: A Space Odyssey
> (i) Blade Runner
> (j) The Thing From Another World
>
> "Robert J Marks II is currently the distinguished professor of electrical and computer engineering at Baylor University in Waco, Texas."

'

417. 'A calorie-counting microwave? GE is working with Baylor on the concept," Baylor Proud, August 5, 2014.

> "It feels like something from The Jetsons or Star Trek, but it's much closer to reality than to TV Land.
>
> "A team from GE, working with faculty and students from Baylor's Electrical and Computer Engineering Department, are moving towards a push-button device that could, in an instant, tell you just how many calories are on your plate."

418. David Klinghoffer "Video: Robert Marks Speaking to the American Scientific Affiliation on 'Algorithmic Specified Complexity'," Evolution News & Science Today, August 8, 2014.

419. David Klinghoffer, "Biological Information: How Do You Explain the Origin of Something That's So Tough Even to Define?" Evolution News & Science Today, August 21, 2014.

> "That's the implicit question raised by our friend and Baylor University electrical and computer engineering Distinguished Professor Robert Marks. Writing at Human Events, Marks describes the 2011 conference at Cornell that became the basis of a controversial collection of papers, Biological Information: New Perspectives"

REGINA DENNIS, "GE, Baylor partner to develop calorie-counting machine," Waco Tribune-Herald, August 24, 2014.

> "Figuring out the number of calories in a meal could soon become as simple as pushing a button, thanks to a new calorie-counter machine GE is developing with Baylor University."
>
> "Robert Marks, distinguished professor of electrical and computer engineering at Baylor, has assisted in analyzing the data from the test trials of the liquid mixtures for the calorie machine. Hundreds of trials were conducted to fine-tune the methodology and ensure that the results would remain consistent with repeated demonstrations. 'It's significant (research) because of the obesity epidemic," Marks said. "Hopefully with one of these calorie counters and some self-discipline and some exercise, that sort of thing can be addressed; that's what we're hoping. And I know that there's a demand, because my wife said, 'I want one! I want to buy the first one!' "

420. Abigail Loop "Baylor students, faculty engineer a healthier America," Baylor Lariat Newspaper, August 25, 2014.

> "Counting calories in a meal will soon happen with a push of a button.
>
> "Faculty members from Baylor's Electrical and Computer Engineering Department, along with a team of undergraduate and graduate students, are in the process of developing a microwave-like device that will display the number of calories in a meal on a plate.
>
> "Drs. Randall Jean and Robert Marks, Baylor engineer professors who are the lead researchers for the project, are also working alongside a team from researchers from General Electric's global research team."
>
> " 'Right now we have some preliminary data,' Marks said. 'When you do research of this sort, you look for proof of principle. You want to see if it works and get the problem down to the simplest form. The proof of principle has worked out splendidly.'

> "Marks said eventually they would like to achieve something user friendly that could be put on a plate.
>
> "Marks said the research team is hoping that not only will this product be innovative for the Baylor engineering department and GE, but that it will also encourage healthier eating.
>
> "With America's rising obesity rate, this product is needed more than ever, Marks said.
>
> " 'America is fat,' he said. 'These people are really ill. If they had one of these calorie counters and exercise, they could solve it. I see this possibly being a solution to the obesity epidemic.' "

421. "Frequently Asked Questions," Evolution News & Science Today, September 6, 2014

> "Are there established scholars in the scientific community who support intelligent design?
>
> "Yes. Intelligent design theory is supported by doctoral scientists, researchers, and theorists at a number of universities, colleges, and research institutes around the world... Research centers for intelligent design include the Evolutionary Informatics Lab, led by Robert Marks, Distinguished Professor of Engineering at Baylor University "

422. "Peer-Reviewed Articles Supporting Intelligent Design," Evolution News & Science Today, September 6, 2014.

423. "Robert Marks on probability and random processes," Uncommon Descent, September 15, 2014.

424. Ken Ammi " 'Biological Information: New Perspectives' and blacklisting scientists," True Freethinker, September 17, 2014.

> "A fracas has ensued regarding an already peer reviewed book which was due to be published by Springer, an 1International Science, Technology, Medicine' publisher...
>
> "This is all in regards to the book Biological Information: New Perspectives which is being condemned, without having been read, as a book of Creationism or Intelligent Design disguised as a book about science. This is why the Orthodox Darwinists are blacklisting it and its editors."

425. "The Impact of Christian Faith on Mathematics & Science: Yesterday & Today" Flyer, September 29, 2014.

426. "How come theists never get into peer-reviewed journals with their ideas and so called evidence?" Yahoo,September 30, 2014.

427. Jason B. Ladd "Ratio Christi: Bringing Students Back to Life," Ratio Christi, September 30, 2014.

"If you've never heard of Ratio Christi, you will."

"Speakers included:... Robert J. Marks, II - Distinguished Professor of Engineering in the Department of Engineering at Baylor University, consultant for Microsoft Corporation, Pacific Gas & Electric, and Boeing Computer Services, co-editor of Biological information :New Perspectives."

428. "Who is Robert J. Marks II?" Biography, Gossip, Facts, September 30, 2014

"What is Robert J. Marks II's horoscope?

"Is Robert J. Marks II's gay or straight?

"Are there any photos of Robert J. Marks II's hairstyle or shirtless?

"Is Robert J. Marks II still alive?

"Is Robert J. Marks II hot or not?

"Does Robert J. Marks II do drugs?

"What is Robert J. Marks II's net worth?"

429. "Robert J Marks" OPINION ENCYCLOPEDIA, September 30, 2014.

430. About "Robert J. Marks II," September 30, 2014.

431. William A. Dembski, "Responding to My Talk at the University of Chicago, Joe Felsenstein's Argument by Misdirection," Evolution News & Science Today, October 7, 2014.

"Actually, in my talk, I work off of three papers, the last of which Felsenstein fails to cite and which is the most general, avoiding the assumption of uniform probability to which Felsenstein objects. That paper is William A. Dembski, Winston Ewert, and Robert J. Marks II, 'A General Theory of Information Cost Incurred by Successful Search,' in Marks et al., eds., Biological Information: New Perspectives (Singapore: World Scientific, 2013)."

"Felsenstein is perhaps a quarter right here. Marks and I do think that insofar as evolutionary processes produce specified complexity, this is ultimately due to a designer fine-tuning the evolutionary process. But our actual work on Conservation of Information only shows that any evolutionary theory is necessarily incomplete and cannot account for the creation of the information that the evolutionary processes limned by the theory supposedly outputs."

432. Denyse O'Leary, "Immaterial Evidence The Law of Conservation of Information: Part I," SALVO, October 10, 2014.

"Robert Marks II and his students at Baylor University in Texas have developed the idea in terms of 'search,' and their approach has profound consequences for plausible ideas of how evolution occurs, especially when vast claims are made for WEASEL and other "evolution" computer programs."

433. Denyse O'Leary, "Shoutout to Tom English: How much of the animus you display against Marks and Dembski is scholarly?" Uncommon Descent, October 13, 2014.

> "Dr. English has been subject to a number of disciplinary actions at Wikipedia for attempted edits to the bio entry for Marks."

434. Casey Luskin, "How Can We Positively Test Intelligent Design?" IDEA, October 18, 2014.

435. Denyse O'Leary, "Bob Marks on apologetics," Uncommon Descent, October 19, 2014.

> "You remember him, right?
>
> "See, it's true that a lot of these ID people ARE Christians (ghost jumps out of sheet, whoooshes past everybody. Gee wow. Did something happen and I never knew it?)"

436. Eugene Selensky, "LIVING ORGANISMS AS DECISION-MAKING SYSTEMS," (Translated from Russian), October 19, 2014.

437. Casey Luskin, "The College Student's Back To School Guide to Intelligent Design," Evolution News & Science Today, October 19, 2014.

2015

438. O'Leary "Podcast: Winston Ewert on computer simulation of evolution (AVIDA) that sneaks in information." Uncommon Descent, February 6, 2015.

439. O'Leary "Robert Marks, answering a facet of the War between Science and [Christian] Religion thesis," Uncommon Descent, March 15, 2015.

440. Johnny B. "Signal to Noise: A Critical Analysis of Active Information," Uncommon Descent, April 23, 2015.

441. Winston Ewert, "These Critics of Intelligent Design Agree with Us More Than They Seem to Realize." Evolution News & Science Today, April 27, 2015.

> "Joe Felsenstein and Tom English have written a post, 'Fitness surfaces and searches: Dembski, Ewert, and Marks's search for design.' That is in reply to William Dembski's article at ENV, "Responding to My Talk at the University of Chicago, Joe Felsenstein's Argument by Misdirection," which in turn was a response to another post by Felsentein at Panda's Thumb, 'Dembski's argument in Chicago – New? Persuasive?' The discussion concerns conservation of information, including active information and search for the search – ideas developed by William Dembski, Robert Marks, and myself at the Evolutionary Informatics Lab. Felsentein (University of Washington geneticist) and English (identified on his blog as a computer scientist in Oklahoma City) raise a number of objections. However, their objections are directed against an argument we do not make. In fact, regarding the conclusion of conservation of information, they are in agreement with us."

442. Winston Ewert "Aurelio Smith's Analysis of Active Information," Uncommon Descent, April 30, 2015.

443. kairosfocus "On Active Information, search, Islands of Function and FSCO/I," Uncommon Descent, May 5, 2015.

444. William A. Dembski "A Design-Theorist's Brief Guide to Rupert Sheldrake," Evolution News & Science Today, May 12, 2015.

445. "Any Sufficiently Vacuous Evolutionary Explanation Is Indistinguishable from Magic," Evolution News & Science Today, May 18, 2015.

446. "Evolutionary Computing: The Invisible Hand of Intelligence," Evolution News & Science Today, June 17, 2015.

> "Darwinian evolution is characterized by an utter lack of guidance; it is the 'blind watchmaker'of Dawkins. It doesn't know where it's going."
>
> "William Dembski and Robert Marks have shown that no evolutionary algorithm is superior to blind search – unless information is added from an intelligent cause, which means it is not, in the Darwinian sense, an evolutionary algorithm after all. This mathematically proven law, based on the accepted No Free Lunch Theorems, seems to be lost on the champions of evolutionary computing. Researchers keep confusing an evolutionary algorithm (a form of artificial selection) with "natural evolution."
>
> "There's no question that intelligently guided 'evolutionary computing' has been very successful at solving problems. Marks and Dembski can testify to that from work in their own Evolutionary Informatics Lab."
>
> "Marks and Dembski account for the invisible hand required in evolutionary computing."

447. Jonas E. Alexis, "David Duke, Eugenics, and the Aryan Vision,, Veterans Today, June 29, 2015.

> "In a previous article, I did say specifically that Zionism and Darwinism are arguably concentric circles."
>
> "Another point that needs to be discussed quite briefly here is that Darwin's grand theory (what is now called macro-evolution) is much more philosophical and political than scientific. Many scientists have been fired for simply mentioning that macro-evolution does not provide a serious mechanism for life on earth."
>
> "Robert J. Marks II, Distinguished Professor of Engineering at Baylor University, was a tenured professor. Yet as soon as the university found out that he mentioned intelligent design in his website, the university immediately shut it down and asked him to return his grant money."

448. Casey Luskin, "Research by Dembski and Marks Makes Inroads in Technical Literature," Evolution News & Science Today, July 29, 2015.

> "Intelligent design is making unmistakable progress in mainstream scientific thinking. Here's an example from a new paper in the journal of Soft Computing, 'Heuristic algorithm based on molecules optimizing their geometry in a crystal to solve the problem of integer factorization.' It cites the work of leading ID researchers William Dembski and Robert Marks of the Evolutionary Informatics Laboratory – quite favorably so, not in order to critique them."

449. Bill Leonard "The Scopes Trial, then and now," Baptist News Global, September 9, 2015.

450. Mario Lopez, "An Interview with Dr. William A. Dembski," IDEA, October 19, 2015.

> "With the formation of Robert Marks's Evolutionary Informatics Lab in June 2007 (Marks is a distinguished professor of electrical and computer engineering at Baylor University), and work by him and me on the conservation of information (several papers of which are available at http://www.EvoInfo.org), I think ID is finally in a position to challenge certain fundamental assumptions in the natural sciences about the nature and origin of information. This, I believe, will have a large impact on science."
>
> "Mind you, Robert Marks's title is Distinguished Professor of Electrical and Computer Engineeringhe doesn't just have tenure but he is (or was) a star professor at Baylor. In any case, Marks still remains at his university. Untenured faculty are not so fortunate."
>
> "...this work will be published as separate articles in collaboration with Robert Marks. I expect that eventually we will be co-authoring a monograph on this topic together, though we may not give it that title given the climate of hostility against ID."

451. "Robert J. Marks II Quotes" izQuotes, October 25, 2015.

> "Is it wrong to pray for God to make me more successful so that I can be more humble? "

452. "Robert J. Marks II," Goodreads, October 26, 2015.

453. "Robert J. Marks II," Project Gutenberg, October 29, 2015.

454. "Robert J Marks II Author Profile: Biography, Books and Appearance Information," All American Speakers, October 30, 2015.

455. "Robert J. Marks II Philosopher," Redirectify, Bio & Facts, October 30, 2015.

456. "Robert J. Marks II Quotes," AZ Quotes, October 30, 2015.

> "Saying the Bible is not a book about science is like saying a cookbook is not a book about chemistry."

457. "Robert J. Marks II," Freebase, October 31, 2015.

458. Sarah Chaffee, "ID Inquiry: Robert Marks on Information," ID the Future, November 2, 2015. [Audio], [YouTube: https://youtu.be/c2UCPX5mKio].

459. David Klinghoffer, "Listen: Robert J. Marks on 'Information,' and What Is It, Anyway?" Evolution News & Science Today, November 4, 2015. [Audio], [YouTube : https://youtu.be/c2UCPX5mKio].

> "'Information' is a key concept in arguments for intelligent design, but understanding what the term means in an ID context is not simple. Dr. Marks explains with his usual panache."

460. Winston Ewert, "Specified Complexity Like Déjà Vu All Over Again," Evolution News & Science Today, December 2, 2015.

> "Writing at the blogs Panda's Thumb and The Skeptical Zone, Joe Felsenstein (University of Washington geneticist) and Tom English (Oklahoma City computer scientist) have lately published three posts criticizing two arguments for intelligent design: specified complexity and conservation of information. However, their objections are based on misrepresentations of these arguments."

461. Winston Ewert, "What Does 'Life's Conservation Law' Actually Say?" Evolution News & Science Today, December 3, 2015.

> "In an earlier article at Evolution News ('These Critics of Intelligent Design Agree with Us More Than They Seem to Realize'), I emphasized that while the theorems of conservation of information show that active information must derive from a non-mechanistic source outside of the universe, this does not necessarily imply that the source was intelligent or even teleological."
>
> "In this passage, they [Dembski and Marks] argue for intelligent design on the basis of the conservation of information theorems. However, they do not say that the only possible account of active information is intelligence. Rather, they use words like 'suggests' and 'evokes.' If Dembski and Marks thought that they had a mathematical proof that only intelligence could be the source, they would have said so. They say only that what they have is suggestive of that explanation.
>
> "This is reminiscent of arguments for theism based on Big Bang cosmology."

462. Winston Ewert, "The GUC Bug" Evolution News & Science Today, December 4, 2015.

> "In my previous post, I reviewed the arguments by William Dembski and Robert Marks in their paper 'Life's Conservation Law.' I showed that the paper is not based on any simplistic claim that all active information must derive from an intelligent source. However, it does argue that all known computer and mathematical models of Darwinian evolution are teleological."

> "WE have not claimed that a search algorithm like GUC can't do better than choosing a DNA sequence at random. In fact, Dembski and Marks showed that it could and provided a limit on the active information available through such a scheme. In 'Conservation of Information in Search: Measuring the Cost of Success,' they wrote:
>
> > "Multiple queries clearly contain more information than a single query. Active information is therefore introduced from repeated queries."
>
> "Demonstrating an algorithm using multiple random queries that outperforms a single random query is not at all surprising. It is precisely what Dembski and Marks indicated would happen."

463. Winston Ewert, "Breaking Sticks" Evolution News & Science Today, December 5, 2015.

464. O'Leary, "Robert Marks on the math paradox challenging physics," Uncommon Descent, December 15, 2015.

> "Yesterday we noted new findings that a math paradox might make physics problems unanswerable be unanswerable (and thus maybe turn the physics problems into paradoxes too).
>
> "Robert Marks II, computer science prof at Baylor U and editor-in-chief of Bio-Complexity, offers some thoughts:"

465. Casey Luskin, "No ID Research? Let's Help Out This Iowa State Student," Evolution News & Science Today, December 18, 2015.

> "...let's turn to a recent op-ed in the Iowa State Daily, "Heckle: Unintelligent design part 3: Misrepresentation of evolution," by Michael Heckle, a columnist at the Iowa State University (ISU) campus newspaper who says he is studying journalism, media, and communication."
>
> " Intelligent design advocates have done a great deal of research, leading to numerous scientific discoveries. Let's help out this student by reviewing some prominent ones, amounting to only a portion of that overall research."
>
> "The Evolutionary Informatics Lab
>
> "Another ID lab focuses on answering that precise question. As the website of the Evolutionary Informatics Lab puts it, "Evolutionary informatics ... points to the need for an ultimate information source qua intelligent designer."
>
> "The lab's founders, William Dembski and Robert Marks, have some of the strongest credentials in the ID movement. With PhDs in both mathematics and philosophy, Dembski is one of the leading lights of ID. Marks is Distinguished Professor of Electrical and Computer Engineering at Baylor University and has over 250 scientific publications to his name, including many in the field of evolutionary computing."

466. "How Does Summer in Seattle Sound? Apply Now for Our Intensive 9-Day Seminars on Intelligent Design," Evolution News & Views," Evolution News & Science Today, December 22, 2015.

467. Seyyed Mahmoud Mirafzali Serizdi "The Darwinian Sectional in the World," Evolution Blog, December 27, 2015. [Persian], [English (Google Translation)].

468. Casey Luskin, "Peer-Reviewed Scientific Paper Develops New Ways of Measuring Complex and Specified Information in Life, Evolution News & Science Today, December 28, 2015.

> "Winston Ewert, Bill Dembski, and Bob Marks have recently published a new peer-reviewed paper in the journal IEEE Transactions on Systems, Man, and Cybernetic: Systems, titled 'Algorithmic Specified Complexity in the Game of Life.' The purpose of the paper is to develop the concept of algorithmic specified complexity as a new and improved method of measuring biological (and other forms of) information.
>
> "They start by observing that 'Neither fundamental Shannon nor Kolmogorov information models are equipped' to measure 'meaningful' information. As I recently explained, 'the purpose of Shannon information is to help measure fidelity of transmission of information.' "

469. Casey Luskin, "Big Announcement, and Reflections on a Great Decade," Evolution News & Science Today, December 31, 2015.

470. "Science, Faith & Belief in God," Bridges International, Decemeber 31, 2017. [YouTube: https://youtu.be/J1rWonYk6EE].

2016

471. Winston Ewert "Steiner Wars: An Exchange with Dave Thomas," Evolution News & Science Today, February 3, 2016.

> "Dave Thomas has written a post, "Target? TARGET? We STILL don't need no stinkin' Target¡' He responds there to my discussion of his Steiner tree evolution simulation in my papers "Digital Irreducible Complexity" (written solely by myself) and "Climbing the Steiner Tree" (written with Dr. Robert Marks and Dr. William Dembski). He attempts to argue that his simulation falsifies irreducible complexity, and that my papers are nonsense. He is, in fact, incorrect."

472. "Algorithmic Specified Complexity Part I: Genesis," ID the Future, February 4, 2017. [Audio], [YouTube: https://youtu.be/m3_S-nglVek].

> "On this episode of ID The Future, Robert Marks and Winston Ewert, both of the Evolutionary Informatics Lab, discuss three of their recently published

papers dealing with evolutionary informatics, algorithmic specified complexity and how information makes evolution work. This is the first of three segments."

473. "Listen: Information Theory for Non-Nerds Evolution News," Evolution News & Science Today, February 4, 2016. [Audio], [YouTube: https://youtu.be/yivqPiuqQf8].

474. ID the Future, "Listen: Robert Marks and Winston Ewert on Conway's Game of Life, ID the Future, February 10, 2016.[Audio], [YouTube: https://youtu.be/yivqPiuqQf8].

475. "Algorithmic Specified Complexity Part III: Measuring Meaning in Images," ID the Future, February 10, 2016. [Audio], [YouTube: https://youtu.be/2lhiB8jTLjc].

476. Kate Amaya "U.S. Army Announces Collaborative Alliance with Baylor's School of Engineering and Computer Science," Baylor University, May 12, 2016.

> "WACO, Texas (May 12, 2016) Today marks the official kickoff of a Collaborative Alliance (CA) between Baylor University's School of Engineering and Computer Science and the U.S. Army Research Laboratory (ARL). Through the CA, Baylor professors in the department of electrical and computer engineering will work alongside professors from Purdue University and collaborate with ARL Scientists and Engineers to develop next-generation radar hardware for future radar systems planned to begin operation around the year 2030."
>
> " 'Currently, important broadcast bands are both contested and congested,' said Robert J. Marks, Ph.D., Distinguished Professor of Electrical and Computer Engineering. 'Next-generation radar will come from a much smaller, more flexible device that is able to run operational rings around today's radar and will help make cellular devices and radar best friends forever.'
>
> "The Baylor team, led by Marks and Baylis, will work alongside Dimitrios Peroulis, Ph.D., professor of electrical and computer engineering at Purdue University, and Abbas Semnani, Ph.D., senior research scientist in the School of Electrical and Computer Engineering at Purdue University, to develop new technology that will prove useful both in war and peacetime. These efforts will coincide with parallel research performed at the Adelphi Laboratory Center (ALC) in Adelphi, Md."
>
> "The CA provides more than $850,000 in research funding that will provide research opportunities for Baylor students enrolled in the undergraduate and graduate electrical and computer engineering programs at Baylor."

477. Sarah Chaffee "Tolerate Differences in Scientific, Not Just Political, Viewpoints," Evolution News & Science Today, May 18, 2016.

478. O'Leary, "Will journals accept papers written by a ... computer?" Uncommon Descent, May 24, 2016.

"They'll even try to review them. Computer science prof Robert Marks writes at The Best Schools:"

479. O'Leary, "Computer science: 'Write-only articles'," Uncommon Descent, May 31, 2016.

"Not an improvement, apparently, on read-only memory. From Bio-Complexity's editor-in-chief Robert Marks II, some more thoughts on peer review:

> "Authors are often asked to write short autobiographies in the third person at the end of their papers. In these biographies we often read self-congratulatory phrases like 'Dr. Pythagoras is the author of over 500 journal and conference papers.' This is like saying 'Dr. Pythagoras pounded 500 nails into various types of lumber.' The pounding of the nails is unimportant. It's what you've built that counts.
> "... worthless papers are called 'write-only articles,' which is funny if you know what ROM stands for. "

"

480. O'Leary, "Prof Bob Marks on what computers can't do," Uncommon Descent, December 3, 2016. [YouTube: https://youtu.be/Cm0s7ag3SEc].

"Excellent presentation by Dr. Marks."

481. David Klinghoffer "A Flash of Insight About Physics, Reality, and DNA Launched Bruce Buff as a Novelist," Evolution News & Science Today, December 15, 2016. [Link]

"Human creativity, Dr. [Robert] Marks notes, occurs, not algorithmically, by following a (possibly very complex) set of steps, but often in a 'flash of insight.' Mathematicians, musicians, writers, engineers, and artists all testify to this. Deep insights often occur unbidden. Roger Penrose, a former colleague of Cambridge physicist Stephen Hawking, years ago established that the human mind is not a computer and that, as a result, computers cannot be creative. Marks leaves it as an open question whether non-algorithmic computers (which we do not have and cannot yet build) could demonstrate creativity. AlphaGo, no matter how unexpected the move it made, was not creative like humans are creative. It was, like the machines before it and all who follow its lead, just doing what it was told to do."

2017

482. Nick Peters, "Book Plunge: Buried Hope Or Risen Savior?" Deeper Waters, February 2, 2017.

"What do I think of this book edited by Charles Quarles and published by B&H Academic? Let's plunge into the Deeper Waters and find out."

> "By far, the most technical chapter is the next one by William Dembski and Robert J. Marks II. Those names might seem out of place in a book on the NT, but they're there because they're dealing with the probability claim as one statistician said the odds are 1 in 600 that the Talpoit Tomb is NOT the tomb of Jesus. Dembski and Marks look at this claim and apply their own mathematical approach that argues otherwise. This is the most technical chapter in the book and you would need a good knowledge of probability theory I think to understand it."

483. IMDb page for Robert J. Marks II on February 9, 2017.

484. *Introduction to Evolutionary Informatics.*

    (a) Target

    (b) World Scientific: [Covers], [Authors], [eBook], [Endorsements].

    (c) Barnes & Noble

    (d) Goodreads

    (e) Amazon

485. Kaelly Farnham, "Marketing Programs Manager at Keysight Technologies," Linkedin, May 11, 2017

> "Engineers surround themselves with the best tools they can find. For the RF engineer, a new tool discussed in the literature recently is the Cylindrical 3D Smith Chart (also called the 'Smith Tube'). This 3D version of the classical Smith Chart allows engineers to explore data in new and interesting ways. It was pioneered by a team at Baylor University led by Dr. Baylis and presented in a landmark IEEE WAMICON paper in 2014 that introduced the 'Smith Tube' in the literature for the very first time (see more references at the end)."

486. Sarah Chaffee, "In the Dallas Morning News, Senior Scientist Weighs In on Texas Science Standards," Evolution News & Science Today, April 18, 2017. [Editorial]

> "This morning, the Texas Board of Education hears public comment on the Texas Essential Knowledge and Skills (TEKS) science standards, before considering adoption later this week. As we've mentioned before, there has been a concerted push to gut the science standards of provisions asking for students to learn the scientific strengths and weaknesses of evolution.
>
> "Today, the Dallas Morning News features an op-ed endorsing objective standards on evolution from Dr. Robert Marks, a senior research scientist at the Evolutionary Informatics Lab and Distinguished Professor of Electrical & Computer Engineering at Baylor University"

170423-DMN-EditorialResponse.html

487. O'Leary, "Texas: The icons of evolution are STILL on welfare after all these years?" Uncommon Descent, April 20, 2017.

> "Baylor computer science prof Robert Marks comments on Texas science standards at Dallas Morning News:"

488. "Teach creationism or evolution in Texas science texts?: Letters to the Editor," Dallas Morning News, April 23, 2017.

> "Professor Marks may not be able to model the creation of life on a computer, but life still exists. The professors at Baylor may not have created artificial intelligence, but natural intelligence continues to exist. The mathematical modeling of biological evolution has progressed immensely from the time of Darwin and accurately predicts how traits will change over time."

489. The Bob Phillips Show, The Bridge, KTXW Austin, 1120 AM, April 24, 2017. [Interview promo only: https://youtu.be/3yqFX3Snzjw], [Youtube: https://youtu.be/dmNOrtWPVzs]

490. Brian Miller "Evolutionary Informatics: Marks, Dembski, and Ewert Demonstrate the Limits of Darwinism," Evolution News & Science Today, May 2, 2017.

> "Authors Robert Marks, William Dembski, and Winston Ewert bring decades of experience in search algorithms and information theory to analyzing the capacity of biological evolution to generate diverse forms of life. Their conclusion is that no evolutionary process is capable of yielding different outcomes (e.g., new body plans), being limited instead to a very narrow range of results (e.g., finches with different beak sizes). Rather, producing anything of significant complexity requires that knowledge of the outcomes be programmed into the search routines. Therefore, any claim for the unlimited capacity of unguided evolution to transform life is necessarily implausible."

491. Winston Ewert "Author of New Book Tells Why Evolution Simulations Don't," ID the Future, May 2, 2017. [Audio].

> "On this episode of ID the Future, Ray Bohlin interviews Winston Ewert, Ph.D., co-author with William Dembski and Robert Marks II of the new book, An Introduction to Evolutionary Informatics."

492. David Klinghoffer "Darwinian Theory Proved by Video Game? Robert J. Marks Begs to Differ," Evolution News & Science Today, May 3, 2017.

> "This is a sort of story that makes us roll our eyes, yet it's catnip for many reporters. Here's a recently released video game, 'Darwin's Demons' from Polymorphic Games, that seems to prove the veracity of Darwinian theory in explaining how new animals emerge from unguided evolutionary churning."
>
> "Writing at CNSNews, our friend Robert J. Marks of the Evolutionary Informatics Lab draws the distinction between evolution and adaptation. Dr. Marks, who is Distinguished Professor of Engineering at Baylor University,

is co-author of a new book, Introduction to Evolutionary Informatics, that those students could profitably be assigned instead."

"Dr. Marks writes (amusingly, as always):

> "Adaptation differs significantly from Darwinian evolution. Humans have unquestionably adapted to discoveries in medicine, sanitation practices and improved nutrition. We are healthier and live longer than we did a few centuries ago. Marvel's X-Men celebrate new human super powers obtained through Darwinian evolution. Some who mock [intelligent design] say ID proponents should quit believing in the fairy tale of a designer. In extrapolating adaptation to Darwinian evolution, perhaps these critics should quit believing in comic books."

"Adaptation, if anything, demonstrates intelligent design, not Darwinism. Of course they won't tell you that at the University of Idaho, or most anywhere else. Instead they'll stick you in front of a video game and tell you the stale, old fable."

493. "Why Evolution Simulations Fail: Author of Evolutionary Informatics Book Explains," Evolution News & Science Today, May 4, 2017.

> "On a new episode of ID the Future, Ray Bohlin takes up the issue with Dr. Winston Ewert, co-author with William Dembski and Robert Marks II of a new book, An Introduction to Evolutionary Informatics."

494. Brian Miller "Book: Computer simulations yield very minor results for Darwinian evolution," Uncommon Descent, May 5, 2017.

> "Authors Robert Marks, William Dembski, and Winston Ewert bring decades of experience in search algorithms and information theory to analyzing the capacity of biological evolution to generate diverse forms of life. Their conclusion is that no evolutionary process is capable of yielding different outcomes (e.g., new body plans), being limited instead to a very narrow range of results (e.g., finches with different beak sizes)."
>
> "Evolutionary Informatics is, despite the math stuff, quite readable."

495. O'Leary "Robert Marks on new evolutionary informatics book not Darwin-friendly," Uncommon Descent, May 6, 2017.

> "Don't watch this [interview of Robert Marks] if you are completely committed to your local End of Science rent-a-riot"

496. O'Leary, "Oddities from fake news: We didn't know Uncommon Descent was starving in 2015," Uncommon Descent, May 7, 2017.

> "...he's been ranting about Marks, Dembski, and Ewert (Evolutionary Informatics) for years on end. As readers likely know, Marks, Dembski, and Ewert have a new book out, pictured, that'll keep English blogging."

497. Julian Charles "TMR 173: Dr. Robert J. Marks II" The Mind Renewed, May 20, 2017. [Audio Podcast], [Interview Manuscript], [Interview Manuscript (edited)], [Youtube: https://youtu.be/y3f-h08PGak], [Youtube plain: https://youtu.be/FAwEMS-GtKs].

    "This week we are joined by Dr. Robert J. Marks II, Distinguished Professor of Engineering at Baylor University, for a discussion on his newly-published book, Introduction to Evolutionary Informatics, co-authored with the mathematician and philosopher Dr. William A. Dembski and the research scientist and software engineer Dr. Winston Ewert."

498. Intro to Evo Info Media Kit, June 1, 2017.

499. "About E.I." Intelligent Education, June 5, 2017.

500. "Robert J. Marks II," Intelligent Education, June 5, 2017.

501. ID the Future, "Why Digital Cambrian Explosions Fizzle ... Or Fake It," June 7, 2017. [Podcast], [Youtube: https://youtu.be/5d10MxZ5uv8].

    "This episode of ID the Future features a follow-up interview with Winston Ewert, co-author of An Introduction to Evolutionary Informatics."

502. David Klinghoffer "Falsify Intelligent Design? Try Simulating the Cambrian Explosion Digitally," Evolution News & Science Today, June 7, 2017.

    "Researchers have tried, in multiple cases, as Introduction to Evolutionary Informatics author Winston Ewert tells biologist Ray Bohlin on a new episode of ID the Future. But each time, the simulations hit a "complexity barrier," as the scientists themselves concede, and fail. It's a fascinating conversation."

503. David Klinghoffer, "Robert Marks on Computer Evolutionary Simulations, Science and Faith, the Limits of Artificial Intelligence, and More, Evolution News & Science Today, June 12, 2017 [Link].

    "This morning Introduction to Evolutionary Informatics author Robert J. Marks II answered ten common questions about and challenges to his book, co-written with William Dembski and Winston Ewert. As a follow-up, you'll enjoy his recent podcast conversation with UK interviewer Julian Charles of The Mind Renewed.

    "Dr. Marks is both a superb scientist and, and as you'll see or rather, hear an amusing and personable guy to talk with."

504. O'Leary, "Why evolution can never get any smarter," Uncommon Descent, June 14, 2017.

    "A friend writes to raise the question of Basener's ceiling: From Robert Marks II at ENV: "We show that no meaningful information can arise from

an evolutionary process unless that process is guided. Even when guided, the degree of evolution's accomplishment is limited by the expertise of the guiding information source a limit we call Basener's ceiling. An evolutionary program whose goal is to master chess will never evolve further and offer investment advice' "

505. "New Book: Introduction to Evolutionary Informatics," Thomistic Bent, June 14, 2017.

"New book out, hot off the press: 'Introduction to Evolutionary Informatics' by William Dembski, Robert Marks, and Winston Ewart. These men are all math modelers, and they are claiming that there is no math model to explain evolution, and as such, it mathematically has not been proven. Written at the level that us non-math folks can understand.

"Dr. Robert Marks says "There exists no model successfully describing undirected Darwinian evolution." Without the math to back it up, it is difficult for scientific explanations to hold for very long.

"This work will likely be very influential."

506. David Klinghoffer, "Evolutionary Biologist Backs Off from Computer Simulations," Evolution News & Science Today, June 15, 2017.

"PZ Myers is an atheist activist and evolutionary biologist whose blog is more about promoting his left-wing politics than it is about evolution. But this caught my eye. In denouncing me for a brief post here recommending a podcast interview with Introduction to Evolutionary Informatics co-author Winston Ewert, Professor Myers tellingly backs off from the idea of computer simulations of evolution, at least where the Cambrian explosion is concerned."

"This I find *very* interesting. Dr. Myers writes:

> "I also take exception to creationist's [sic] constant focus on 'computer models'. Computer models are useful tools for assessing some ideas, but they're no substitute for real dataespecially when the events you're pursuing are not simple, and have a million different equally valid ways of producing a result. Again with the binary thinking: Cambrian evolution will not be described with a 'yes' or a 'no'."

"It's just what Robert Marks wrote here the other day. He responded to ten common objections to the evidence in Introduction to Evolutionary Informatics. This one is Myers in a nutshell:

> "2. **But Darwinian evolution is so complicated, it can't be modeled!**
> "If this objection is true, we have reached the same conclusion by different paths: There exists no model successfully describing undirected Darwinian evolution."

> "Which means that on anyone's honest analysis, Darwinism fails to deliver on an expectation of what Marks calls 'hard science.' "

507. "Introduction to Evolutionary Informatics Paperback," Amazon.com, June 15, 2017.

   - ◇ #32,345 in Books
   - ◇ #10 in Books > Computers & Technology ¿ Business Technology ¿ **Management Information Systems**
   - ◇ #11 in Books > Computers & Technology ¿ Computer Science > **Information Theory**
   - ◇ #25 in Books > Computers & Technology ¿ Networking & Cloud Computing ¿ **Network**

508. Bill Bumpas, "Prof: Fears about AI overblown unless you believe 'X-Men' ", NE News Now, Thursday, June 29, 2017.

> "A Christian scholar says all the hype about artificial intelligence taking over the world is 'totally inappropriate' and that people who believe in the evolution of AI need to quit believing in comic books.
>
> "Dr. Robert Marks II downplays those fears. Baylor University's distinguished professor of electrical and computer engineering says the capabilities of computers haven't changed since they were first invented.
>
> "There's something called the Church-Turing Thesis, which says the computers we have today can't do anything different than the computers we had back in the 1930s," he explains. "Now they can do it a billion times, a trillion times as fast but nevertheless, they have no additional capabilities in terms of acquiring intelligence and such."
>
> "Marks, who is considered by one group to be among the 20 most influential Christian scholars, is the premier scientist in the intelligent design (ID) movement. He finds it's interesting that people who oppose the concept of ID tell him he needs to quit believing in fairy tales, when in fact that's what they themselves are doing.
>
> " 'I maintain these people who believe in these incredible achievements in the future of AI need to quit believing in comic books,' he counters. 'They need to quit believing in X-Men, where evolution has taken over and given all these young people these super-duper powers. It's a myth and there's certainly no evidence for it.'
>
> "The professor explains that computers are limited in that they can only do what they're told and they have no capability of creation. He is widely quoted as saying, 'Computers are no more able to create information than iPods are capable of creating music.' "

509. Denyse O'Leary, "Information theory is bad news for Darwin: Evolutionary informatics takes off," Uncommon Descent, June 30, 2017.

"The book Introduction to Evolutionary Informatics continues to make waves. The Lab writes to say:

"A lot continues to happen surrounding the release of "Introduction to Evolutionary Informatics" by Robert J. Marks, William A. Dembski and Winston Ewert:

"Here's a quick summary of media.

" AI means the topic is Artificial Intelligence hype EV deals with Darwinian Evolution

"(AI) Janet Mefford Today A.I. Hype & Limitations with guest Robert J. Marks (American Family Radio)

"(AI) "Point of View" with Kerby Anderson. Robert J. Marks talks about AI hype

"(AI) "The Remnant Road" Raging Against the Machines with guest Robert J. Marks

"(AI) "Are Super Computers on the Verge of Becoming Our Overlords?' Terry Lowry interviews Robert J. Marks

"(AI) Bob's interview on "The Going Home Show with Mark Cope" Newstalk 102.3 KXYL

"(EV) Bob's interview with Julian Charles's on "The Mind Renewed" about "Introduction to Evolutionary Informatics"

"(EV) Bob's essay at EN "Top Ten Questions and Objections to Introduction to Evolutionary Informatics"'

"(EV) Winston Ewert's "ID the Future" podcast #1 on "Introduction to Evolutionary Informatics" titled "Author of New Book Tells Why Evolution Simulations Don't"

"(EV) Winston's "ID the Future" podcast #2 on "Introduction to Evolutionary Informatics" titled "Why Digital Cambrian Explosions Fizzle Or Fake It"

"Granville's EN "Intelligent Design Goes International A Report from Istanbul"

"(EV) Bob's essay in CNS News "Sorry Darwin: New Video Game Proves Adaptation Is Ubiquitous Not Evolution"

"(EV) Bob's editorial in the Dallas Morning News

"(EV) Bob's interview on the Bob Phillips Show in Austin."

510. Denyse O'Leary, "Who thinks Introduction to Evolutionary Informatics should be on your summer reading list?" Uncommon Descent, July, 1 2017.

"Robert Marks sends these endorsements for Evolutionary Informatics:

"(Note: It is surprisingly easy to read.)

> "An honest attempt to discuss what few people seem to realize is an important problem. Thought provoking!"

Gregory Chaitin, Ph.D.
Professor, Federal University of Rio de Janeiro
Eponyms: Kolmogorov-Chaitin-Solomonov Information Theory
Chaitin's Number
Chaitin's algorithm
Author of:The Unknowable
Meta Math!: The Quest for Omega
The Limits of Mathematics
Thinking about Gödel and Turing: Essays on Complexity
Algorithmic Information Theory.

"Darwinian pretensions notwithstanding, Marks, Dembski, and Ewert demonstrate rigorously and humorously that no unintelligent process can account for the wonders of life."
Michael J. Behe, Ph.D.
Professor of Biological Sciences , Lehigh University
Author of: Darwin's Black Box
The Edge of Evolution
"This is a fine summary of an extremely interesting body of work. It is clear, well-organized, and mathematically sophisticated without being tedious (so many books of this sort have it the other way around). It should be read with profit by biologists, computer scientists, and philosophers."
David Berlinski, Ph.D.
Author of: The Devil's Delusion, The Deniable Darwin and Other Essays, The King of Infinite Space: Euclid and His Elements
"For decades and decades, the ubiquitous cultural lie is that Intelligent Design advocates do nothing but rehash old criticisms of evolutionary theory. They never present fresh, positive research that supports ID theory. Now repeating serious criticisms of evolution is very important, especially since the universities, state school boards, and the ACLU have guaranteed that students must never hear of the problems with evolutionary theory. Still, the ID movement must present positive research for its views, and since this has been done for years through a number of publications, it is now a sign of ignorance, intellectual bigotry and bad faith for people to perpetuate this cultural lie. It is itself a lie. But with the publication of the ground-breaking book, Introduction to Evolutionary Informatics, there is now a cutting-edge positive ID research volume that does fresh, heretofore unpublished (and un-thought of!!) ideas that get to the very deepest bottom of recent science that is not only relevant to the ID/Evolution debate, but actually devastates evolutionary theory at the ground floor. In my view, no one reading this book can continue to adopt Theistic Evolution on philosophical and scientific grounds alone. This is must reading for all believers

and unbelievers interested in the debate, and Christians who are scientists have, I believe, a moral and spiritual duty to read this book. Though somewhat difficult, Marks, Dembski and Ewert have done a masterful job of making the book accessible to the engaged and thoughtful layperson. I could not endorse this book more highly."
J.P. Moreland, Ph.D.
Distinguished Professor of Philosophy, Biola University,
Author of: The Soul: How We Know It's Real and Why It Matters
"With penetrating brilliance, and with a masterful exercise of pedagogy and wit, the authors take on Chaitin's challenge, that Darwin's theory should be subjectable to a mathematical assessment and either pass or fail. Surveying over seven decades of development in algorithmics and information theory, they make a compelling case that it fails."
Bijan Nemati, Ph.D.
Jet Propulsion Laboratory
California Institute of Technology

"Dr. Marks has been at the forefront of research on evolutionary algorithms for three decades. However, in 2007 his university removed the website of his Evolutionary Informatics group because his research was a threat to the status quo in evolutionary biology. Nonetheless, Dr. Marks and his colleagues continued to pursue research into the informational requirements of evolutionary algorithms, the result of which is found in this volume. If you want to know what information theory says about evolution, this is the volume to read."
Jonathan Bartlett, Director
The Blyth Institute
Author Programing from the Ground Up
Building Scalable Web Applications Using the Cloud
Coeditor Engineering and the Ultimate: An Interdisciplinary Investigation of Order and Design in Nature and Craft
Naturalism and Its Alternatives in Scientific Methodologies

"Introduction to Evolutionary Informatics is a lucid, entertaining, even witty discussion of important themes in evolutionary computation, relating them to information theory. It's far more than that, however. It is an assessment of how things might have come to be the way they are, applying an appropriate scientific skepticism to the hypothesis that random processes can explain many observed phenomena. Thus the book is appropriate for the expert and non-expert alike."
Donald Wunsch, Ph.D.
Mary K. Finley Missouri Distinguished Professor

Director of the Applied Computational Intelligence Lab
Missouri University of Science & Technology
IEEE Fellow, INNS Fellow
Past President of the International Neural Networks Society
Coauthor of Neural Networks and Micromechanics
Unified Computational Intelligence for Complex Systems Clustering
"Evolution requires the origin of new information. In this book, information experts Bob Marks, Bill Dembski, and Winston Ewert provide a comprehensive introduction to the models underlying evolution and the science of design. The authors demonstrate clearly that all evolutionary models rely implicitly on information that comes from intelligent design, and that unguided evolution cannot deliver what its promoters advertise. Though mathematically rigorous, the book is written primarily for non-mathematicians. I recommend it highly."
Jonathan Wells, Ph.D. Ph.D.
Senior Fellow, Discovery Institute
Author of: Zombie Science,
Icons of Evolution
The Myth of Junk DNA

"When biologists finally come to terms with the fact that Darwinism was a long experiment in collective self-deception, the work described in this book will deserve much of the credit for putting things right."
Douglas Axe, Ph.D.
Director of Biologic Institute
Author of Undeniable: How Biology Confirms Our Intuition That Life Is. Coauthor of Science and Human Origins

"Introduction to Evolutionary Informatics helps the non-expert reader grapple with a fundamental problem in science today: We cannot model information in the same way as we model matter and energy because there is no relationship between the metrics. As a result, much effort goes into attempting to explain information (and intelligence) away. The authors show, using clear and simple illustrations, why that approach not only does not work but cannot work. It impedes understanding of our universe. The picture that emerges from their work is of a universe that is at the same time more mysterious than we had been led to expect and more familiar."
Denyse O'Leary, Science Writer.
Author/Coauthor of:
The Spiritual Brain: A Neuroscientist's Case for the Existence of the Soul
By Design Or By Chance?: The Growing Controversy On The Ori-

gins Of Life In The Universe

"Marks, Dembski, and Ewert have written a book summarizing in a very accesible way all of their research at the Evolutionary Informatics Lab for the last decade. If the blind watchmaker says "me thinks it is like a weasel", they say "perhaps, but in order to see it you need these active-information glasses." When the watchmaker is able to see with the glasses (and he needs them to be certain it is a weasel), he is not blind anymore. He is, like the programmer of an evolutionary algorithm, an intelligent designer with a very clear sight of his target. Oh, yes, it was a weasel!' "
Daniel Andrs Daz Pachn, Ph.D.
Research Assistant Professor, Biostatistics, University of Miami
"This is an important and much needed step forward in making powerful concepts available at an accessible level."
Ide Trotter, Ph.D.
Trotter Capital Management Inc.
Founder: Trotter Prize & Endowed Lecture Series on Information, Complexity and Inference (Texas A&M)
"Steampunk fiction anachronistically fuses Victorian steam powered technology into the digital age. Darwinism is steampunk science.' It is an analog-based Victorian relic trying to make its way in the digital information age. Darwin had no conception of the information problem facing any account of naturalistic evolution. Darwin's 21st century successors certainly know about the problem, but as Marks, Dembski and Ewert demonstrate in Introduction to Evolutionary Informatics, in 2017 they are no closer to solving the problem than Darwin was in 1859. This lay-accessible introduction to the information issue and how it remains unsolved is absolutely essential to anyone who wants to understand how all life is fundamentally information-based, and how naturalistic evolutionary science has not come remotely close to solving the problem of how meaningful information can arise in the absence of intelligence."
Barry Arrington, D.Jur.
Colorado House of Representatives (1997-1998)
Editor-in-Chief, UncommonDescent.com
"One of the things Intelligent Design theorists do is take what is obvious to the layman, that unintelligent forces cannot do intelligent things, and state it in more rigorous, scientific terms, so that highly educated people can understand also. This book makes important contributions to that effort, using results and terminology from information theory."
Granville Sewell, Ph.D.
Professor of Mathematics, University of Texas, El Paso
Author of: Computational Methods of Linear Algebra

> In the Beginning: And Other Essays on Intelligent Design
> Christianity for Doubters
> "A very helpful book on this important issue of information, which evolution cannot explain. Information is the jewel of all science and engineering which is assumed but barely recognised in working systems. In this book Marks, Dembski and Ewert show the major principles in understanding what information is and show that it is always associated with design."
> Andy C. McIntosh DSc, FIMA, C.Math, FEI, C.Eng, FInstP, MIGEM, FRAeS.
> Visiting Professor of Thermodynamics, School of Chemical and Process Engineering, University of Leeds, LEEDS, UK. Adjunct Professor, Department of Agricultural and Biological Engineering. Mississippi State University, Starkville, Mississippi, USA
>
> People who don't like the book still won't."

511. "Dr. Brian Miller Explores Coevolution," ID the Future, October 24, 2017.

> "On this episode of ID The Future, Sarah Chaffee interviews Center for Science and Culture Research Coordinator Dr. Brian Miller about co-evolution. Together they explore a recent paper on the subject by Winston Ewert and Robert Marks in BIO-Complexity."

512. David Klinghoffer, "For Beleaguered Computer Simulations of Evolution, Can Co-Evolution Save the Day?" Evolution News & Science Today, October 30, 2017. [LINK]

> "With enviable lucidity, Dr. Miller talks with Sarah Chaffee about research by Winston Ewert and Robert Marks in the journal BIO-Complexity that takes on the co-evolution epicycle.
>
> The hope, Miller explains, was that "co-evolutionary algorithms can bypass the New Free Lunch theorems because they can somehow provide active information to find distant targets, or perhaps they can bypass the need for this active information." But Ewert and Marks have splashed cold water on that one. It turns out that co-evolutionary algorithms are no solution, since they perform no better, and sometimes worse, than the old algorithms. In other words, for Darwin defenders, it's back to the drawing board."

513. Johmmy B. "Evolutionary Biology's Wrong Turn," Uncommon Descent, November 29, 2017.

> "As it says in one of the taglines for Robert Marks Evolutionary Informatics lab (an Intelligent Design venture), they are "Investigating How Information Makes Evolution Possible". In other words, evolutionary teleonomy."

514. David Klinghoffer, "Intelligent Design and Artificial Intelligence The Connection," Evolution News & Science Today, December 20, 2017. [Podcast], [YouTube: https://youtu.be/ZStcSl1RMps], [Video Download].

> "It seems obvious on a moment's reflection: intelligent design and artificial intelligence have something in common, and that is intelligence. What's the significance of that? In an illuminating conversation for ID the Future, Robert Crowther talks about the connection with Dr. Robert Marks of Baylor University, co-author of the recent book Introduction to Evolutionary Informatics.
>
> "Marks and his fellow researchers have shown that evolution isn't computable, meaning it can't be successfully modeled "There exists no model successfully describing undirected Darwinian evolution," as Marks puts it. And you know what? The qualities that make human intelligence special are similarly not computable.
>
> "That, as Professor Marks explains among other helpful observations, makes fantasies about AI robots taking over the world, developing consciousness, or displacing the human race incompatible with reality."

2018

515. David Klinghoffer, "Elon Musk Intelligent Design Proponent?" Evolution News & Science Today, January 8, 2018. [Podcast], [YouTube: https://youtu.be/w1Do06Uf6Ks].

> "Robert Crowther sits down with Robert Marks for a typically engaging and enlightening conversation. Dr. Marks is Distinguished Professor of Electrical and Computer Engineering at Baylor University. His most recent book is Introduction to Evolutionary Informatics, co-authored with William Dembski and Winston Ewert. Marks makes, among other provocative points, the observation that Elon Musk of Tesla, SpaceX, and PayPal fame must be considered a proponent of intelligent design.
>
> "Admittedly, that may come as a surprise to Elon Musk, and not necessarily a pleasant one. But I think Marks defends the argument with a certain persuasive mischievousness. Also on the podcast, Dr. Marks explains why computers will never achieve consciousness or human understanding."

516. "Evolutionary informatics has come a long way since a Baylor dean tried to shut down the lab." Uncommon Descent, January 11, 2018.

> "Robert Marks II writes to offer updates on the Introduction to Evolutionary Informatics book."

517. David Klinghoffer "Robert Marks on the Lovelace Test." Evolution News & Science Today, January 23, 2018. [Link].

"A postscript here to a couple of posts by Sarah Chaffee. She notes today the views of Robert Marks, author of Introduction to Evolutionary Informatics, on the limits of what can be expected, for good or bad, from AI robots. In an earlier post, she considered the "genius" of a computer program, AIVA, that composes classical music."

"AIVA can combine musicals styles - that of, say, Bach and Beethoven, if you feed it enough of those two composers' works. What such a program can't do is innovate, says Dr. Marks. It can't strike out in a new direction of its own, put Bach together with Beethoven and come up withStravinsky. Such a leap would be uncomputable, therefore permanently beyond the reach of even the most cleverly designed artificial intelligence.

"Marks explains the Lovelace test which, unlike the better-known Turing test, focuses precisely on this hard limit to what computer algorithms can do. AI cannot, in this sense, truly create. That indicates an impassable border for AI, not the only one. Beyond lies the unique realm of the human, no matter what addled things Stephen Hawking may say about computers 'replacing' us. "

518. Sarah Chaffee "Terrified of a Robopocalypse? Don't Be," Evolution News & Science Today, January 23, 2018. [Link]

"These statements sound remarkably like what Robert Marks, Distinguished Professor of Electrical and Computer Engineering at Baylor University, noted in a recent ID the Future podcast:

> "Anything you can think of writing an algorithm to do will eventually be replaced. But then there are other things such as webmasters, computer programmers, and such, that won't be replaced. I've heard these people referred to as knowledge-workers. So, yeah I see this quite a bit. The other thing which is also intriguing is the ability of artificial intelligence to augment our performance. I think that all technology augments a human trait cars go faster than we do, calculators add faster than we do. So, we're going to be augmented by access to the knowledge of the world. I have that at my fingertips now on my cell phone it blows my mind! I'm old enough to remember going to the library looking for a paper, and going through the stacks and finally finding the volume and opening it to the page and some jerk has ripped it out and taken it away. And I don't have to worry about that anymore. I can just look it up on my phone; it's incredible. Now, there's a trade-off because I've sacrificed totally my privacy. Google knows where I am every second of the day, I imagine. So there are going to be trade-offs of that sort too."

"Robert Marks is the co-author of the new book Introduction to Evolutionary Informatics."

519. O'Leary "Robert Marks on the Turing Test vs the Lovelace Test for computer intelligence," Uncommon Descent, January 25, 2018. [Link].

520. James C. Bezdek, "Celebrating 25 Years of the IEEE TRANSACTIONS ON FUZZY SYSTEMS by James Bezdek," IEEE Transactions on Fuzzy Systems, vol. 26, #1 2018

> "Bob Marks invited me to join the IEEE Neural Networks Council (NNC) in the summer of 1991."

521. Live webinar with Robert Marks, Baylor U, on artificial intelligence and human exceptionalism.

522. Sarah Chaffee, "Education or Obfuscation? Avida in Science Class," Evolution News & Science Today, February 16, 2018. [Link].

> "In their recent book Introduction to Evolutionary Informatics, Robert Marks, William Dembski, and Winston Ewert, of the Evolutionary Informatics Lab, offer a more sober perspective."

523. Jayantika Soviana, "Robert J. Marks II," Integrasi Science, March 7, 2018 [Link.]

> "Robert J. Marks II adalah Profesor Teknik Elektro dan Komputer terkemuka di Universitas Baylor di Waco, Texas. Sebelumnya, ia pernah berada di fakultas Universitas Washington selama 25 tahun. Dia adalah pelopor dalam bidang kecerdasan komputasi (termasuk jaringan saraf, himpunan fuzzy, dan komputasi evolusioner), dan merupakan presiden pertama dari Institute of Electrical and Electronics Engineers (IEEE) Neural Networks Council. [Indonesian]"

524. Barry Arrington "We Cannot, in Principle, 'Know' Whether a Machine is Conscious," Uncommon Descent, April 9, 2018. Barry Arrington "We Cannot, in Principle, 'Know' Whether a Machine is Conscious," Uncommon Descent, April 9, 2018. [Link.]

525. Andrew Jones, "Digital Evolution and Bohemian Bugs," April 26, 2018. [Link.]

526. David Klinghoffer "New Discovery Institute Center to Explore Threat, Promise, Limits of AI; Seattle Launch on July 11," Evolution News & Science Today, June 5, 2018. [Link.]

> "Dr. Bradley will be joined by the Center's new director, Robert J. Marks, Distinguished Professor of Electrical and Computer Engineering at Baylor University; mathematician, author, and entrepreneur William Dembski; neuroscientist Michael Egnor of Stony Brook University; and Microsoft data scientist George Montañez.
>
> "Dr. Marks and his colleagues will outline the goals of the Center, introduce staff and fellows, and engage the audience in a provocative discussion. "

527. "Will the Machines Take Over? Human Uniqueness in the Age of Smart Machines." [registration]. [Link.]

"In addition to guest-of-honor Walter Bradley, the July 11 event will feature:

(a) mathematician, author, and entrepreneur William Dembski.
(b) Director of the new Bradley Center Robert J. Marks, Distinguished Professor of Electrical and Computer Engineering at Baylor University.
(c) Stony Brook University neurosurgeon Michael Egnor.
(d) Microsoft data scientist George Montañez.

This is a FREE event, but space is limited, so registration is required!"

528. David Klinghoffer "Bradley Center to Sort Reality from Rubbish on AI," Evolution News & Science Today, June 20, 2018. [Link.]

> "The Bradley Center officially launches on Wednesday, July 11 in Seattle, and we hope you will join us to celebrate, meet the new Fellows of the Center, and participate in a fascinating panel discussion. More information is here. The panelists, including Dr. Marks, are scientists with an appropriately strong humanistic and philosophical bent: mathematician William Dembski; neuroscientist Michael Egnor of Stony Brook University; and Microsoft data scientist George Montaez. Discovery Institute Fellow Walter Bradley, who co-authored the pioneering book The Mystery of Life's Origin: Reassessing Current Theories, and for whom the Center is named, will be the guest of honor."

529. Stacy Tillie, "Researching for the Sky," Baylor Magazine, Summer 2018 [Link.]

530. "Walter Bradley Center for Natural and Artificial Intelligence launches Wednesday, July 11," Uncommon Descent, July 10, 2018. [Link.]

531. "Will the Machines Take Over? Human Uniqueness in the Age of Smart Machines An event celebrating the launch of the Walter Bradley Center for Natural and Artificial Intelligence at Discovery Institute," Evolution News & Science Today, July 11, 2018. [Link.]

> "In addition to guest-of-honor Walter Bradley, the July 11 event will feature:
>
> ◇ mathematician, author, and entrepreneur William Dembski.
> ◇ Director of the new Bradley Center Robert J. Marks, Distinguished Professor of Electrical and Computer Engineering at Baylor University.
> ◇ Stony Brook University neurosurgeon Michael Egnor.
> ◇ Microsoft data scientist George Montañez.
>
> This special event will take place from 7:30-9:30 pm in the William Allen Theater at the Museum of Flight in Seattle."

532. Finding Hidden Connections, "New Bradley Center Launches; Will Consider Promise and Threat of Artificial Intelligence," July 16, 2018. [Link.]

533. David Klinghoffer, "New Bradley Center Launches; Will Consider Promise and Threat of Artificial Intelligence," Evolution News & Science Today, July 17, 2018. [Link.]

534. William A. Dembski, "HOW HUMANS CAN THRIVE IN A WORLD OF INCREASING AUTOMATION," MindMatters.today JULY 17, 2018 [Link.]

> "First, however, I want to thank friends and colleagues of Seattle's Discovery Institute for their vision in forming this center and providing it with a secure home. Thanks go especially to Bruce Chapman and Steven Buri for making the center a full-fledged program of Discovery; to John West for working through the many crucial details; to Robert J. Marks, a towering presence in the field of computational intelligence, for his willingness to lead the center; and finally to Walter Bradley for giving us not only his name but also his example and inspiration, about which I will have more to say in a moment."

535. "William Dembski: Descartes Understood the Limits of Artificial Intelligence," Wired Tech Focus, July 18, 2018 [Link.]

> "...the Center's director, Robert Marks, read Dembski's address to us, and it is remarkable, both profound and humane."

536. William Dembski, "VIRTUAL RAILROADS AND WEST VIRGINIA BACK ROADS: AI's Temptation to Theft Over Honest Toil," Mind Matters.today, July 26, 2018. [Link.]

> "My colleague Robert Marks dubs such a reconfiguration of the environment a "virtual railroad." His metaphor is spot on. Without such a virtual railroad, fully automated vehicles simply face too many unpredictable dangers and are apt to "go off the rails." Marks, who hails from West Virginia, especially appreciates the dangers. Indeed, the West Virginia back roads are particularly treacherous and give no indication of ever submitting to automated driving."

537. Denyse O'Leary, "AI That Can Read Minds? Deconstructing AI Hype," Uncommon Descent, August 5, 2018. [Link.]

> "From computer engineering prof Robert J. Marks at Mind Matters Today: Fake and misleading AI news is everywhere today."

538. Eric Holloway "COULD ONE SINGLE MACHINE INVENT EVERYTHING?" Mind Matters, August 15, 2018. [Link.]

> "The basic idea is that conventional evolutionary programs have an upper bound on performance even when the fitness changes in time. This "ceiling" was explored in Introduction to Evolutionary Informatics. Claims about open-ended evolution try to skirt this limitation. My paper outlines the problem, which applies to artificial intelligence as well as to unintelligent evolution."

539. "Could HAL 9000 Ever Be Built? Robert Marks Thinks So," Uncommon Descent, August 31, 2018 [Link].

540. ERIC HOLLOWAY, "SLAUGHTERBOTS: HOW FAR IS TOO FAR? And how will we know if we have crossed a line?" Mind Matters News, September 4, 2018. [Link.]

> "Editor's note: On Monday, Robert J. Marks addressed the question raised by the film Slaughterbots: Is it ethical to develop a swarm of killer AI drones? Tonight, Eric Holloway adds some thoughts:... The moral argument Dr. Marks raises is a difficult one. Where do we draw the line? If all scientific research and weapon development are justifiable to win a total war, then even something as horrible as Nazi and Communist human experimentation is licit if it means we develop the superhuman shock troopers ahead of the enemy."

541. "Computer Engineer Robert J. Marks Discusses the Perils and Promise of AI", Evolution News & Science Today, September 13, 2019. [Link].

542. Podcast: Winston Ewert on the Dependency Graph vs. Darwin's Tree of Life, Part 1 [Link.]

543. Wiki Visual: Robert J. Marks II, October 11, 2018. [Link.]

544. David Klinghoffer, "From Ewert's Dependency Graph Paper A 'Gut Punch' to Darwin's Tree¿' Evolution News & Science Today, October 11, 2018 [Link.]

> "I'm reminded again that Marks, among many other distinctions, was born to podcast. He's really very good at it. His interview with Ewert is a winner, quite amusing and accessible, especially for such a potentially recondite subject."

545. David Klinghoffer, "Critics Need to Grapple with Ewert's Challenge to Darwin's Tree" Evolution News & Science Today, October 17, 2018 [Link.]

    Eric Holloway, "An Artificial Controversy," EIDOS, October 16, 2018. [Link.]

546. Eric M. Eckert, "Annual Baylor Business Ethics Forum to Address 'Ethics of Artificial Intelligence'," Oct. 22, 2018. [Link.]

547. Business Ethics & Leadership Ethics Forum Speakers, October 25, 2018. [Web, Bio, Link, Flyer.]

548. "What can math and computer simulations tell us about the limits of evolution?," REASONABLE FAITH University of Texas, Nov. 1, 2018. [Schedule, Poster.]

549. Brian Miller, "Examining Randy Isaac's Critique of Introduction to Evolutionary Informatics," Evolution News & Science Today, October 31, 2018. [Link.]

> "In an article yesterday I examined physicist Randy Isaac's criticisms of several science chapters in Theistic Evolution: A Scientific, Philosophical, and Theological Critique. Today, I will discuss his critique of the content of the TE book that draws from Introduction to Evolutionary Informatics

> by Robert Marks, Bill Dembski, and Winston Ewert (MDE). The authors' work is particularly significant since it demonstrates that no evolutionary process could achieve novel outcomes which correspond to generating significant amounts of new information."

550. "WILL 'SMART MACHINES' TAKE OVER OUR JOBS?" SUNDAY, NOVEMBER 4 , 2018, DALLAS COUNTRY CLUB. (flyer).

551. Baylor Faith & Reason Panel: sponsors: ASA (American Scientific Association), Oso Logos, SPS (Society of Physics Students), Nov 13, 2018.

> "Baylor faculty Panelists: Dr. Lorin Matthews (General Studies), Dr. Tom Ward (Philosophy), Dr. Walter Wilcox (Physics), Dr. Robert J. Marks (Engineering)."

552. "Human consciousness may not be computable," Uncommon Descent, November 27, 2018. [Link.]

553. "Robert Marks Talks Computers with Michael Medved," Uncommon Descent, November 29, 2018 [Link.]

554. David Klinghoffer, "Great Minds: Robert Marks, Michael Medved on the Limits of Computation," Evolution News & Science Today, November 29, 2018. [Link.]

> "On a new episode of Great Minds with Michael Medved, Dr. Robert Marks of Discovery Institute's Bradley Center for Natural and Artificial Intelligence casts some very helpful light on the limits of AI."

555. DENYSE O'LEARY, "ROBERT J. MARKS TALKS COMPUTERS WITH MICHAEL MEDVED," Mind Matters, November 29, 2018. [Link.]

> "Recently, Robert J. Marks, director of the Walter Bradley Center for Natural and Artificial Intelligence, sat down with radio host and author Michael Medved to help sort through the confusion about what artificial intelligence can and can't do, now and in the future."

556. "Whether or not man has free will, quantum mechanics means that nature does," Uncommon Descent, December 6, 2018. [Link.]

557. Denyse O'Leary, "AI Apprehension: Is Artificial Intelligence Taking Over? Or Is a Fashionable Panic Afoot?" Salvo Magazine, December 7, 2018. [Link.]

> "Baylor computer engineering professor Robert J. Marks notes that GÖdel's Theorem, a key moment in mathematics, shows that some things are outside the laws of mathematics. In any event, they are not computable. And there is no evidence that algorithms, by themselves, become creative and produce large amounts of new information. The source of large amounts of new information is still elusive."

558. David Klinghoffer, "Robert Marks: Randomness and the Enigma of Creativity," Evolution News & Science Today, December 7, 2018 [Link.]

> "Is there any true randomness in nature? Or are deterministic processes the rule, even down at that quantum level? Over at Mind Matters, Robert Marks examines these questions in a really interesting post. From 'Quantum Randomness Gives Nature Free Will':"

559. "Trends in Philosophy of Science: What Does 'Semantic Information' Mean?" Evolution News & Science Today, December 10, 2018 [Link].

> "Robert Marks and William Dembski mean something different by 'semantic information,' which avoids the trap of self-refutation inherent in methodological naturalism."

560. 'IF COMPUTERS THOUGHT LIKE FRUIT FLIES, THEY COULD DO MORE," Mind Matters, December 12, 1018. [Link.]

> "Building novelty detection into a computer is a bit of a challenge, Robert J. Marks acknowledges, 'Novelty detection is an old problem in real and artificial neural networks. The dilemma in learning is a tradeoff between strengthening one of your old categories (stability) and learning something new (novelty). I've heard it described as the tradeoff between being skeptical and being gullible or between stability and plasticity' "

561. David Klinghoffer, "Great Minds: Marks, Medved on Human Exceptionalism's Two Frontiers," Evolution News & Science Today, December 13, 2018. [Link.]

> "'Not so fast, explains Dr. Marks. There are fundamental, unbridgeable chasms on either side, animal and machine. The capacity for creativity, for one thing, stands permanently outside the reach of algorithms. This is a really interesting conversation. Wide-ranging, too, as Robert Marks tackles questions like what it means for something to be not just unknown but 'unknowable."'
>
> "For all that understanding human exceptionalism is central to Discovery Institute's mission, I'm not sure that until now I've heard a discussion, in one sitting, of the issue with respect to both animals and computers. Because when our contemporary culture seeks to demote humanity, as nothing special, it does so by insisting both that nothing much (other than the chin, that chance evolutionary "spandrel"!) distinguishes us from beasts, and that computers are fast closing in on being able to replicate and exceed any human achievement. We'll soon be ruled by AI. That is mankind's future!'
>
> Not so fast, explains Dr. Marks. There are fundamental, unbridgeable chasms on either side, animal and machine."

562. "Proven: If you torture a Big Data enough, it will confess to anything," Uncommon Descent, December 18. 2018. [Link.]'

563. "WHAT DO THOUGHTS WEIGH? Robert Marks thrashes out with Michael Medved why our minds are neither meat nor software," Mind Matters News, December 21, 2018. [Link.]

564. "10. Is AI really becoming 'human-like'?" Uncommon Descent, December 21. 2018. [Link.]

565. "9: Will That Army Robot Squid Ever Be 'Self-Aware'?" Uncommon Descent, December 22, 2018. [Link.]

566. "2018 AI Hype Countdown 8: AI Just Needs a Bigger Truck!," Uncommon Descent, December 23, 2018. [Link.]

567. "2018 AI Hype Countdown 7: Robert J. Marks On The Claim Computers Can Develop Creative Solutions On Their Own!" Uncommon Descent, December 27, 2018. Posted on December 27, 2018. [Link.]

568. "2018 AI Hype Countdown 6: Robert J. Marks On The Claim, AI Can Even Find Loopholes In The Code!" Uncommon Descent, December 27, 2018. [Link.]

569. "2018 AI Hype Countdown 5: Robert J. Marks On The Claim, AI Can Fight Hate Speech!" Uncommon Descent, December 29, 2018. [Link.]

570. "2018 AI Hype Countdown 4: Robert J. Marks On The Claim, Making AI Look More Human Makes It More Human-Like!" Uncommon Descent, December 29, 2018. [Link.]

571. "2018 AI Hype Countdown 3: Robert J. Marks on the claim, You Will Never Have Secrets Again!" Uncommon Descent, December 29, 2018. [Link.]

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572. "Top Ten AI Hype 2: AI Can Write Novels And Screenplays Better Than The Pros!" Uncommon Descent, January 1, 2019. [Link.]

573. "Top Ten AI Hype Countdown 1: IBM's Watson Is Not Our New Computer Overlord," Uncommon Descent, January 1, 2019. [Link.]

574. BRICE CHERRY, "Sweet emotion: Midway coach's reunion with old team falls in favor of Panthers, 3-1," Waco Tribune, January 22, 2019. [Link.]

> "'Today, I was thinking about it it's hard to put into words, but I think it was the second-hardest day of my life,' Kahler said. 'The first being the day I asked my wife's father for permission to marry her. "

575. "Unifying Specified Complexity: Rediscovering Ancient Technology," Evolution News & Science Today, January 30, 2019. [Link.]

576. David Klinghoffer, "Marks on the AI Church: "The Singularity Is Far," February 3, 2019. [Link.]

> "In an excellent post at Mind Matters, Robert Marks of Discovery Institute's Bradley Center observes the way that new religions, including one centered on Artificial Intelligence, follow a stereotyped pattern, with promises of immortality, holy books (Ray Kurzweil's The Singularity Is Near), a prophesied World to Come, apologetic arguments, and more.
>
> "Great reflections, and witty as you'd expect from Dr. Marks."

577. "Silicon Valley Invents A Religion Suited To The Culture," Uncommon Descent, February 3, 2019. [Link.]

578. Junior Eskelsen, "O Ídolo com Pés de Silcio: O Cativeiro Computacional 4 de fevereiro de 2019," TEORIA DO DESIGN INTgentELIGENTE, February 4, 2019. [Link.]

579. Jerry Newcombe, "For What Robot Did Jesus Die?" D. James Kennedy Ministries, February 13. 2019. [Link.]

> "But is that 'love'? I reached out to Dr. Robert J. Marks for a comment on the idea of falling in love with robots. Marks is the Director of The Bradley Center for Natural & Artificial Intelligence at Baylor University.
>
> "Marks told me via email: 'Those proclaiming that exclusive truth lives totally in naturalism are constrained to a sadly narrow view of the world. In their constrained silo, love and romance must have a materialistic explanation. But computers, including AI, are limited. They are all constrained to follow programmed instructions called algorithms. Things nonalgorithmic are not computable. Human creativity, sentience, consciousness and qualia are not computable. Can anyone write code to explain to a computer your true sensory experience of enjoying hot buttered sweet corn? Sex with a human-appearing robot can be simulated, but love and romance are not computable. Those married to the love of their lives for forty years like me know this.'"
>
> "A few years ago, when stories were coming out along the lines that AI was a potential threat to humanity, I interviewed Dr. Marks on the radio.
>
> "For example, I asked him about this quote from Stephen Hawking about AI: 'The development of full artificial intelligence could spell the end of the human race.' Marks responded, 'Well, I think it's actually just hyperbole. And I think that people who say these sorts of things need to go back to the fundamentals and understand what computers can't and can do.'
>
> "Marks observed, 'A computer will never be creative. It will never have consciousness. It will never have understanding. It only does what you tell it to do.They will never have a soul. They will never have an understanding of what they do. They will never have a consciousness. Computers can only do something which is algorithmic.a fancy word for recipe. You have to give a computer step-by-step instructions on doing something, just like a recipe.'
> "

580. Jerry Newcomb, "For What Robot Did Jesus Die?," NEWSMAX, February 15, 2019. [Link.]

581. Jerry Newcomb, "For What Robot Did Jesus Die?," The Christian Post, February 16, 2019. [Link.

582. "Robert J. Marks: The Mathematics Underlying Our World Is Fascinating And Full Of Surprises," Uncommon Descent, March 8, 2019. [Links]

583. "The Human Advantage: Will Artificial Intelligence Supersede Human Intelligence?," Christ Church, 112 Medina Street, Austin. Event: March 11, 2019. [Link.]

584. "Robert J. Marks: The Mathematics Underlying Our World Is Fascinating And Full Of Surprises," Uncommon Descent, March 8, 2019.

585. "Robert J. Marks: Things Exist That Are Unknowable," Uncommon Descent, March 20, 2019. [Link.]

586. David Klinghoffer, "Lennox, Marks: Uploading the Mind Would Mean Eternal Death," Evolution News & Science Today, March 22, 2019. [Link.]

> "In breaking through scientific and spiritual boundaries, the idea behind Discovery Institute's Bradley Center is audaciously original. Led by Baylor University computer engineer Robert J. Marks, the Bradley Center considers the technology and ethical implication of Artificial Intelligent from a strong Judeo-Christian perspective. Is there anyone else out there doing that? Not that I'm aware.
>
> "In a new podcast series, Dr. Marks takes up a conversation with the wonderful Oxford University mathematician and theologian John Lennox."

587. David Klinghoffer, "Great Minds: How Darwinism and AI Are Oversold, Often at the Same Time," Evolution News & Science Today, March 28, 2019. [Link.]

> "Studying Darwinian evolution and AI, respectively, scholars with the two programs find that both Darwinism and AI have been wildly oversold to the public. And often, intriguingly, for the same reasons and in the same way.
>
> "Despite much hype, both lack the gift of creativity that appears to be the sole possession of human beings."

588. "Robert J. Marks: Things Exist That Are Unknowable," Uncommon Descent, March 20, 2019 [Link].

589. "JAY RICHARDS: CREATIVE FREEDOM, NOT ROBOTS, IS THE FUTURE OF WORK," Mind Matters News, April 18, 2019. [Link.]

590. "Jonathan Bartlett And Robert Marks Take On Elon Musk," Uncommon Descent, April 26, 2019 [Link].

591. "Robert J. Marks: Do Robots Make Better Decisions?" Uncommon Descent, April 27, 2019 [Link].

592. "Robert J. Marks: What Do AI And Evolution Have In Common?" Uncommon Descent, May 18, 2019 [Link]

593. "HOW THE INJURED BRAIN HEALS ITSELF: OUR AMAZING NEUROPLASTICITY," Mind Matters News, May 23, 2019 [Link.]

> "Robert J. Marks's colleague at the University of Washington, chemistry at atmospheric science professor Bill Zoller, lost twenty years of his memory as a result of a catastrophic car accident in 1987. What did that mean for him?"

594. David Klinghoffer, "Robert Marks on Evolution and Creativity," Evolution News & Science Today, May 23, 2019 [Link].

> "Robert Marks ... has a very insightful post. He explains how creativity unifies three seemingly disparate phenomena: artificial intelligence, entrepreneurship, and evolution."

595. "MICHAEL MEDVED TALKS WITH ROBERT J. MARKS ABOUT ANIMAL VS. HUMAN VS. AI MINDS," Mind Matters News, May 30. 2019 [Link].

596. "NON-INVASIVE HEALING FOR THE WOUNDED BRAIN," Mind Matters News, May 30, 2019 [Link.]

> "This week, our host, Walter Bradley Center director Robert J. Marks looks at a new technique intended to help an injured brain heal."

597. David Klinghoffer, "Robert Marks: Why 'Edmond de Belamy' Is Bunk," Evolution News & Science Today, June 5, 2019 [Link].

> "Robert Marks explains why AI-generated art is bunk. It has to do with the difference between interpolation and extrapolation."

598. "PHILOSOPHER: GLOOM AND DOOM OVER AI IS 'SILLY' ", Mind Matters News, June 3, 2019 [Link].

> "Philosopher Jay Richards, author of The Human Advantage, discusses with Walter Bradley Center director Robert J. Marks the dystopia that historian Yuval Noah Harari feels the Digital Age is sure to be."

599. David Klinghoffer, "Robert Marks: Materialism and the AI Delusion," Evolution News & Science Today, June 5, 2019 [Link].

> "Robert Marks with Discovery Institute's Bradley Center watched the first episode of Science Uprising and got goosebumps by the end."

600. "Is A Merger With Machines NearerOr Impossible?" Uncommon Descent, November 3, 2019. [Link].

> "As Robert J. Marks put it, Non-algorithmic things (things that cannot be calculated), 'cannot be uploaded.' Human consciousness, little as we understand it, appears to be one of those non-algorithmic things. "

601. " CAN WE WRITE CREATIVE COMPUTER PROGRAMS?" Mind Matters News, July 26, 2019. [Link].

> "Recently, Walter Bradley Center director Robert J. Marks was interviewed at The World and Everything in it on the ethics of artificial intelligence."

602. "CAN THE AI POKER CHAMP IMPROVE REAL-WORLD DECISIONS?" Mind Matters News, July 15, 2019 [Link].

> "Bradley Center director Robert J. Marks notes that Bernie Widrow was using a computer to win at the card game of Black Jack at Stanford in 1960. He also forecast weather and translated spoken language to type. Not as sophisticated as today, but very impressive."

603. "HOW DO WE KNOW OUR UNIVERSE IS NOT A SIM WORLD?," Mind Matters News, July 10, 2019 [Link].

> "Robert J. Marks observes that 'There is an uneasy parallel with Judeo/Christian beliefs':
>
> "Simulation requires a model and the Genesis account says God created man in his own image. In that view, however, we are not the products of only DNA or other computer code. Algorithms are incapable of qualia, creativity or love. Those who believe we are simulations can believe life is too complicated to explained by Darwin. Or the universe is too fine tuned to be explained by chance. There is no God, and panspermia, the belief that space aliens seeded life on Earth, is too whacky. So they reason, we must be a computer simulation. "

604. "AI DELUSIONS: A STATISTICS EXPERT SETS US STRAIGHT," Mind Matters News, Kune 14, 2019 [Link].

605. "THE US 2016 ELECTION: WHY BIG DATA FAILED," Mind Matters News, June 14. 2019 [Link].

> "Gary Smith, author of The AI Delusion ... and Walter Bradley Center director Robert J. Marks discussed the 2016 US election, which analysts expected to be won by Hillary Clinton."

606. David Klinghoffer, "Robert J. Marks: Humor, Ambiguity, and AI," Evolution News & Science Today, June 17, 2019 [Link].

> "From the annals of Stuff Artificial Intelligence Can't Do: Robert J. Marks at Mind Matters notes that they can't do ambiguity...
>
> "Dr. Marks thinks it's possible that AI may improve in its ability to resolve ambiguous language. Right now it's not looking so good.""

607. "Robert J. Marks: Simple Sentences Confuse AI," Uncommon Descent, June 18, 2019 [Link].

608. " 'Texas Sharpshooter Fallacies' Produce Bad Science Data," Uncommon Descent, June 21, 2019 [Link].

609. "CAN AI COMBAT MISLEADING MEDICAL RESEARCH?" Mind Matters News, June 21, 2019 [Link]

610. "CAN THE AI POKER CHAMP IMPROVE REAL-WORLD DECISIONS?" Mind Matters News, July 16, 2019 [Link].

> "Historical note: Bradley Center director Robert J. Marks notes that Bernie Widrow was using a computer to win at the card game of Black Jack at Stanford in 1960. He also forecast weather and translated spoken language to type. Not as sophisticated as today, but very impressive. "

611. "Robert J. Marks: Reforming Peer Review Faces Serious Numerical Law Problems," Uncommon Descent, July 19, 2019 [Link].

612. David Klinghoffer, "An Invitation: Science, Culture, and the COSM Conference, Evolution News & Science Today, July 24, 2019 [Link].

> "Robert J. Marks and William Dembski of the Bradley Center will join Gilder and other leading thinkers Peter Thiel, Steve Forbes, Ray Kurzweil, Carver Mead, and more."

613. "CAN WE WRITE CREATIVE COMPUTER PROGRAMS?" July 26, 2019. [Link].

> "Robert J. Marks tells World Radio, people have tried making computers creative but no luck."

614. "Bob Marks On What Happens When People Try To Write Creative Computer Programs," Uncommon Descent, July 28, 2019 [Link].

615. "CAN WE WRITE CREATIVE COMPUTER PROGRAMS?" July 26, 2019 [Link].

> "Robert J. Marks was interviewed at *The World and Everything In It* on the ethics of artificial intelligence. "

616. " WHEN HIGH TECH MUST BE KEPT SECRET," Mind Matters News, July 29, 2019 [Link].

> "Robert J. Marks, director of the Walter Bradley Center, spoke with international trade attorney Daniel M. Ogden on a variety of issues, including theft of technology research."

617. "Why The 'Computer' Model Of The Human Brain Fails" Uncommon Descent, Sept 22, 2019 [Link].

618. "DO WE ACTUALLY REMEMBER EVERYTHING?" Mind Matters News, September 13, 2019. [Link].

> "neuroscientist Yuri Danilov ⋯ and Walter Bradley Center director Robert J. Marks discuss how natural brain healing can be accelerated using stimulation."

619. "IS WHAT WE KNEW ABOUT THE BRAIN ALL WRONG?" Mind Matters News, September 19, 2019. [Link].

> "Robert J. Marks and Yuri Danilov discuss what we thought we knew about the brain twenty years ago, and how what we think we know now might change in another twenty?"

620. "WHY THE BRAIN IS NOT AT ALL LIKE A COMPUTER" Mind Matters News, September 20, 2019. [Link].

621. "CAN ACCOUNTANTS SURVIVE AN AI WORLD?" Mind Matters News, October 3, 2019. [Link.]

> "Robert J. Marks and Jeremiah Marks, Chief Financial Officer at Opera Philadelphia, discuss the way AI is changing the role of the accountant."

622. "HOW YOU CAN REALLY KNOW YOU'RE TALKING TO A COMPUTER" Mind Matters News, October 8, 2019. [Link].

> "Walter Bradley Center director Robert J. Marks and Harvey Mudd College computer science prof George D. Montañez got together to talk about a perennial favorite topic these days, Can machines think?"

623. Michael Egnor, "Rankled by Mount Fuji, Darwinist Jeffrey Shallit Offers Little Self-Refuting Black Holes" Evolution News & Science Today, October 11, 2019 [Link].

624. "WHAT DO THE TURING TEST AND ID HAVE IN COMMON?" Mind Matters News, October 11, 2019 [Link].

> "Darwinist mathematician Jeffrey Shallit has been challenging my I.D. colleague Bob Marks for five years about Dr. Marks's comment: '[W]e all agree that a picture of Mount Rushmore with the busts of four U.S. Presidents contains more information than a picture of Mount Fuji.' "

625. DENYSE O'lEARY, "IS RAY KURZWEIL'S SINGULARITY NOW NEARER OR IMPOSSIBLE?" Mind Matters News, October 31, 2019. [Link].

> "Robert J. Marks, director of the Walter Bradley Center for Natural and Artificial Intelligence, offered a historical take on Kurweil's claims. One of the goals of alchemy was the creation of a "homunculus," the manufactured human that can think for us. As we began to understand nature better, such pursuits discredited alchemy. "I believe that the Singularity will live in history as like the homunculus," he predicted."
>
> "As Robert J. Marks put it, Non-algorithmic things (things that cannot be calculated), "cannot be uploaded." Human consciousness, little as we understand it, appears to be one of those non-algorithmic things."
>
> "It featured Matt McIlwain (Moderator) Managing Director, Madrona Venture Group; Dr. Robert Marks Director, Bradley Center for Natural and Artificial Intelligence; Oren Etzioni Ceo, Allen Institute for Artificial Intelligence; and Dr. George Montaez Assistant Professor of Computer Science, Harvey Mudd College "

626. "YOUR BODY IS A PIANO YOUR MIND PLAYSWELL OR BADLY," Mind Matters News. Nov 11, 2019. [Link].

> "Last week, Walter Bradley Center director Robert J. Marks talked with Walter Bradley, the distinguished engineer after whom our center is named, on a thought-provoking topic: 'Is Your Body an Instrument of Your Mind?"'

627. "WHY MEDICAL SCIENTISTS TAKE NEAR-DEATH EXPERIENCES SERIOUSLY NOW," Mind Matters News, Nov 21, 2019. [Link].

628. "DO NEAR-DEATH EXPERIENCES DEFY SCIENCE?" Mind Matters News, Nov 25, 2019 [Link].

629. "Does the Bible Talk About Near-Death Experiences?" Mind Matters News, December 6, 2019 [Link].

630. "Inventor? Entrepreneur? Beware the Patent Troll!" Mind Matters News, December 6, 2019 [Link].

631. "What Did the Computer Learn in the Chinese Room? Nothing." Mind Matters News, December 31, 2019 [Link].

> "In a recent Mind Matters.ai podcast, 'The Unexpected and the Myth of Creative Computers,' Larry L. Linenschmidt of the Hill Country Institute interviews Walter Bradley Center director Robert J. Marks about why we mistakenly attribute understanding and creativity to computers."

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632. "A Moral Argument for Killer Robots: Why America's Military Needs to Continue Development of Lethal AI" January 6, 2020

> "Marks provocatively argues that the development of lethal AI is not only appropriate in today's societyit is unavoidable if America wants to survive and thrive into the future."

- ◇ Chinook Observer
- ◇ Seeking Alpha
- ◇ Market Watch
- ◇ Morningstar
- ◇ PR Newswire
- ◇ KOTV-TV CBS, Tulsa
- ◇ Spoke
- ◇ Yahoo Finance
- ◇ Daily Herald, Chicago
- ◇ The Buffalo News
- ◇ BENZINGA
- ◇ KWTV-TV CBS-9 [Oklahoma City, OK]
- ◇ KAKE-TV ABC [Wichita, KS]
- ◇ Finanzen, Germany
- ◇ Finanzen, China
- ◇ Minyanville
- ◇ WBOC-TV CBS-16 [Salisbury, MD]
- ◇ One Page News
- ◇ One Page News
- ◇ WRCB-TV NBC-3 [Chattanooga, TN]
- ◇ Business Insider: Markets Insider
- ◇ News Blaze
- ◇ WZVN-TV ABC-7 [Fort Myers, FL]
- ◇ My Mother Load
- ◇ KTVN-TV CBS-2 [Reno, NV]
- ◇ WFMJ-TV NBC-21 [Youngstown, OH]

633. Free eBook promotion banner, Mind Matters News, January 11, 2020

634. Free eBook offer, Mind Matters News, January 11, 2020

635. Ed Martin, "Robert Marks - Killer Robots," The Ed Martin Movement, January 10, 2020 [Link]

636. "The Case for Killer Robots" is #11 on Amazon's "Best Sellers in Military Technology" Jamuary 14, 2020.

637. "Robert J. Marks on Information and Intelligent Design" Evolution News & Science Today, January 18, 2020. [Link]

> "On a classic episode of ID the Future, hear an installment in our ID Inquiry series, in which ID scientists and scholars answer your questions about intelligent design and evolution."

638. "Dr. Brian Miller Explores Coevolution" ID the Future, January 25, 2020 [Link, Audio Cache]

> "On this episode of ID The Future from the vault, Sarah Chaffee interviews Center for Science and Culture Research Coordinator Dr. Brian Miller about coevolution."

639. "No Escape from Intelligent Design: Brian Miller Explores Coevolution" ID the Future, January 26, 2020 [Link]

640. "Mystery of Life's Origin Authors Reunite for Dallas Conference on Science & Faith" Evolution News & Science Today, January 27, 2020 [Link]

> "A presentation by Dr. Bradley was introduced appropriately by the director of Discovery Institute's Walter Bradley Center for Natural & Artificial Intelligence, Robert J. Marks. His comments included the observation that as a theist, Dr. Marks is grateful to have all possible scientific explanations of the natural world, including intelligent design, available to him whereas atheists and materialists have that option arbitrarily foreclosed to them."

641. "Robert J. Marks: Peace May Depend on Killer Robots" Mind Matters News, January 28, 2020 [Link]

> "In an op-ed at CNS this morning, Walter Bradley Center director Robert J. Marks summarizes his case, as an artificial intelligence expert, that the United States must remain competitive in military AI or, as it is called, 'killer robots'. "

642. David Klinghoffer, "Stars of ID Were Out for the Day: More Photos from the Dallas Science & Faith Conference" Evolution News & Science Today, January 29, 2020 [Link]

643. David Klinghoffer, "Information as Matter's *Fifth State* A Physicist's Contortion," Evolution News & Science Today, January 29, 2020 [Link]

> "Materialism drives its adherents into twists of logic, in line with remarks that Robert J. Marks made over the past weekend at the Dallas Conference on Science & Faith. Marks was introducing one of the authors of the newly expanded 1984 intelligent design 'Ur-text,' *The Mystery Life's Origin*."

644. David Klinghoffer, "Before Natural Selection There Was, and Remains, a Mystery" Evolution News & Science Today/ January 30, 2020 [Link]

> "In a series of interviews for ID the Future, Dr. Marks of the Walter Bradley Center for Natural & Artificial Intelligence talks with Dr. Bradley about the origins of the book."

645. "Walter Bradley on the new, expanded edition of The Mystery of Life's origin" Uncommon Descent, January 30, 2020 [Link]

646. "Marks, Bradley: 'Magical' Circumstances Around the Publication of *The Mystery of Life's Origin*, Evolution News & Science Today, February 8, 2020 [Link]

> "Bradley and Marks...talk about some scholars who more recently have testified to how the book, and Dr. Bradley himself, dramatically influenced their lives and their intellectual careers."

647. "WHY ELIMINATIVE MATERIALISM CANNOT BE A GOOD THEORY OF THE MIND," Mind Matters News, February 17, 2020 [Link]

> "Michael Egnor talked with Robert J. Marks about the mind and its relationship to the brain and about different theories as to how the mind works"

648. "KILLER ROBOTS IS NOW AVAILABLE IN AUDIBLE FORMAT," Mind Matters News, February 20, 2020 [Link]

649. "THE MIND'S REALITY IS CONSISTENT WITH NEUROSCIENCE," Mind Matters News, February 21, 2020 [Link]

650. "WHAT IS THE DIFFERENCE BETWEEN 'SOUL' AND 'SPIRIT'?" Mind Matters News, February 26, 2020 [Link]

> "Walter Bradley Center director Robert J. Marks explored with neurosurgeon Michael Egnor a variety of questions like 'From the perspective of a brain surgeon, is there evidence for a soul? Is there evidence for a spirit?' "

651. "WHY PIONEER NEUROSURGEON WILDER PENFIELD SAID THE MIND IS MORE THAN THE BRAIN," Mind Matters News, February 29, 2020 [Link]

> "In a podcast discussion with Walter Bradley Center director Robert J. Marks, neurosurgeon Michael Egnor talks about how many famous neuroscientist became dualists"

652. David Klinghoffer, "Unguided Origin of Life: 'Completely Impossible but Must Have Happened' " Evolution News & Science Today, March 18, 2020 [Link]

> "...we are mourning the passing of Jon Buell, the 'matchmaker' who brought Bradley, Thaxton, and Olsen together in the first place. Or as Dr. Marks puts it, using a different metaphor, Buell 'corralled these authors,' and

'sparked' the project that, in 1984, started the modern intelligent design movement."

653. "How a Neuroscientist Imaged Free Will (and 'Free Won't')" Mind Matters News, March 19, 2020 [Link]

> "Robert J. Marks discussed free will, free won't, predestination, and the brain with Dr. Michael Egnor. In this transcribed portion, they look at neuroscientist Benjamin Libet's findings on free will."

654. "Roger Olsen: The Mystery of Life's Origin on the Early Earth" Evolution News & Science Today, April 2, 2020 [Link]

> "Bradley Center director Robert J. Marks interviews geochemist Roger Olsen, co-author of the groundbreaking 1984 book The Mystery of Life's Origin."

655. "IF YOUR BRAIN WERE CUT IN HALF, WOULD YOU STILL BE ONE PERSON?," Mind Matters News, April 4, 2020 [Link]

> "Robert J. Marks asked Dr. Michael Egnor, 'If you lose all four of your limbs, are you still you? Most people would say yes. What if your brain were cut into two pieces? Would you still be you?' "

656. "Thinking Machines? Has the Lovelace Test Been Passed?" Mind Matters News, April 17, 2020 [Link]

657. "Has any 'thinking machine' passed the Lovelace test?" Uncommon Descent, April 17, 2020 [Link]

658. "Can People in Comas Have Abstract Thoughts?" Mind Matters News, April 20, 2020 [Link]

> "Robert J. Marks raised an interesting point with neurosurgeon Michael Egnor: Can people in comas think abstractly or do they form thoughts only at a much more basic level, given how physically distressed they are?"

659. "Can Human Minds Be Reduced to Computer Programs?" Mind Matters News, April 21, 2020 [Link]

> "Walter Bradley Center director Robert J. Marks and computer scientist Selmer Bringsjord discuss whether we could achieve immortality by uploading our minds to computers."

660. "Why Our Minds Can't Really Be Uploaded to Computers," Mind Matters News, April 22, 2020 [Link]

661. "Selmer Bringsjord: Can human minds be reduced to computer programs?" Uncommon Descent, April 22, 2020 [Link]

662. "Selmer Bringsjord: Why our minds can't really be uploaded to computers" Uncommon Descent, April 23, 2020 [Link]

663. "COVID-19: When 900 Bytes Shut Down the World" Mind Matters News, April 26, 2020 [Link]

> "Walter Bradley Center director Robert J. Marks and Dr. Daniel Andrs Daz-Pachn explore a dreadful truth: 'Human biology is so finely tuned that less than a kilobyte of information can stop the world' "

664. "Evolutionary Informatics Lab guys on COVID-19: When 900 bytes shut down the world" Uncommon Descent, April 26, 2020 [Link]

665. "COVID-19" FIBERO.net, April 27, 2020 (in Russian)

666. David Klinghoffer, "Robert J. Marks: Coronavirus and the 'Primacy of Information' " Evolution News & Science Today, April 28. 2020 [Link]

> "At Mind Matters, information theorist Daniel Andrs Daz-Pachn talks with Bradley Center director Robert J. Marks about the little bit of information that has overturned the economic order of our modern world. This is the kind of insight that halts you in your tracks: 'Human biology is so finely tuned that less than a kilobyte of information can stop the world.' "

667. David Klinghoffer, " 'Follow the Science'? Free Webinar, May 16, on Scientism and Society" Evolution News & Science Today, April 29, 2020 [Link]

668. "CAN AI SAVE US FROM COVID-19? AN EXPERT IS SKEPTICAL" Mind Matters News, April 30, 2020 [Link]

669. Brandon McGee "CALVIN AND HOBBES EXPLAIN WHY AI WILL NEVER RULE THE BATTLEFIELD" AIeCommerce.com, May 4, 2020 [Link]

670. "Coronavirus: Is Data Mining Failing Its First Really Big Test?" Freeqo.com, May 5, 2020 [Link]

671. David Klinghoffer "From Pfizer, Scientism and Self-Congratulation" Evolution News & Science Today, May 5, 2020 [Link]

> "John West, joined by Brian Miller and Robert J. Marks, will discuss 'Science and Scientism in the Age of COVID-19: Wisdom from C. S. Lewis'."

672. David Klinghoffer, "Marks, Bringsjord: Confound Your Atheist Friends with Gödel's *God Theorem*" Evolution News & Science Today, May 9, 2020 [Link]

> "I recommend that you listen to a fascinating conversation over at Mind Matters. Robert J. Marks, who directs Discovery Institute's Walter Bradley Center, talks with cognitive scientist Selmer Bringsjord of Rensselaer Polytechnic Institute about the unpublished *God Theorem* formulated by Kurt Gödel."

673. "Gödel's proof of the existence of God,Uncommon Descent, Articles May 10, 2020 [Link]

674. David Klinghoffer, "Free Webinar, May 16: Compliant or Critical? Scientific Authority in the Age of COVID-19" Evolution News & Science Today. May 11, 2020 [Link]

675. "New Papers Explore the Utility of Active Information" Uncommon Descent. May 13, 2020 [Link]

676. "New Papers Explore the Utility of Active Information" Evolution News & Science Today, May 13, 2020 [Link]

> "William Dembski and Robert J. Marks developed the concept of active information to measure the extent to which a search function appears pre-programmed to find some target. Inspired by the theory of intelligent design, this metric has proved useful in exposing when genetic algorithms don't truly model the power of Darwinian evolution, but rather "cheat" due to a programmer's guidance, leading to a predetermined outcome."

677. "Robert J. Marks: Time to change the peer review system" Uncommon Descent, May 15, 2020 [Link]

> "Back to the way it usually was in Einstein's day, says Robert J. Marks"

678. "Advice to Physicists: Shut Up and Do Physics — Mind Matters Walter Bradley Center for Natural and Artificial Intelligence" Saanvi News, May 26, 2020 [Link]

679. "Robert J. Marks on why there cannot be an infinite number of universes" Uncommon Descent, June 4, 2020 [Link]

> "The Big Bang Theory sitcom's Sheldon Cooper insists that in no universe would he dance with Penny. That might be true, says Marks but there still isn't an infinite number of universes."
>
> "... in 1993, the first technically serious conference on virtual reality was put together by Thomas Furness, Tom Caudell, and Robert J. Marks."

680. "VR Was Invented by an Air Force Engineer" Mind Matters News, June 5, 2020 [Link]

> "Robert J. Marks interviewed Thomas Furness, an engineer who wanted American fighter pilots to be able to see what was really happening around them in the air."

681. "Is Big Bang Theory's Sheldon Right re the Multiverse? — Mind Matters Walter Bradley Center for Natural and Artificial Intelligence" PROMETHEISM: The 21st Century Religion of Transhumanism" June 6, 2020 [Link]

682. "Interview with Grandfather of VR on his work in the USAF developing advanced cockpits" Avio Blog, June 8, 2020 [Link]

683. William A. Dembski, "Retirement ≠ Repudiation" Evolution News & Science Today, June 16, 2020 [Link]

684. Brian Miller "The Information Enigma: A Closer Look" ENV, June 19, 2020. [Link]

685. "Can We Really Cheat Death by Downloading Our Brains?" Mind Matters News, June 19, 2020 [Link]

> "Last October, Jay Richards, author of The Human Advantage, caught up with Bradley Center director Robert J. Marks, a Baylor University computer engineering prof, at COSM 2019 to ask, what are our cheat-death chances?
>
> "They were responding to futurist Ray Kurzweil's heady claims made at the conference that we will merge with computers by 2045 and live on as AI."

686. "Virtual Reality Joins Actual Reality - and It's a Real Advance" Mind Matters News, June 20, 2020 [Link]

> "In a recent podcast, Walter Bradley Center director Robert J. Marks continued his discussion with the 'grandfather of virtual reality."'

687. "Can We Actually Cheat Demise by Downloading Our Brains?" UK Google Hits, June 20, 2020 [Link]

688. "Is the Turing Test Misguided? George Montañez comments" Mind Matters News, June 26, 2020 [Link]

689. "Why we can't cheat death by uploading our brains to the internet" Uncommon Descent, June 27, 2020 [Link]

> "Robert J. Marks: There's good foundations and algorithmic information theory and computer science, which suggest that there are indeed non-algorithmic phenomena and there's a strong evidence that the qualities such as creativity and understanding and qualia, are above and beyond the capabilities of algorithms and computability."

690. Eric Holloway, "Why is Bell's Theorem Important for Conservation of Information?" Mind Matters NewsJune 29, 2020 [Link]

> "This brings us to a more general result known as the conservation of information. Design theorists William Dembski and Robert J. Marks defined the law of conservation of information in their 2009 paper 'Conservation of Information in Search' and then proved the result in their follow-on 2010 paper 'The Search for a Search"'

691. "Eric Holloway: Why Bell's theorem matters" Uncommon Descent, June 29, 2020 [Link]

692. "2084 vs 1984: The Difference AI Could Make to Big Brother" Mind Matters News, July 3,2020 [Link]

693. "How Do We Know Our Universe Is Not a Sim World?", Mind Matters News, July 10, 2020 [Link]

> "Robert J. Marks observes that 'There is an uneasy parallel [of sims] with Judeo/Christian beliefs"'

694. "IN DAN BROWN'S AI HYPE NOVEL, THE HERO STUMBLES ONTO GOD" Mind Matters News, July 12, 2020 [Link].

> "In a recent podcast, 'John Lennox: False Assumptions in the hype over AI,' Oxford mathematician John Lennox, author of *2084: Artificial Intelligence and the Future of Humanity* (2020) discussed common mistaken assumptions with Walter Bradley Center director Robert J. Marks."

695. "Did Dan Brown's hero stumble onto God?" Uncommon Descent, July 12, 2020 [Link]

696. "In Dan Brown's AI Hype Novel, the Hero Stumbles Onto God" Promethesiam: The 21st Century Religon of Transhumanism, July 13, 2020 [Link]

697. "In Dan Brown's AI Hype Novel, the Hero Stumbles Onto God" Buzzing Startups, July 14, 2020 [Link]

698. "OXFORD MATHEMATICIAN: ATHEISM DETRACTS FROM SCIENCE" Mind Matters News, July 17, 2020 [Link]

699. "Can AI Replace the Need for Belief in God?" Mind Matters News, July 19, 2020 [Link]

700. "Do Some Passages in the Book of Revelation Seem to Talk About AI?" Mind Matters News, July 19, 2020 [Link]

701. "Can AI Replace the Need for Belief in God?" News Makes Me Happy, July 19, 2020 [Link]

702. "Can AI Replace the Need for Belief in God?" e-Car News, July 19, 2020 [Link]

703. "Can AI Replace the Need for Belief in God?" ORS AI News, July 19, 2020 [Link]

704. Robert J. Marks, "VR Pioneer Founded Off-Campus Lab to Work On Practical Uses " Mind Matters News, July 23, 2020 [Link]

> "In a recent podcast, "Rats in the Technology lab" Walter Bradley Center director Robert J. Marks continued his discussion with the "grandfather of virtual reality" Thomas Furness."

705. Robert J. Marks, "John Lennox: What (Not) to Expect of Artificial Intelligence in 2084" Evolution News & Science Today, July 27, 2020 [Link]

> "On a new episode of ID the Future, host Robert J. Marks interviews Oxford University mathematician John Lennox on Lennox's new book, *2084: Artificial Intelligence and the Future of Humanity*."

706. Robert J. Marks II, the professor, is pictured next to a bio of Brigadier General Robert J. Marks on the Microsoft search engine Bing. July 28, 2020.

707. "VR PIONEER FOUNDED OFF-CAMPUS LAB TO WORK ON PRACTICAL USES" Mind Matters News, July 23, 2020 [Link]

708. "Can AI stand in for God? John Lennox comments" Uncommon Descent, July 26, 2020 [Link]

709. "Oxford Mathematician John Lennox Reviews AI Predictions Through the Ages" Evolution News & Science Today, July 31, 2020 [Link]

710. "WHY REASONABLE PEOPLE THINK NEAR-DEATH EXPERIENCES ARE REAL" [Link]

711. "The Amazing Things We Can Do with Virtual and Augmented Reality" Mind Matters News, August 7, 2020 [Link]

> "In a recent podcast ... Walter Bradley Center director Robert J. Marks continued his discussion with the "grandfather of virtual reality," Thomas Furness. They focused on the cutting edge of virtual reality today."

712. "Is Ray Kurzweil's Singularity Nearer or Still Impossible?" Mind Matters News, August 14, 2020 [Link]

> "Robert J. Marks, director of the Walter Bradley Center for Natural and Artificial Intelligence, offered a historical take on Kurweil's claims. One of the goals of early modern alchemy was the creation of a 'homunculus,' a manufactured human that can think for us. As we began to understand nature better, alchemists became chemists and abandoned such pursuits in favor of compiling the periodic table of the elements. 'I believe that the Singularity will live in history as like the homunculus,' he predicted."

713. ERIC HOLLOWAY "IS DEMBSKI'S EXPLANATORY FILTER THE MOST WIDELY USED THEORY EVER?" Mind Matters News, August 17, 2020 [Link]

714. "Six Limitations of Artificial Intelligence As We Know It" Mind Matters News, August 27, 2020 [Link].

> "...a discussion between Larry L. Linenschmidt of the Hill Country Institute and Walter Bradley Center director Robert J. Marks."

(a) Reprinted at PopularAI.com [Link]

(b) Reprinted at IOT.ng [Link]

(c) Reprinted at TradingTech.org [Link]

(d) Reprinted at HK3.news [Link]

(e) Reprinted at Paper.tl [Link]

(f) Reprinted at TechInsiderDesk.com [Link]

715. Brian Miller "Paul Ashby on Thermodynamics, Information, and Life's Molecular Machines" Evolution News & Science Today, September 9, 2020 [Link]

> "The challenge is that no fitness function or strategy driving a search could find highly improbable targets unless the search algorithm were supplied with information about a target. The underlying theory for this limitation has been explained in detail by Robert J. Marks, William Dembski, and Winston Ewert"

716. "Six Limitations of Artificial Intelligence As We Know It" Mind Matters News, August 27,2020 [Link]

717. "Should Robots, Instead of Humans, Go Into Space?" Mind Matters News, September 17, 2020 [Link]

> "In a recent podcast, Robert J. Marks discusses what robots can do for us with retired internist and author Geoffrey Simmons."

◇ Reprinted at *AI Summary* on September 19, 2020 [Link]

718. "CAN AI REALLY EVOLVE INTO SUPERINTELLIGENCE ALL BY ITSELF?" Mind Matters News, September 22, 2020 [Link]

> "The key thing here is novelty. As Dr. Marks and I proved in our paper *Observation of Unbounded Novelty in Evolutionary Algorithms is Unknowable,* it is impossible to generate endless novelty through algorithmic techniques."

719. "CAN AI WRITE THE GREAT AMERICAN NOVEL? OR COMPOSE SPORTS NEWS?" Mind Matters News, September 28, 2020 [Link]

> "Rensselaer professor Selmer Bringsjord discusses AI and creativity with computer engineering professor and Walter Bradley Center director Robert J. Marks."

720. "Russia Aims to Close the Technology Gap With the United States" Mind Matters News, October 9, 2020 [Link]

> "Walter Bradley Center director Robert J. Marks talks with Samuel Bendett about Russia's struggles to develop AI for entrepreneurship and free enterprise"

721. "Can AI Write the Great American Novel? Or Compose Sports News?" Mind Matters News, September 28, 2020 [Link]

> "Rensselaer professor Selmer Bringsjord discusses AI and creativity with computer engineering professor and Walter Bradley Center director Robert J. Marks."

722. John G. West, "Despite Darwinists' Cancel Culture, Intelligent Design Has a Breakthrough in Biology Journal," Evolution News & Science Today, October 2, 2020 [Link]

> "The article explicitly cites work by Discovery Institute Fellows such as Stephen Meyer, Gunter Bechly, Ann Gauger, Douglas Axe, and Robert J. Marks."

723. "Breakout Paper in Journal of Theoretical Biology Explicitly Supports Intelligent Design" Evolution News & Science Today, October 5, 2020 [Link]

> "the authors consider intelligent design as a possible explanation of biological fine-tuning, citing heavily the work of William Dembski, Winston Ewert, Robert J. Marks, and other ID theorists"

724. "Robert J. Marks: Pigeons can solve the Monty Hall problem. But can you?" Uncommon Descent. October 6, 2020 [Link]

725. Robert J. Marks, "Russia Aims to Close the Technology Gap With the United States "Mind Matters News, October 9, 2020 [Link]

> "Walter Bradley Center director Robert J. Marks talks with Samuel Bendett about Russia's struggles to develop AI for entrepreneurship and free enterprise, rather than military uses."

726. "Robert J. Marks on the 'Listen to science' mantra" Uncommon Descent, October 13, 2020 [Link]

727. "Russia Is Systematically Copying U.S. Military AI Robotics" Mind Matters News, October 15, 2020 [Link]

> "This week's podcast, "AI development in Russia,' is Part 2 of a podcast featuring Walter Bradley Center director Robert J. Marks in discussion with Samuel Bendett about Russia's intended military uses of AI."

   (a) Reprinted at IoT.ng [Link]

   (b) Reprinted at IAM Platform

728. "Why Is AI a Key Battleground in Philosophy and Religion?" Mind Matters News, October 24, 2020 [Link]

> "Walter Bradley Center director Robert J. Marks interviews futurist George Gilder on *How AI is gaming intelligence.*"

729. "Faster Computers Lead to More Wealth, Right? What Could Go Wrong?" Mind Matters News, October 29, 2020 [Link]

> "George Gilder and computer engineer Robert J. Marks, our Walter Bradley Center director, continued their discussion of the impact of artificial intelligence (AI)."

730. "Has the Singularity Been Called Off? Indefinitely Postponed?" Mind Matters News, November 5, 2020 [Link]

> "*George Gilder on Superintelligent AI,* tech philosopher George Gilder and computer engineer Robert J. Marks, our Walter Bradley Center director, continued their discussion of the impact of artificial intelligence (AI)."

731. "STRETTON'S PARADOX: THE PARADOX OF THE LOWLY WORM" Mind Matters News, November 10, 2020 [Link]

> "Robert J. Marks [and] tech philosopher George Gilder used the term 'Stretton's paradox' in connection with the attempt to understand the human connectome, the white matter in your brain that is as dense as the entire internet."

732. "While the West Hesitates, China Is Moving to Blockchain" Mind Matters News, November 12, 2020 [Link]

> "...tech philosopher George Gilder and computer engineer Robert J. Marks, our Walter Bradley Center director, continued their discussion ... on the future of blockchain, of quantum computing, and carbon computing. What difference will they make? Quite a lot it seems. Today, we will look at what happens when blockchain goes global."

   (a) Reprinted at CryptoCup.com [Link]

   (b) Reprinted at Exchange Crypto News [Link]

   (c) Reprinted at E-RMB [Link]

   (d) Reprinted at iammarketingmedia.com [Link]

   (e) navms.com [Link]

733. "Does Schrödinger's Cat Think Quantum Computing Is a Sure Thing?" Mind Matters News, November 17, 2020 [Link]

   (a) Reposted at IAM Marketing Media [Link]

734. "Could Carbon Computing Make Computers More Environment Friendly?" Mind Matters News, November 18, 2020 [Link]

> "...futurist George Gilder and computer engineer Robert J. Marks looked at, among other things, what's really happening with carbon computing"

735. "Is the U.S. Military Falling Behind in Artificial Intelligence?" Mind Matters News, November 20, 2020 [Link]

> "Robert J. Marks spoke with Robert D. Atkinson and Jackie Whisman on the distinguished AI suppose tank, Data Know-how and Innovation Basis, about his latest e-book, The Case for Killer Robots."

Reposted at:

(a) American Infrastructure Group

(b) AI Development Hub [Link]

(c) People In Tech [Link]

(d) IOT [Link]

(e) IAM Marketing Media [Link]

736. "AI Is Not Nearly Smart Enough to Morph Into the Terminator" Mind Matters News, November 23, 2020 [Link]

> "Walter Bradley Center director Robert J. Marks spoke with Robert D.Atkinson and Jackie Whisman at the prominent AI think tank, Information Technology and Innovation Foundation, about his recent book, The Case for Killer Robots."

737. "Is the Research Money for AI Spent at Universities Just Wasted?" Mind Matters News, November 25, 2020 [Link]

738. "Computer Prof: Feds Should Avoid University, Seek Entrepreneurs" Mind Matters News, November 26, 2020 [Link]

739. "Here's Why the Quantum World Is Just So Strange" Mind Matters News, November 26, 2020 [Link]

> "Robert J. Marks talks with fellow computer engineer Enrique Blair about why Quantum mechanics pioneer Niels Bohr said, 'If quantum mechanics hasn't profoundly shocked you, you haven't understood it yet.' " "

740. "The quantum world underlies our universe but follows its own 'rules' " Uncommon Descent, November 27, 2020 [Link]

741. "How Scientists Have Learned To Work With the Quantum World" Mind Matters News, November 29, 2020 [Link]

(a) Reprinted at I AM [Link]

742. "The Final Ambiguous Truth About Schrödinger's Cat" Mind Matters News, November 30, 2020 [Link]

743. " 'Spooky Action at a Distance' Makes Sensein the Quantum World" Mind Matters News, December 2, 2020 [Link]

> "Robert J. Marks talks with fellow computer engineer Enrique Blair about why quantum mechanics is so strange. The discussion turned to why Albert Einstein, a brilliant but orderly mathematical thinker, did not really like quantum mechanics at all and what we should learn from that"

(a) Reprinted at Convetic

744. "A New Book Discusses Walter Bradley's Life And Legacy" Uncommon Descent, December 2, 2020 [Link]

745. "How Quantum Computing Can and Can't Help Us Here in Macro World" Mind Matters News, December 3, 2020 [Link]

> "Robert J. Marks [and] Enrique Blair about why quantum mechanics is so strange, yet an intrinsic part of the way our universe works. They discussed whether quantum computing will be in our future any time soon? In our cell phones? What difference will it make? "

(a) Reprinted Coventik Digital News [Link]

746. "Why Google's 'Quantum Supremacy' Isn't Changing Much - Not Yet" Mind Matters News, December 4, 2020 [Link]

747. "How is information present in life?" Uncommon Descent, December 4, 2020 [Link]

> "Robert J. Marks: Before talking about information, you really have to define it For example, if I burn a book to ashes and scatter the ashes around, have I destroyed information? Does it make a difference if there's another copy of the book? If I take a picture, am I creating information? The answers depend on your definition of information."

748. "How Spooky 'Quantum Collapse' Can Give Us More Secure Encryption" Mind Matters News, December 8, 2020 [Link]

> "Walter Bradley Center director Robert J. Marks talks with ... Enrique Blair about why quantum mechanics is so strange but important to our future. They discussed 'quantum communication' (generally, quantum encryption) and why safer quantum encryption might be easier to achieve than general quantum computing. "

749. "Yellow Fingers Do Not Cause Lung Cancer" Mind Matters News, December 10, 2020 [Link]

> "Neurosurgeon Michael Egnor and computer engineer Bob Marks look at the ways Big Data can mislead us into mistaking incidental events for causes"

750. 'Could Slowing Quantum Processes Lead To More Useful Computing?" Mind Matters News, December 10, 2020 [Link]

> "Robert J. Marks talks with fellow computer engineer Enrique Blair about why quantum mechanics is so strange but important to our future. They discussed the prospects of slowing down quantum computing to make it more useful (adiabatic computing)"

751. "Help Mind Matters News Continue in 2021" Mind Matters News, December 11, 2020 [Link]

> "Mind Matters News has already published more than 500 articles in 2020, attracting more than 800,000 users to its website and reaching another 330,000+ users through the Apple News platform, for a combined audience of over 1.1 million."

752. "Complexity Is Not Always a Bad Thing" Mind Matters News, December 12, 2020 [Link]

> "Robert J. Marks: In terms of meaningful information, I think it's obvious. Michael, they used to say that it doesn't take a brain surgeon to answer this or it doesn't take a rocket scientist. Well, it turns out you're a brain surgeon and I've done work for NASA and I got an NASA Tech Brief award. I guess that makes me a rocket scientist. So I think for both of us, the answer is obvious, yeah, that Mount Rushmore contains more information than does Mount Fuji. And it's clear from the context that this refers to meaningful information. There's more meaningful information on Mount Rushmore. There's Lincoln and Roosevelt and Washington, and yep, what do we get? Well, if we get Mount Fuji, we just get a big chocolate gum drop. So yeah, there's obviously more information on one than the other."

753. "Walter Bradley: An Engineer Who Has Made a Difference" Mind Matters News, December 13, 2020 [Link]

> "Titled *For a Greater Purpose: The Life and Legacy of Walter Bradley* the biography is authored by Walter Bradley Center Director Dr. Robert J. Marks and Distinguished Fellow design theorist William Dembski."

754. "Why is specified complexity so badly misunderstood?" Uncommon Descent, December 13, 2020 [Link]

755. "#12! AI Is Going To Solve All Our Problems Soon!" Mind Matters News, December 17, 2020 [Link]

> "...our Walter Bradley Center director Robert J. Marks interviewed fellow computer nerds, members of our Brain Trust, Jonathan Bartlett and Eric Holloway on their picks last Saturday."

756. John West "Walter Bradley's Wonderful Life Scientist, Humanitarian, ID Proponent" Evolution News & Science Today, December 17, 2020 [Link]

757. "#11: A Lot of AI Is As Transparent As Your Fridge" Mind Matters News, December 18, 2020 [Link]

758. "A new book discusses Walter Bradley's life and legacy" Uncommon Descent, December 20, 2020 [Link]

"Walter Bradley has been a key figure in the ID community. The biography, *For a Greater Purpose*, is by Robert J. Marks and William Dembski"

759. "WALTER BRADLEY CENTER: YEAR IN REVIEW 2020" Mind Matters News, December 21, 2020 [Link]

"Directed by Baylor University professor Robert J. Marks, the Bradley Center is guided by the vision of Discovery Institute board member and entrepreneur William Dembski."

"Under the editorship of Denyse O'Leary, Mind Matters News has published more than 500 articles in 2020, attracting more than 800,000 users to its website and reaching another 330,000+ users through the Apple News platform, for a combined audience of over 1.1 million."

"The Mind Matters News podcast has produced more than 50 new episodes, which have been downloaded 130,000 times. Hosted by Robert J. Marks, the podcast tackled topics such as "Can Computers Think?, Artificial Intelligence Gaming the Stock Market, AI Development in Russia, and The Evolution (Or Not) of Consciousness, Distracted by Virtual Reality, and How Will Artificial Intelligence Impact the World by 2084? Noted podcast guests included economist George Gilder, neurosurgeon Michael Egnor, computer scientist Selmer Bringsjord at Rensselaer Polytechnic Institute, Scientific American contributing author Bernardo Kastrup, Oxford University mathematician John Lennox, University of Miami research statistician Daniel Andrs Daz-Pachn, and Jonathan Sackier, Chief Medical Officer of Helius Medical Technologies." "

"On the publication front, the Bradley Center and its Fellows were involved in the production of several new books in 2020. Starting off the year was Robert Marks' short book, *The Case for Killer Robots: Why America's Military Needs to Continue Development of Lethal AI*, which was praised as 'succinct, well-reasoned, detailed, and provocative' by Donald Wunsch, Director of the Applied Computational Intelligence Lab at Missouri University of Science and Technology. Dr. Marks participated in more than 30 media interviews promoting the book, including appearances on *Fox News Radio* and *Coast to Coast with George Noory*, the #5 radio show in the nation, which reaches a weekly audience of 10.5 million listeners. "

760. "#10: Big AI Claims Fail To Work Outside Lab" Mind Matters News, December 22, 2020 [Link]

◇ Reposted at Full Stack Feed [Link]

761. "#9: Erica the Robot Stars in a Film. But Really, Does She?" Mind Matters News, December 23, 2020 [Link]

"Our Walter Bradley Center director Robert J. Marks has been interviewing fellow computer nerds (our Brain Trust) Jonathan Bartlett and Eric Holloway about 12 overhyped AI concepts of the year."

762. "Erica, Robot Film Star, is Pretty Typical Modern-Day Puppeteering" Mind Matters News, December 24, 2020 [Link]

763. "#8 in our AI Hype Countdown: AI Is Better Than Doctors!" Mind Matters News, December 25, 2020 [Link]

    - ◇ Reposted at Nigeria Cancer Blog [Link]
    - ◇ Reposted at Tech Menders [Link]
    - ◇ Reposted at Computer Science News [Link]

764. "AND WALTER BRADLEY REACHED OUT HIS HAND ⋯" Mind Matters News, December 27, 2020 [Link]

765. "#7 AI CAN CREATE GREAT NEW VIDEO GAMES ALL BY ITSELF!" Mind Matters News, December 28, 2020 [Link]

    - ◇ Reposted at Computer Science News [Link]
    - ◇ Reposted at Retro Avatar (India) [Link]

766. "#6 A CONVERSATION BOT IS COOL IF YOU REALLY LOWER YOUR STANDARDS" Mind Matters News, December 29, 2020 [Link]

    - ◇ Reposted at Computer Science News [Link]

767. "#5 AI HYPE: AI COULD GO PSYCHOTIC DUE TO LACK OF SLEEP!" Mind Matters News, December 30, 2020 [Link]

    > "Our nerds here at the Walter Bradley Center have been discussing the AI hypes of the year. Our director Robert J. Marks, Eric Holloway and Jonathan Bartlett have been talking about 12 overyhyped AI ideas."

    - ◇ Reposted at TradingTech.org (Sassico) [Link]
    - ◇ Reposted at People in Tech [Link]
    - ◇ Reposted at IoT (Switzerland) [Link]
    - ◇ Reposted at Tech Register (United Kingdom) [Link]
    - ◇ Reposted at Mind Relaxation [Link].
    - ◇ Reposted at Tech Register (United Kingdom) [Link].

768. "WILL MACHINE LEARNING DISRUPT ACADEMIC RANKINGS?" Mind Matters News, December 31, 2020 [Link]

    > "Disclosure: Robert J. Marks, Bradley Center Director, is a member of the Core Team at AcademicInfluence."

2021

769. "#4 Elon Musk: This Time Autopilot Is Going To WORK!" Mind Matters News, January 1, 2021 [Link]

    - ◇ Reposted at People in Tech [Link]
    - ◇ Reposted at Sharecaster [Link]
    - ◇ Reposted at eCar News [Link]
    - ◇ Reposted at Computer Science News [Link]

770. "#3 AI, We Are Now Told, Knows When It Shouldn't Be Trusted!" Mind Matters News, January 1, 2021 [Link]

    - ◇ Reposted at Tech Register [Link]
    - ◇ Reposted at People in Tech [Link]
    - ◇ Reposted at IoT [Link]

771. "#2 Computers Can Be As Smart As Humans If We Crowdfund Them!" [Link]

    - ◇ Reposted at IoT [Link]

772. "New Edition Of Blyth Institute Journal" Uncommon Descent, January 1, 2021 [Link]

    > "The mathematics of tiling patterns."

773. "Our #1 AI Hype of 2020!: Elon Musk Will Fix Your Brain!" Mind Matters News, January 2, 2021 [Link]

774. "Jonathan Bartlett on Why We Do Not Live in a Simulated Universe" Mind Matters News, January 3, 2021 [Link]

    > "Here's what Jonathan [Bartlett], of the Blyth Institute says about it, in conversation with Walter Bradley Center director Robert J. Marks "

    - ◇ Covered by TV6 News
    - ◇ Covered by Atomeiry.com
    - ◇ Covered by Newshamble.com
    - ◇ Covered by Stellar Reaches

775. "#10 AI Success!: Translation Gets Faster and Better" Mind Matters News, January 7, 2021 [Link

    > "Once again, our Walter Bradley Center director, Robert J. Marks, is back with Jonathan Bartlett and Eric Holloway this time to to discuss real advances in AI in 2020."

776. "#9 AI Success: Smarter Cars for Non-Millionaires" Mind Matters News, January 8, 2021 [Link]

> "Our Walter Bradley Center director Robert J. Marks is back with Jonathan Bartlett and Eric Holloway to assess the Top Ten real advances (Smash Hits) in AI in 2020."

- ◇ Reposted at People in Tech [Link]
- ◇ Reposted at IoT [Link]

777. "Algorithmic Specified Complexity: Genesis" Evolution News & Science Today, January 9, 2021 [Link]

> "On a classic episode of ID the Future, Robert J. Marks and Winston Ewert... discuss three of their papers written with design theorist William Dembski. "

778. "#8 AI 2020 Smash Hit: Big Gains in Practical Self-Driving Cars" Mind Matters News, January 9, 2021 [Link]

779. "#7 AI Smash Hit: Why AI Can't Do Your Thinking for You" Mind Matters News, January 12, 2021 [Link]

780. "#6 AI Smash Hit 2020!: AI Defeats Fighter Pilot Hands Down" Mind Matters News, January 13, 2021 [Link]

781. "AI 2020 Smash hits #5: DeepfakesWhat They Can and Can't Do" Mind Matters News, January 13, 2021 [Link]

782. "Researchers: It Would Be Impossible To Control Super AI" Mind Matters News, January 16, 2021 [Link]

> "When asked whether HAL had a mind or not, he responded that he didn't know... Marks compares the question to 'arguing whether Spider Man can beat up the Green Lantern.' "

- ◇ Reposted at IoT.ng [Link]

783. '#4 AI Smash Hits 2020 AI Helps Detect Dreaded White Eye Disease" Mind Matters News, January 18, 2021 [Link]

784. RICHARD W. STEVENS "WHY THE IDEA THAT THE HUMAN MIND IS AN ILLUSION DOESN'T WORK" Mind Matters News, January 19, 2021 [Link]

> Photo of Bob & Connie with mirrors: Photo by Robert J. Marks

785. "Algorithmic Specified Complexity: The Game of Life" Evolution News & Science Today, January 20, 2021 [Link]

786. "#3 AI Smash Hits 2020: AI Can Help Paralyzed People Move Again" Mind Matters News, January 20, 2021 [Link]

787. "AI Smash Hits #2 To Win AI-Run Poker Humans Must Find Blind Spots" Mind Matters News, January 21, 2021 [Link]

    ◇ Reposted at GuciPoker.com [Link]

    ◇ Reposted at Poker News [Link]

788. "#1 Smash Hit in AI 2020: AI Cracks Protein Folding!" Mind Matters News, January 22, 2021 [Link]

789. Jonathan Witt "Algorithmic Specified Complexity: Measuring Mount Rushmore" Evolution News & Science Today, January 23, 2021 [Link]

    > "On a classic episode of ID The Future, Robert J. Marks and Winston Ewert, both of the Evolutionary Informatics Lab, continue their conversation about three of their recently published papers dealing with evolution, biological information, and what is known as algorithmic specified complexity."

790. Richard W. Stevens "The Infinity Mirror Trap: Part 2: The Thought Determinism Paradox" Mind Matters News, January 24, 2021 [Link]

    Photo of Bob & Connie with mirrors.

791. "Can Deepfakes Substitute for Actors?" Mind Matters News, January 26, 2021 [Link]

    > "When our Walter Bradley Center director, Robert J. Marks, was discussing with Eric Holloway the events that really made a difference in AI, one very interesting issue that came up was the use of deepfakes to substitute for actors in films."

    ◇ Reposted at NewsChest public figures

792. "Does Information Just Happen? Or Does the Universe Have Meaning?" Mind Matters News, January 29, 2021 [Link]

    > "Neurosurgeon Michael Egnor ...interviewed Robert J. Marks ... on the nature of information. Information makes a huge difference to what happens among human beings. But it is not like matter or energy. It doesn't weigh anything or generate heat. How can we understand it scientifically? "

793. "What If, Condemned, You Had 12 Friends on the Firing Squad?" Mind Matters News, January 29, 2021 [Link]

    > "Neurosurgeon Michael Egnor, a frequent contributor to Mind Matters News, interviewed our Walter Bradley Center director Robert J. Marks on the nature of information... the question comes up: How do we know if something is an accident or not? "

794. "NOT CONSPIRACY THEORY: HOW ONLINE TROLLS CAN CONTROL YOUR NEWS" Mind Matters News, February 1, 2021 [Link]

> "Robert J. Marks hosted intelligence analyst Denise Simon, talking about the way hostile foreign powers can use AI to generate false information "

795. "Things That Might Surprise You About Great Scientists" Uncommon Descent, February 3, 2021 [Link]

796. "HOW RUSSIA USES NEW TECH TO CREATE CHAOS IN THE UNITED STATES" Mind Matters News, February 4, 2021 [Link]

> "Walter Bradley Center director Robert J. Marks hosted Denise Simon, an intelligence analyst, talking about the way hostile foreign powers can use AI to generate false information."

- ◇ Reposted at Russian News Review
- ◇ Reposted at News-Lynx
- ◇ Reposted at Trump and Trumpism
- ◇ Reposted at Internet Guide USA
- ◇ Reposted at Trump Investigation
- ◇ Reposted at Trump Investigation
- ◇ Reposted at Trump News

797. "No Free Lunch for Darwin The AI Case Against Blind Evolution" Evolution News & Science Today, February 4, 2021 [Link]

> "On a new ID the Future episode cross-posted at Mind Matters, professor of neurosurgery Michael Egnor hosts Robert J. Marks, Distinguished Professor of Electrical and Computer Engineering at Baylor University, and Director of Discovery Institute's Walter Bradley Center for Natural & Artificial Intelligence. The two discuss evolutionary computing, the no free lunch theorem, Aristotle, and the contextual role of purpose in recognizing chance events."

798. "No Free Lunch for Darwin The AI Case Against Blind Evolution" Evolution News & Science Today, February 4, 2021. [Link]

> "On a new ID the Future episode cross-posted at Mind Matters, professor of neurosurgery Michael Egnor hosts Robert J. Marks, Distinguished Professor of Electrical and Computer Engineering at Baylor University, and Director of Discovery Institute's Walter Bradley Center for Natural & Artificial Intelligence."

799. "TODAY'S RUSSIAN DIPLOMACY: DEEPFAKES AND RADIOACTIVE POISONS" Mind Matters News, February 5, 2021 [Link]

> "Robert J. Marks hosted Denise Simon, an intelligence analyst, talking about the way hostile foreign powers can use AI to generate false information."

- ◇ Reposted at Pashman Tech Thoughts

800. "WALTER BRADLEY: FINDING A LIFE OF GREATER PURPOSE" Mind Matters News, February 14, 2021 [Link]

> "Robert J. Marks and design theorist William Dembski discuss the biography they have written about a remarkable engineer, Walter Bradley, *For a Greater Purpose: The Life and Legacy of Walter Bradley.* It also helps explain why we call ourselves the Walter Bradley Center, as we seek to extend Dr. Bradley's work."

801. STEPHEN BERGER "EXACTLY WHAT IS ARTIFICIAL INTELLIGENCE ANYWAY?" Mind Matters News, February 18, 2021 [Link]

- ◇ Reposted at Celebsy
- ◇ Reposted at Just Ai
- ◇ Reposted at abangtech
- ◇ Reposted at IoT.ng

802. "HOW WALTER BRADLEY BROKE DOWN CAMPUS ANTI-CHRISTIAN PREJUDICE" Mind Matters News, February 21, 2021 [Link]

> "Walter Bradley Center director Robert J. Marks and design theorist William Dembski reflect on the biography they have written about a remarkable engineer, Walter Bradley, *For a Greater Purpose: The Life and Legacy of Walter Bradley.*"

803. "RESEARCHERS DISAPPOINTED BY EFFORTS TO TEACH AI COMMON SENSE" Mind Matters News, February 21, 2021 [Link]

> "Ambiguous quests that baffle AI because it cannot access life experience are called Winograd schemas. Robert J. Marks offers a number of examples, with commentary "

804. "WHY OXFORD'S JOHN LENNOX WROTE A BOOK ON AI PROMISES AND THREATS" Mind Matters News, February 22, 2021 [Link]

> "Robert J. Marks $\cdots$ focused on why Lennox chose that theme and how far we have caught up with George Orwell's 1984. "

805. "GREGORY CHAITIN ON THE GREAT MATHEMATICIANS, EAST AND WEST" Mind Matters News, March 5, 2021 [Link]

> "Robert J. Marks interviewed mathematician and computer scientist Gregory Chaitin on the almost supernatural awareness that the great mathematicians had of the foundations of reality in the mathematics of our universe "

806. "Gregory Chaitin (Of Chaitin's Number Fame) Muses On What Makes The Great Mathematicians Stand Out" Uncommon Descent, March 5, 2021 [Link]

807. "GREGORY CHAITIN'S 'ALMOST' MEETING WITH KURT GÖDEL" Mind Matters News, March 6, 2021 [Link]

808. "HOW KURT GÖDEL DESTROYED A POPULAR FORM OF ATHEISM" Mind Matters News, March 7, 2021 [Link]

809. "Kurt Gödel Was Unhappy With Atheism And Finally He Blasted One Fashionable Type To Smithereens" [Link]

> "Gregory Chaitin and Robert J. Marks discuss Gödel in more detail"

810. "Kurt Gödel Was Unhappy With Atheism And Finally He Blasted One Fashionable Type To Smithereens" Uncommon Descent, March 7, 2021 [Link]

811. "Robert J. Marks II" PipiWiki, first posted March 9, 2021 [Link]

812. "Gregory Chaitin On True Randomness"Uncommon Descent, March 12, 2021 [Link]

813. "CHAITIN'S DISCOVERY OF A WAY OF DESCRIBING TRUE RANDOMNESS" Mind Matters News, March 23, 2021 [Link]

814. "HOW DID RAY SOLOMONOFF KICKSTART ALGORITHMIC INFORMATION THEORY?" Mind Matters News, March 15, 2021 [Link]

815. "HARD MATH CAN BE ENTERTAINING WITH THE RIGHT MUSICAL SCORE!" Mind Matters News, March 16, 2021 [Link]

816. "MATHEMATICS: DID WE INVENT IT OR DID WE MERELY DISCOVER IT?" Mind Matters News, March 19, 2021 [Link]

> "Robert J. Marks interviewed mathematician and computer scientist Gregory Chaitin (pictured) on how math presents us with a challenging philosophical question: Does math image deep truth about our universe? Or do we just make up these math rules in our own minds to help us understand nature?"

817. "Gregory Chaitin's Take On: Was Math Invented Or Discovered?" Uncommon Descent, March 19, 2021 [Link]

818. "Gregory Chaitin's take on: Was math invented or discovered?" Uncommon Descent, March 19, 2021 [Link]

819. "WHY DON'T WE SEE MANY GREAT BOOKS ON MATH ANY MORE?" Mind Matters News, March 20, 2021 [Link]

820. "At Mind Matters News: Why don't we see many great books on math any more?" Uncommon Descent, March 20, 2021 [Link]

821. "At Mind Matters News: Why Don't We See Many Great Books On Math Any More?" Uncommon Descent, March 20, 2021 [Link]

822. "WHY ELON MUSK AND OTHER GENIUSES CAN'T AFFORD TO FOLLOW RULES" Mind Matters News, March 21, 2021 [Link]

823. "HOW STEPHEN WOLFRAM REVOLUTIONIZED MATH COMPUTING" Mind Matters News, March 22, 2021 [Link]

824. "Gregory Chaitin on How Bureaucracy Chokes Science Today" Mind Matters News, March 23, 2021 [Link]

825. "Gregory Chaitin on the dead hand of bureaucracy in science" Uncommon Descent, March 23, 2021 [Link]

826. "A Question Every Scientist Dreads: Has Science Passed the Peak?" Mind Matters News, March 24 2021 [Link]

> "Robert J. Marks interviewed mathematician and computer scientist Gregory Chaitin on many things, including whether the great discoveries in science are behind us not due to lack of creativity or ability on the part of scientists but to the growing power of corporate and government bureaucracies to stifle research. "

827. "Getting To Know the Unknowable Number (More or Less)" Mind Matters News, March 25, 2021 [Link]

828. 'Listen: Mathematician Gregory Chaitin on Godel, Incompleteness ... and Children" Evolution News & Science Today, March 25, 2021 [Link]

> "host Robert J. Marks begins a conversation with trailblazing Argentine-American mathematician and computer scientist Gregory Chaitin."

829. "Why the Unknowable Number Exists But Is Uncomputable" Mind Matters News, March 28, 2021 [Link]

830. "The Paradox of the Smallest Uninteresting Number" Mind Matters News, March 29, 2021 [Link]

831. "Why Human Creativity Is Not Computable" March 30, 2021 [Link]

832. "Gregory Chaitin on why human creativity is not computable" Uncommon Descent, March 30, 2021 [Link]

833. "For a Greater Purpose: The Life and Legacy of Walter Bradley" Walter Bradley comments, FRONTLINES. Faculty Commons - a CRU Ministry. [Link.]

834. "Can Mathematics Help Us Understand Consciousness?" Mind Matters News, Aplil 1, 2021 [Link]

835. "Is Chaitin's Unknowable Number a Constant?" Mind Matters News, April 2, 2021 [Link]

836. "Gregory Chaitin asks, if the universe is information, not matter, does that help explain consciousness?" Mind Matters News, April 2, 2021. [Link]

837. "Gregory Chaitin: Why 'impractical' things like philosophy are actually quite useful" Uncommon Descent, April 6, 2021 [Link]

838. "WHY IMPRACTICAL THINGS LIKE PHILOSOPHY ARE ACTUALLY QUITE USEFUL" Mind Matters News, April 6, 2021 [Link]

> "Robert J. Marks continued his conversation with mathematician Gregory Chaitin, best known for Chaitin's unknowable number."

839. STACY TILLIE "Top-flight faculty pioneer research poised to make dramatic improvements in the aerospace industry for generations to come." Synergy Magazine, Baylor University [Link]

840. "COULD CHAITIN'S NUMBER PROVE GOLDBACH'S CONJECTURE AT LAST?" Mind Matters News, April 7, 2021 [Link]

> "Walter Bradley Center director Robert J. Marks continued his conversation with mathematician Gregory Chaitin, best known for Chaitin's unknowable number. One thing [Walter Bradley Center director Robert J. Marks and mathematician Gregory Chaitin] discussed was the usefulness of philosophy, with Chaitin saying that if he had had to do practical work 60 years ago, there wouldn't be practical research today based on the Omega number."

841. "THE 'JUMP' OF CHAITIN'S OMEGA NUMBER" Mind Matters News, April 8, 2021 [Link]

> "Dr. Marks and Dr. Chaitin discuss what we can know about Omega numbers"

842. "NEW BOOK MASSIVELY DEBUNKS OUR 'AI OVERLORDS': AIN'T GONNA HAPPEN" Mind Matters News, April 14, 2021 [Link]

> "I saw computational intelligence research, such as conducted by my colleague Robert J. Marks II, produce interesting solutions to well-defined problems, but without pretensions for creating artificial minds that would compete with human minds... William Dembski. "

843. "Robert J. Marks: How materialism proves unbounded scientific ignorance" Uncommon Descent, April 14, 2021 [Link]

844. William A. Dembski "Artificial Intelligence: Unseating the Inevitability Narrative" Evolution News & Science Today, April 19, 2021. [Link]

845. ELIZABETH WHATELY "A SHORT FILM EXPLORES THE DREAMSCAPE OF A CHILD IN A COMA" Mind Matters News, May 3, 2021 [Link]

846. Elizabeth Whately "Where Do People Go in a Coma?" Evolution News & Science Today, May 5, 2021. [Link]

> "...as engineer Robert J. Marks and neurosurgeon Michael Egnor discuss in this interview, evidence shows that even people in a 'persistent vegetative state' (viewed by some as 'vegetables') can hear and understand us."

847. Elizabeth Whately "Where Do People 'Go' in a Coma?" Evolution News & Science Today, May 5, 2021 [Link]

> "...as engineer Robert J. Marks and neurosurgeon Michael Egnor discuss ..., evidence shows that even people in a 'persistent vegetative state' (viewed by some as 'vegetables') can hear and understand us."

848. "IF THE MIND AND BODY ARE SO DIFFERENT, HOW CAN THEY INTERACT?" Mind Matters News, May 7, 2021 [Link]

> "...director Robert J. Marks interviewed Concordia University philosopher Angus Menuge on the notoriously difficult mindbody problem. In the first part, they talked about we know we are not just bodies, citing the immateriality and indivisibility of the mind and the evidence from near-death experiences. But then how does the immaterial mind interact with the material body? "

- ◇ Reposted by Green Mind Body [Link]

849. "How Have Various Thinkers Tried To Solve the MindBody Problem?" Mind Matters News, May 11, 2021 [Link]

> "Robert J. Marks interviewed Concordia University philosopher Angus Menuge on one of philosophy's biggest headscratchers, the mindbody problem. "

850. "Marks: We Can't Do Without Autonomous Killer Robots in Combat" Mind Matters News, May 11, 2021 [Link]

> "Over a year ago, Robert J. Marks argued in *The Case for Killer Robots* for developing autonomous military weapons."

851. "How Would Angus Menuge Resolve the MindBody Problem?" Mind Matters News, May 12, 2021 [Link]

> "Robert J. Marks interviewed Concordia University philosopher Angus Menuge on the difficult mindbody problem: What, exactly, is the connection between wanting a drink of milk and carrying out the actions that produce one?"

◇ Reposted at Green Mind Body

852. "Will AI Change or Eliminate the Mind-Body Problem?" Mind Matters News, May 14, 2021 [Link]

> "Robert J. Marks interviewed Concordia University philosopher Angus Menuge on the difficult mindbody problem: Dr. Menuge sees mindbody interaction as a transmission of information between two realms; our minds and bodies are one integrated system with a translation function "

853. "Could Artificial Intelligence Change The MindBody Problem?" Uncommon Descent, May 14, 2021 [Link]

854. "Can the Machine Know You Are Just Being Sarcastic?" Mind Matters News, May 15, 2021 [Link]

> "Walter Bradley Center director Robert J. Marks, a computer engineer, is a bit skeptical of the claim that an AI program can detect sarcasm. He says:"

◇ Reposted at AI-Summary.com

855. "ANGUS MENUGE EXPLAINS WHY 'RED' IS SUCH A PROBLEM IN PHILOSOPHY" Mind Matters News, May 19, 2021 [Link]

> "In philosopher Angus Menuge's second podcast with Walter Bradley Center director Robert J. Marks, the big topic is the perennial Hard Problem of consciousness and various proposed solutions. "

◇ Reposted at StudentDigital.org

856. "PANPSYCHISM IS, IN ANGUS MENUGE'S VIEW, A DESPERATE MOVE" Mind Matters News, May 20, 2021 [Link]

857. "CAN QUANTUM MECHANICS HELP DECIPHER CONSCIOUSNESS? FREE WILL?" Mind Matters News, May 21, 2021 [Link]

858. "CAN A MATERIALIST CONSCIOUSNESS THEORY SURVIVE QUANTUM MECHANICS?" Mind Matters News, May 23, 2021 [Link]

> "Robert J. Marks's second podcast with philosopher Angus Menuge, where the big topic is the perennial 'Hard Problem of consciousness,' one of the questions was whether quantum mechanics can help decipher consciousness. But that leads to another question: Can any materialist view of consciousness survive quantum mechanics?"

859. "Can We Apply Tests for Consciousness to Artificial Intelligence?" Mind Matters News, May 24, 2021 [Link.] Reprinted at:

    - ◇ celebsy.
    - ◇ Trading Tech
    - ◇ SEA (South East Asia) Tiger News
    - ◇ Artificial Intelligence
    - ◇ Zelpedia
    - ◇ Cryonics Revival
    - ◇ IoT

860. "Mystery: Our Brains Divide Up Events But We Experience Them Whole " Mind Matters News, May 25, 2021 [Link]

861. "How Split-Brain Surgery Underlines the Unity of Consciousness" Mind Matters News, May 26, 2021 [Link]

862. "Why Do We Stay the Same Person Over Time? Why Not Split Up?" Mind Matters News, May 27, 2021 [Link]

863. "Life in the Plural: If There Were Two of You, Would 'You' Exist?" Mind Matters News, May 29, 2021 [Link]

864. "Why Don't Changes to Our Bodies Create a Different Consciousness?" Mind Matters News, May 30, 2021 [Link]

    > "Marks asks one final question: If consciousness is simply generated by the body, as materialists think, why don't changes to our bodies create different consciousnesses? "

865. "What Will Elon Musk's Neuralink Really Change, If It Catches On" Mind Matters News, May 31, 2021 [Link]

866. "HOW MARVIN MINSKY INSPIRED ARTIFICIAL NEURAL NETWORKS" Mind Matters News, June 4, 2021 [Link]

    > "In this week's podcast, Dr. Robert J. Marks interviewed Dr. Paul Werbos, famous for his 1974 dissertation which proposed training artificial neural networks through the use of a backpropagation of errors."

867. " 'AI IS FASTEST PATH TO COMMUNISM,' SAYS ELON MUSK'S PARTNER" Mind Matters News, June 4, 2021 [Link]

    > "*Mind Matters News* posted an article from Dr. Robert J. Marks earlier this week, countering the predictions of AI Dystopians that killer robots will one day rule the world."

868. "NEW PAPER PROVIDES FURTHER EVIDENCE FOR FREE WILL" Mind Matters News, June 5, 2021 [Link]

> "Robert J. Marks [to Michael Egnor]: You mentioned that Libet's experiment of free won't is misrepresented by materialists. Could you elaborate on that a little bit? "

869. "THE MYSTERY OF NUMERACY: HOW DID WE LEARN TO COUNT?" Mind Matters News, June 5, 2021 [Link]

> "Most real numbers are not real or not in the way you think. (Robert J. Marks)"

870. "HOW PATENT LAW HAS CHANGED FOR THE WORSE" Mind Matters News, June 10, 2021 [Link]

> "During their conversation about the National Science Foundation, Drs. Robert J. Marks and Paul Werbos took a moment to discuss patent law."

871. "Marks, Haug: Gödel Says God Exists and Proves It " Mind Matters Newsletter, June 14, 2021.

> "Kurt Gödel, an intellectual giant of the 20th century, offered a mathematical proof that God exists. Those who suffer from math anxiety admire what the theorem claims to do, but have absolutely no idea what it means. Our goal is to explain, in English, what Gödel's existence of God proof says. "

872. "Misleading claims about a long running evolution experiment" Uncommon Descent, June 21, 2021 [Link]

873. "Marks: No Free Lunches Bernoulli is Right, Keynes is Wrong " Mind Matters Newsletter, July 12, 2021.

> "A common visualization of the classic Big Bang model starts with a big empty space where a type of explosion happens. No. This is wrong. 'A big empty space' is something. Imagining the existence of nothing can be difficult. Doing so can tax the imagination."

874. Tom Ford "Robert Marks Ii Net Worth" CelebretyNetWoths.net, Accessed July 14, 2021. [Link]

875. "Robert J. Marks II Net Worth" NetWorthPost.org, Accessed July 14, 2021. [Link]

> "$ 1.2 Million"

876. "Robert J. Marks II, Researcher" CelebsAgeWiki.com, Accessed July 14, 2021. [Link]

> "$ 1 Million - $5 Million"

877. "Vip Faq: Robert J. Marks II" vipfaq.com, Accessed July 14, 2021. [Link]

"Net worth: $ 1,211,431 in 2021"

878. "Tecnologia Só haverá inteligência artificial quando ela tiver falhas humanas" Super Interessante, Accessed July 15, 2021 [Link]

> "'Pelo que vi no artigo cientfico deles, há suposies de que a IA possa criar 'metaobjetivos' [isto é, coisas para as quais não foi programada], e que ela pode ser 'consciente'. Isso não vai acontecer... "

879. "COSM 2021 Speakers" COSM, August 11, 2021 [Link]

880. "Algorithm 2022, Winter 2022, Dallas" algoithmconference.com Link]

> "3 days of high-level talks and workshops... Featured speakers: Robert J. Marks"

881. Daniel Kuhn "EMPs From the Sun Can Wipe Computers and Streetlights" Illinois News Today, August 24, 2021 [Link]

882. "Detecting Malicious Intent in Undisputed Design" Evolution News & Science Today, September 18, 2021 [Link]

> "AI professor Robert J. Marks and neuroscientist Michael Egnor assure us that AI will never gain consciousness or self-awareness. That gives us philosophical hope that Data will never quite 'get there' as a plausible human mimic."

883. "ARE YOUR ELECTRONICS PROTECTED AGAINST SUDDEN SURGES?" Mind Matters News, August 19, 2021. Link]. Reprinted at

   ◇ NationalCybersecurityNews.com

> "In a recent podcast, "Sarah Seguin on EMPs and How to Protect Your Data" (August 5, 2021), Sarah Seguin, talks with Walter Bradley Center director Robert J. Marks."

884. "EMPS FROM THE SUN CAN WIPE COMPUTERS AND STREETLIGHTS" Mind Matters News, August 20, 2021 [Link]

   ◇ NationalCybersecurityNews.com

885. "When will Artificial General Intelligence Actually Arise?" Ricochet, August 23, 2021. [Link]

886. "Ours Is a Finely Tuned and No Free Lunch Universe" MM, September 8, 2021. [Link.]

887. "Science Uprising Returning for Season 2 on September 15" Evolution News & Science Today, September 6, 2021. [Link]

> "Scientists appearing in Season 2 include Oxford University mathematician John Lennox, geologist Casey Luskin, physicist Brian Miller, engineer Robert Marks, philosopher of science Stephen Meyer..."

888. "Fine-tuning? How Bayesian statistics could help break a deadlock" Uncommon Descent, September 17, 2021. [Link]

> "Robert J. Marks: As an engineer I'm always interested in reduction to practice. And one of the things that Bayesian statistics is used for is spam filtering."

889. "Life is so wonderfully finely tuned that it's frightening" Uncommon Descent, September 20, 2021. [Link

890. "EMPS COULD COMBAT VAST DRONE SWARMS BETTER THAN WEAPONS" Mind Matters News, August 23, 2021 [Link]. Reprinted at

- ◇ Flipboard
- ◇ Brand Pulse

> "In 'EMPs from the sun can wipe computers and streetlights,' Walter Bradley Center director Robert J. Marks spoke with electrical engineer Sarah Seguin about electromagnetic pulses"

891. Robert J. Marks, "Fine-tuning? How Bayesian Statistics Could Help Break a Deadlock" Uncommon Descent, September 17, 2021. [Link]

> "Swedish mathematician Ola Hössler and University of Miami biostatistician Daniel Andrés Díaz-Pachón discussed with Walter Bradley Center director Robert J. Marks the many ways in which the universe is finely tuned for life."

892. "Life Is So Wonderfully Finely Tuned That It's Frightening" Mind Matters News, September 20, 2021. [Link]

> "'Life is fine-tuned in a fearful and wonderful way,' Swedish mathematician Ola Hössler and University of Miami biostatistician Daniel Andrés Díaz-Pachón discusses fine tuning in biology with Walter Bradley Center director Robert J. Marks. It's a bit scary to think that each of our cells is like a city because it certainly gives us some idea of all the things that can (but, thankfully, usually don't) go wrong. "

893. "Can there be a general theory for fine-tuning?" Uncommon Descent, September 26, 2021. [Link]

> "Robert J. Marks: Ola, you came up with a general theory. We talk about in physics, for example, a theory of everything. It turns out the fine tuning

> is something ubiquitous in our universe. It occurs in biology, chemistry, and physics and cosmology, the specific area of physics.
>
> "The question is, is there a general theory, a general way that we can look at fine tuning across all of these disciplines?"

894. "Was the universe created for life forms to live in? How would we know?" Uncommon Descent, September 26, 2021 [Link]

895. "Can There Be a General Theory for Fine-Tuning?" Mind Matters News, September 21, 2021. [Link]

896. "Why did Stephen Hawking give up on a Theory of Everything?" Uncommon Descent, September 28, 2021. [Link]

> "Robert J. Marks: In fact, I think it was Stephen Hawking who gave up pursuing the Theory of Everything. He appealed to Gödel: No matter what you did, there would be stuff that was true in the universe that you still needed to prove... "

897. "Was The Universe Created For Life Forms To Live In? How Would We Know?" Uncommon Descent, September 26, 2021 [Link]

898. "Why Did Stephen Hawking Give Up On A Theory Of Everything?" Uncommon Descent, September 21, 2021 [Link]

> "Robert J. Marks asks them about why a Theory of Everything eludes us and about the life-permitting interval the narrow window for life that the constants of the universe permit."

899. "COSM: Robert J. Marks II" COSM, 2021. [Link]

900. "Is Life From Outer Space a Viable Science Hypothesis?" Mind Matters News, October 2, 2021 [Link]

901. "Could Advanced Aliens Have Fine-Tuned Earth for Life?" Mind Matters News, October 3, 2021 [Link]

902. "Our Universe Survived A Firing Squad And It's Just An Accident?" Uncommon Descent, October 4, 2021 [Link]

> "Walter Bradley Center director Robert J. Marks has been doing a series of podcasts with Swedish mathematician Ola Ola Hössler, and Colombian biostatistician Daniel Díaz in connection with a recent co-authored paper on the fine-tuning of the universe for life in the *Journal of Cosmology and Astroparticle Physics.* "

903. "New Book, The Comprehensive Guide to Science and Faith, Answers Key Questions on Intelligent Design" Evolution News & Science Today, October 5, 2021 [Link]

904. "In An Infinity Of Universes, Countless Ones Are Run By Cats" Uncommon Descent, October 5, 2021 [Link]

905. "If Extraterrestrials Didn't Fine Tune Earth, Maybe There Is A God" Uncommon Descent, October 10, 2021 [Link] Reprinted at:

    ◇ Uncommon Descent. [Link]

906. "Author: Robert J Marks II" Audible.com [Link]

907. "Robert J. Marks: Author at the Stream" TheStream.com, October 10, 2021 [Link]

908. "Robert J. Marks II" Social Science Space.com [Link]

909. "Robert J. Marks II" DPMedia.com [Link]

910. "Robert J. Marks II" Wikiwand.com [Link]

911. "Robert J. Marks" Microsoft Academic.

    "342 Publications, 11,802 Citations "

912. "Robert J. Marks II" Computer Science Bibliography, dblp.org [Link]

913. "Robert J Marks II" Goodreads.com [Link]

914. "Robert J. Marks's research while affiliated with Baylor University and other places" ResearchGate.com [Link]

915. "Robert J. Marks II" PeoplePill.com [Link]

916. "Robert J. Marks II quotes" QuotePark.com [Link]

917. "Books by Robert J Marks Ii (Baylor Univ, Usa)" WorldOfBooks.com [Link]

918. "If Extraterrestrials Didn't Fine Tune Earth, Maybe There Is a God" National Association of Christian Ministers, October 10, 2021 [Link]

    > "Walter Bradley Center director Robert J. Marks has been doing a series of podcasts with Swedish mathematician Ola Hssjer, and Colombian biostatistician Daniel Daz in connection with a recent co-authored paper on the fine-tuning of the universe for life in the *Journal of Cosmology and Astroparticle Physics*."

919. "Life: Fearfully and Wonderfully Fine-Tuned" Evolution News & Science Today, October 21, 2021 [Link]

920. "At Mind Matters News: Why just anything can't happen given an infinite sum of universes" Uncommon Descent, October 10, 2021 [Link]

921. Jonathan Witt "New Book Spotlights High Tech Animal Navigation" Evolution News & Science Today, November 3, 2021 [Link]

> "The author, Eric Cassell, joins host and Baylor computer engineering professor Robert J. Marks to discuss the groundbreaking book and, in particular, the chapters on some of the animal kingdom's most stunning navigators the Arctic tern, homing pigeons, the monarch butterfly, and the desert ant, among others."

922. "New Book Focuses On Animal Intelligence As Not Product Of Pure Randomness" Uncommon Descent, November 4, 2021 [Link]

923. "Does Creativity Just Mean Bigger Data? Or Something Else?" Mind Matters News, November 5, 2021 [Link.] Reprinted at:

    ◇ Uncommon Descent. [Link]

    ◇ IoT.ng

    ◇ TechRegister.co.uk

924. "Marks: Why Just Anything Can't Happen Via Infinite Universes" Mind Matters Newsletter, November 8, 2021 [Link]

925. "Does Mt Rushmore contain no more information than Mt Fuji?" Mind Matters News, November 9, 2021 [Link.] Reprinted at:

    ◇ Uncommon Descent. [Link]

926. "At Mind Matters News: Does Mt Rushmore Contain No More Information Than Mt Fuji?" Uncommon Descent, November 9, 2021 [Link]

927. "Amazing Insect Colonies vs. Evolution" Ricochet, November 10, 2021 [Link]

928. "How Do We Know Lincoln Contained More Information Than His Bust?" Mind Matters News, November 11, 2021 [Link.] Reprinted at:

    ◇ Uncommon Descent. [Link]

929. "At Mind Matters News: How Do We Know Lincoln Contained More Information Than His Bust?" Uncommon Descent, November 11, 2021 [Link]

930. "Amazing Insect Colonies vs. Evolution" Evolution News & Science Today, November 11, 2021 [Link]

> "[Eric] Cassell and host Robert J. Marks discuss the complex caste system of these [insect] colonies, the impressive signaling systems they use to communicate, and how technologists study these tiny-brained creatures to learn tricks for developing and improving drone swarm technology."

931. "WHY AI CAN'T REALLY FILTER OUT 'HATE NEWS' " Mind Matters News, November 14, 2021 [Link]

> "As Robert J. Marks explains, the No Free Lunch theorem establishes that computer programs without bias are like ice cubes without cold."

Reprinted at:

- ◇ Learning Ecosystems
- ◇ BiasFix

932. "THE GREAT RACE FOR MILITARY AI AND QUANTUM COMPUTING IS ON" Mind Matters News, November 15, 2021 [Link]

> "Robert J. Marks, Director of the Walter Bradley Center for Natural and Artificial Intelligence (which hosted COSM) - also Distinguished Professor of Electrical and Computer Engineering at Baylor University - spoke first. The title of his 2020 book, The *Case for Killer Robots: Why America's Military Needs to Continue Development of Lethal AI*, provides an unsubtle hint at his position.
>
> " 'Anything you can do on computers today can be done on Turing's original machine,' he explainedit just would take billions of times longer than on your home PC. But this also means that if you find theoretical limits to Turing's original computer, then those limits are applicable to the computers 'not just of today, but also tomorrow.'
>
> "Once you understand the inner workings of computers, these limitations become clear. But Marks thinks that many tech titans today who bullishly hype AGI in the media really don't appreciate the underlying computer science.
>
> "Just because AGI is unrealistic doesn't mean that AI and quantum computers won't be able to do some amazing things. He reminded the audience of Vladimir Putin's famous remark: 'artificial intelligence is the future, not only of Russia, but of all mankind. And then he ends the statement with whoever becomes the leader in this sphere will become the ruler of the world.'
>
> "In other words, there's an AI arms race going on. If we don't get some skin in the game then America will lose to its global competitors. AI can help us develop smarter bombs that inflict more damage upon targets and less upon civilians, improved encryption to protect our secrets from enemies, drones that keep our warriors out of harm's way, and anti-drone technology to protect us from the AI of foreign combatants.
>
> "Yet not everyone agrees we should develop this tech. In 2018, some 4,500 AI experts and others authorities, including 26 Nobel laureates and the UN secretary, said, as Marks put it, that 'killer robots are politically unacceptable, morally repugnant, and should be banned by international law.'
>
> "But he thinks a much stronger moral case can be made in favor of military AI. 'Tech wins wars' he said, further noting in his book that 'Advanced technology not only wins wars but gives pause to otherwise aggressive adversaries.' History seems to prove him right.

> "Consider World War II. Early AI tech such as the Norden bombsight helped American bombers hit their targets like never before. Radar helped England defend against Nazi bombers. And the atomic bomb, as horrific as it was, won the peace. These innovations may be different from modern AI, but they show that if you don't invest in military tech, you lose.
>
> "Marks is therefore mystified as to why some people want to ban the use of AI in military tech because it weakens us and opens us to attack from people who do develop AI for military purposes. He thinks this opposition to AI stems from a mistaken view of human nature."

933. "The Comprehensive Guide to Science and Faith: Exploring the Ultimate Questions About Life and the Cosmos" Discovery.org, November 17, 2021 [Link]

> "*Will Intelligent Machines Rise Up and Overtake Humanity?* by Robert J. Marks II "

934. "Can Wholly Random Processes Produce Information?" Mind Matters News, November 16, 2021 [Link]

935. "How Even Random Numbers Show Evidence of Design" Mind Matters News, November 17, 2021 [Link]

> "In *Define information before you talk about it*, neurosurgeon Michael Egnor interviewed engineering prof Robert J. Marks on the way information, not matter, shapes our world."

936. "At Mind Matters News: How Even Random Numbers Show Evidence Of Design" Uncommon Descent, November 17, 2021 [Link]

937. "At Mind Matters News: Can Wholly Random Processes Produce Information?" Uncommon Descent, November 17, 2021 [Link]

938. "How Convergent Animal Algorithms Challenge Darwinism" Evolution News & Science Today, November 18, 2021 [Link]

> "Host and Baylor University computer engineering professor Robert J. Marks talks with Animal Algorithms author Eric Cassell about the sophisticated algorithms that appear to be embedded in the brains of colony insects, granting them impressive instinctive abilities."

939. "If Not Hal or Skynet, What's Really Happening in AI Today?" Mind Matters News, November 25, 2021 [Link]

940. "When AI Fails, the Results Are Sometimes Amusing. Sometimes Not" Mind Matters News, November 29, 2021 [Link]

941. "Iron Law of Complexity: Complexity Adds But Its Problems Multiply" Mind Matters News, December 1, 2021 [Link]

942. "The Pareto Tradeoff Choosing the Best of a Mixed Lot" Mind Matters News, December 3, 2021 [Link]

> "Dr. Marks begins by asking about the late Donald Rumsfelds notion of the knowns and unknowns"

943. "Computer Engineers Look At Design Tradeoffs In The Human Body" Uncommon Descent, December 3, 2021 [Link]

944. John G. West "Walter Bradley Center: Year in Review 2021" December 14, 2021 [Link]

> "Directed by Baylor University professor Robert J. Marks, the Bradley Center is guided by the vision of Discovery Institute board member and entrepreneur William Dembski. The Center disseminates its work through conferences, online media, and books and articles.
>
> Over 200 tech leaders attended the Bradley Center's COSM 2021 technology summit in November. Designed by Discovery Institute co-founder George Gilder, the in-person summit brought together investors, business executives, and inventors to explore how artificial intelligence, blockchain, cloud computing, and many other technologies are re-shaping humanity's future.
>
> COSM 2021 featured an all-star cast of speakers, including Peter Thiel, cofounder of Pay Pal; Kai Fu Lee, the inventor of speech recognition; Bob Metcalfe, the inventor of ethernet; Ari Emanuel, known as the media visionary who brought Hollywood into the digital age; Gurdeep Pall, Corporate Vice President at Microsoft; and former Speaker of the House Newt Gingrich, who engaged in a lively debate with George Gilder about U.S. policy on China. In addition to Gilder, several other Discovery Institute scholars were featured at the conference as well, including mathematician and entrepreneur William Dembski, Bradley Center Director Robert J. Marks, economist Gale Pooley, and Jay Richards, author of The Human Advantage."
>
> "Under the leadership of veteran journalist Denyse O'Leary, the site will have published over 850 articles in 2021 and attracted nearly 2 million users. The number of users in 2021 represented a dramatic 82 increase over the previous year.
>
> The Center's signature Mind Matters podcast released 50+ new episodes in 2021. Overseen and hosted by Center Director Robert Marks, the podcast featured notable guests that included Erik Larson, author of Harvard University Press's The Myth of Artificial Intelligence; Gregory Chaitin, the founder of algorithmic information theory; Angus Menuge, a Professor of Philosophy at Concordia University; and Paul Werbos, a machine learning pioneer.
>
> Work also continued in 2021 on various book projects supported by the Center. One of them is a book by Robert Marks that will examine AI hype vs. AI reality and describe the unique capabilities of humans that can't be replaced by AI. Marks' book is slated for publication by the end of 2022."

945. "Hear This: Cricket Ears Evolved Like Vertebrate Ears" Evolution News & Science Today, December 15, 2021 [Link]

946. "At Mind Matters News: Can Higher Dimensions Help Us Understand Biblical Miracles?" Uncommon Descent, December 19, 2021 [Link]

> "We assume there are only three spatial dimensions because those are the ones we sense. Baylor computer engineering prof Robert J. Marks asks, What if there are four?"

947. "At Mind Matters News: New AI learns to simulate common sense" Uncommon Descent, December 31, 2021 [Link]

2022[15]

948. "Study Information Theory with Engineer Robert J. Marks"Mind Matters News, January 10, 2022 [Link]

> "Some of the topics may sound daunting, but Marks is an engaging teacher, making complex ideas clear through down-to-earth explanations and simple analogies to things like cooking pancakes."

949. "Study Evolution's Information Problem with Engineer Robert Marks" Evolution News & Science Today, January 10, 2022 [Link]

950. "Robert J. Marks on Why AI Won't Destroy the World, or Save It" Evolution News & Science Today, January 20, 2022 [Link]

> "In the course of the fast-paced interview, Marks touches on dystopian AI and the limits of computer algorithms (they can never do anything that is inherently non-computable, Marks argues), and discuss celebrity thinkers and entrepreneurs who've weighed in on the promises and perils of AI, such as Mark Zuckerberg, Elon Musk, Bill Gates, and Stephen Hawking. Marks calls on Nobel laureate Roger Penrose to second one of Marks's central arguments."

951. Beth Allison Barr "After Graduation" in Baylor Graduate School's "2021 Annual Report" [Link]

> Picture of Kwang Lee and me hooding PhD Albert Yu.

952. CAN AI REALLY BE SLIGHTLY CONSCIOUS? CAN ANYONE? Mind Matters News, January 27, 2022 [Link]

[15]Links to cached sites that copy content was stopped in September 2022 because their inclusion became too much of a hassle.

> "Walter Bradley Center director Robert J. Marks points out that even HAL was probably just obeying its programming when it acted as murderously as it did. [He wrote:] 'At one point on the trip from Earth to Jupiter, HAL becomes suspicious that the crew might be sabotaging the mission. HAL then purposely tries to kill all the crew. The most logical explanation for this act is a coding error. HAL was programmed to operate on the basis that the mission took priority over human life.' "

953. "MARCH 3, 2022 DR. ROBERT J. MARKS" Christian Faculty Forum, University of Georgia, March 3, 2022 [Link.]

954. "Robert J. Marks: AI History How Did All the Hype Get Started?" Mind Matters News, March 11, 2022 [Link]. Reprinted at:

    - ◇ rb RB Webcity
    - ◇ Tech Register
    - ◇ Artificial Intelligence: Nommu
    - ◇ Tech Register

955. "220314-MMN-Newsletter.html" March 14, 2022 [Link]

    > "Robert J. Marks: Zeroing In On What AI Can and Can't Do"

956. "Robert J. Marks: Straight Talk About Killer Robots" Mind Matters News, March 15, 2022 [Link.] Reposted at:

    - ◇ RB Webcity
    - ◇ TECH register

957. "Lead Us Not Into the Uncanny Valley $\cdots$ " Mind Matters News, March 23, 2022 [Link] Reprinted at:

    - ◇ mpeara

    > "Robert Marks and Gretchen Huizinga discuss whether future developments in artificial intelligence will lead to a better future or a worse one"

958. "Why You Are Not and Cannot Be Computable" Mind Matters News, May 24, 2022. [Link.]

    > "An excerpt from Chapter 1 of Non-Computable You (2022) by Walter Bradley Center director Robert J. Marks. "

959. "Opioids: The High Is Brief, the Death Toll Is Ghastly" Mind Matters News, May 25, 2022. [Link.]

> "Walter Bradley Center director Robert J. Marks interviewed anaesthesiologist and pain management expert Dr. Richard Hurley on how highly addictive opiods like Oxycontin, Percodan, and Fentanyl act on the brain. "

960. "What Anti-Opioid Strategies Could Really Lower the Death Toll?" Mind Matters News, May 26, 2022. [Link.]

> "Anesthetist Dr. Richard Hurley discussed with Robert J. Marks the value of cognitive behavior therapy reframing the problem "

Reposted at:

- ◇ The Volgograd News
- ◇ Readdss

961. "Some Opioid Addictions Begin in the Hospital" Mind Matters News, May 27, 2022. [Link.]

> "Walter Bradley Center director Robert J. Marks interviews a man who got addicted to Fentanyl as a medical drug. "

Reposted at:

- ◇ Readdss
- ◇ Readdss

962. "Medical Opioids: The War Between Chronic Pain and Addiction" Mind Matters News, May 31, 2022. [Link.]

> "'Stretch' tells Robert J. Marks, the surgeries did not really work and he became addicted to the painkillers while trying to live a normal, working life. "

963. "How 'Stretch' Finally Kicked the Medical Opioid Habit" Mind Matters News, June 1, 2022. [Link.]

> "It wasn't easy but it was the high cost of staying alive while managing his chronic medical disorder. "

Reposted at:

- ◇ Readdss
- ◇ NRD Blogs
- ◇ Readdss (again)

964. "Gambling: WHY the House Always Wins in the Long Run" Mind Matters News, June 3, 2022. [Link.]

> "Walter Bradley Center director Robert J. Marks interviews mathematician, computer scientist, and engineer Salvador Cordova on a subject on which he has strong views: gambling."

Reposted at:

- ◇ Prometheism
- ◇ Itashi News

965. "Casinos: How Nerds Gamble and Win, Using the Law of Large Numbers" Mind Matters News, June 7, 2022. [Link.] Reposted at:

    - ◇ Readdss

966. "Algorithms in Medicine: Where They Help and Where They Don't" Mind Matters News, June 8, 2022. [Link.]

    > "Robert J. Marks continued his podcast discussion with anesthesiologist Richard Hurley in 'Good and bad algorithms in the practice of medicine' "

    Reposted at:

    - ◇ Readdss
    - ◇ News24Always
    - ◇ Jobs Vacancy
    - ◇ Mortgage Insurance Center

967. "The Challenges of Medical Care When Insurance Algorithms Rule" Mind Matters News, June 9, 2022. [Link.] Reposted at:

    - ◇ Prometheism
    - ◇ Mortgage Insurance Center

968. "Mind Matters News Newsletter" June 13, 2022. [Link.]

    > "Pre-Order Non-Computable You by Robert J. Marks"

969. "The Struggle Between Casinos and Advantage Players" Mind Matters News, June 17, 2022. [Link.] Reposted at:

    - ◇ Readdss
    - ◇ Casino Glitz

970. "Can Casinos Ban Customers Who Might Get TOO 'Lucky'?" Mind Matters News, June 20, 2022. [Link.] Reposted at:

    - ◇ Info BBEA

- ◇ The Tech Best
- ◇ Casino Glitz

971. "Computer Prof: You Are Not Computable and Here's Why Not" Mind Matters News, June 21, 2022. [Link.] Reposted at:

    - ◇ Uncommon Descent
    - ◇ Bit Bet Game
    - ◇ News Renew

972. "Are Future Humans Doomed To Be Replaced By Artificial Intelligence?" Yahoo News, June 21, 2022 [Link.]

973. Denyse O'Leary "Engineer: Failing To See His AI Program as a Person Is 'Bigotry' " Mind Matters News, June 21, 2022. [Link.] Also printed at Evolution News & Science Today, [Link.]

974. "Siri, Am I Just a Meat Computer?" Salvo, June 21, 2022. [Link.]

    > "... ask AI expert Robert Marks, 'Am I just a meat computer?' That question concerns whether humans, like computers, lack free will; whether the soul is nothing but an illusion; whether humans just grind out algorithms from our conscious and subconscious minds, algorithms shaped by brain neurons and hormones and, beneath those, the laws and constants of physics and chemistry. Ask Marks the question and all it implies, and he can give you a meaningful, even fascinating answer.
    >
    > He does so in his new book Non-Computable You: What You Do That Artificial Intelligence Never Will. I was one of the editors for this book, and I not only learned a lot, but very much enjoyed iteven, amazingly, the parts with math."

975. "New Book from Computer Engineer Robert J. Marks: You Are NOT Computable" nota bona, Science & Culture Update, June 22, 2022 [Link.]

976. "Non-Computable You News Release" Discovery Institute, June 21, 2022.

977. "Non-Computable You News Release" (WORD doc), Discovery Institute, June 21, 2022.

978. "Are Future Humans Doomed To Be Replaced By Artificial Intelligence?" Discovery Institute, June 21, 2022. [Link.] News release reposted at:

    (a) Daily Record [Link.]

    (b) PR Newswire [Link.]

    (c) AP News [Link.]

    (d) Leaf EU [Link.]

(e) Cision PR Newswire [Link.]

(f) AI Neurons [Link.]

(g) ksn.com [Link.]

(h) Le Lzard [Link.]

(i) Nordic AI Artificial Intelligence Institute [Link.]

(j) Yahoo News [Link.]

979. "PROF: HOW WE KNOW GOOGLE'S CHATBOT LAMDA IS NOT A 'SELF' " Mind Matters News, June 22, 2022. [Link.]

980. "Non-Computable You - Amazon.com: #2 and #3 on Amazon's top AI and Semantics" June 22, 2022. [Cache.]

981. "Non-Computable You - Amazon.com: #6 and #7 on Amazon's top Computer History & Culture" June 22, 2022. [Cache.]

982. "Can You Really Be a Card Counter Without Resorting to Magic?" Mind Matters News, June 23, 2022. [Link.]

983. "PROBABILITY: NOW FOR THE BASIC ARITHMETIC OF CARD COUNTING" Mind Matters News, June 29, 2022. [Link.]

> "Walter Bradley Center director Robert J. Marks continues his discussion of card counting techniques with gambling ace Salvador Cordova"

984. William A. Dembski "Conservation of Information The Theorems" Evolution News & Science Today, July 1, 2022. [Link.]

> "Around 2007, however, a fundamental shift occurred in my work on conservation of information. Bob Marks and I began to collaborate in earnest, and then two very bright students of his also came on board."

Reposted at:

◇ Uncommon Descent

985. "GAMBLING: WHEN ADVANTAGE PLAYERS TEAM UP, DEALER BEWARE!" Mind Matters News, July 4, 2022. [Link.]

986. "THE HOLY ROLLERS: CHRISTIANS WHO GAMBLE FOR GOD" Mind Matters News, July 6, 2022. [Link.] Reposted at:

◇ The Tech Best

987. nota bena: Science & Culture Update "AI Apocalypse: Will Thinking Machines Replace Humans?" July 6, 2022 [Link.]

988. David Klinghoffer "Marks: Non-Computable You Won't Achieve Immortality Through an AI Machine" Evolution News & Science Today, July 6, 2022. [Link.]

989. "Robert J. Marks On 'Machines With Minds' Vs. The Real-Life Dweebs In His Evolutionary Programming " Uncommon Descent, July 6, 2022. [Link.]

990. Bob Duncan "Marks: Non-Computable You Won't Achieve Immortality Through an AI Machine" Narkive on Atheism, July 7, 2022. [Link.]

991. "Marks: Forget the Hype, 'Thinking Machines' Can't Replace Humans" Mind Matters News, July 7, 2022. [Link.] Reposted at:

    ◇ The Tech Best

    ◇ Rich Tech

    ◇ News Brain

992. "MARKS: COMPUTERS ONLY COMPUTE AND THINKING NEEDS MORE THAN THAT" Mind Matters News, July 8, 2022. [Link.] Reposted at:

    ◇ The Tech Best

    ◇ Nommu

    ◇ Inforbeanow

993. "Robert J. Marks: Some Infinities Are Bigger Than Others But There's No Biggest One" Uncommon Descent, July 9, 2022. [Link.]

994. "Robert J. Marks: Artificial Intelligence, Worshipped As God, Is No Ordinary Deity!" Uncommon Descent, July 10, 2022. [Link.]

995. 'Marks: The Software of the Gaps'" Mind Matters News Letter, July 11, 2022. [Link.]

996. "You Won't Achieve Immortality Through an AI Machine" nota bene UPDATE: Science & Culture newsletter, July 13, 2022.

997. "Marks: Non-Computable You Won't Achieve Immortality Through an AI Machine" Uncommon Descent, July 13, 2022. [Link.]

998. Amanda Witt "The Difference Between Humans and Machines" Evolution News & Science Today, July 13, 2022. [Link.]

999. David Klinghoffer "Marks, Dembski: AI Hype and the 'Illusion of Possibility' " Evolution News & Science Today, July 13, 2022. [Link.]

1000. "New OpenAI Art Program Does NOT Claim Copyright for AI" Mind Matters News, July 22, 2022. [Link.]

> "Robert J. Marks ... told Mind Matters News 'Images generated by AI should be no more copyrightable than Google search engine results.' "

1001. "Robert J. Marks: Could Artificial Intelligence Replace Tom Cruise?" Evolution News & Science Today, July 25, 2022. [Link.]

1002. "In Critiquing Dembski, Jason Rosenhouse Prioritizes Imagination over Reality" Evolution News & Science Today, July 22, 2028. [Link.]

> "Dembski has ... collaborated with ... Robert J. Marks and Winston Ewert to prove conservation of information theorems."

1003. "Why Don't Some Tech Moguls Like Web3, the New Internet?" Mind Matters News, August 4, 2022. [Link.].

> "Robert J. Marks talked with ... Adam Goad about Web3, the coming internet of more privacy on the one hand and a metaverse of avatars on the other. "

Reposted at:

- ◇ News Tech Life
- ◇ NFT Time (Germany)
- ◇ ephosp coins & more
- ◇ Bored Crypyo Club
- ◇ Relax and Crypto
- ◇ Throne Coin
- ◇ Crypto News 100
- ◇ Top Crypto News 24
- ◇ Crypto News Dojo
- ◇ Wow Pics
- ◇ Coin Gosh
- ◇ The Hold Guys
- ◇ Simple FX Online
- ◇ Zaz Capital
- ◇ Metaverse Art Hub
- ◇ Milion Crypto
- ◇ Alt Coinzz
- ◇ News-Crispy Crypto
- ◇ Bee Bank News
- ◇ Rose Ferro Business News
- ◇ Coingraph
- ◇ Crypto Grounds

- ◇ Smoke a Fatty with Paddy News
- ◇ Bit Haul
- ◇ Bitcoin Market Update
- ◇ Talk Crypto
- ◇ Crypto World Info
- ◇ Bitcoin Asia
- ◇ NFT Planet
- ◇ The Crypto Days
- ◇ Coin Wise Now
- ◇ Sticky Satoshi
- ◇ Crypto Idea
- ◇ Crypto Coin Press
- ◇ XRP Family
- ◇ Decentralized Update
- ◇ Metaverse Word
- ◇ Search Crypto World
- ◇ Coin Market Trade Search Crypto World
- ◇ Bitcoin News Analysis
- ◇ My Pipro
- ◇ Crypto Serve U
- ◇ Daily Market News
- ◇ The Block Circle
- ◇ PI Global Investments
- ◇ Social Distance
- ◇ Diffrint Crypto
- ◇ Tech Telegraph
- ◇ Rich Tech
- ◇ INC 29
- ◇ Medium Wire
- ◇ Author Paper: International Digital Newspaper
- ◇ News Express
- ◇ Math Blog
- ◇ Lola News
- ◇ Internet Do

1004. "What's Really Happening With Bitcoin and Other Cryptos?" Mind Matters News, August 5, 2022. [Link.] Reposted at:

   - ◇ News Seasons
   - ◇ Soft News
   - ◇ Tech Silent
   - ◇ Coin Gosh
   - ◇ Crypto Coin Press
   - ◇ Coin Graph: The Future of Money
   - ◇ The Crpto Days
   - ◇ Blocksurge News
   - ◇ Blockchain Ping (China)
   - ◇ Ask Zone
   - ◇ News Sudden
   - ◇ My Pipro
   - ◇ Crypto News Online
   - ◇ Crypto Advisory
   - ◇ News Detail
   - ◇ Bit Coin Press
   - ◇ Crazy Crypto News
   - ◇ Crypto News Plus
   - ◇ Diffrint Crypto
   - ◇ Bitcoin Meta Crypto
   - ◇ US-China Investment News

1005. "When You Buy a Non-Fungible Token (NFT), What Do You Own?" Mind Matters News, August 16, 2022. [Link.]

1006. "What Gives NFTs (Non-Fungible Tokens) Their Value?" Mind Matters News, August 18, 2022. [Link.]

1007. "Why Didn't Decentralized Organizations Work in the Crypto World?" Mind Matters News, August 24, 2022. [Link.]

> "the discussion between computer engineering prof Robert J. Marks and computer engineering grad students Adam Goad and Austin Egber on the wild new online world."

1008. "Are NFTs a Bubble That Has Just Plain Popped for Good?" Mind Matters News, August 23, 2022. [Link.]

> "...discussion between computer engineering prof Robert J. Marks and computer engineering grad students Adam Goad and Austin Egbert on that wild new online world."

1009. "What Would a Financial System Based on Blockchain Look Like?" Mind Matters News, September 7, 2022. [Link.]

> "Adam Goad and Austin Egbert are back with Walter Bradley Center director (and computer engineering prof) Robert J. Marks to discuss how such a system might work. Or maybe not. It didn't work with decentralized autonomous organizations"

1010. "EPITAPH FOR TRANSHUMANISM: BUT IT'S FAR FROM DEAD!, ADVOCATE SAYS" Mind Matters News, August 8, 2022. [Link.]

> "[As] Robert J. Marks points out in *Non-Computable You*, artificial intelligence fundamentally lacks creativity, because computers compute and creativity is not computable."

1011. "The futurist finance world of flash loans and hypernodes" Mind Matters News, September 9, 2022. [Link.]

> "'What Is Decentralized Finance?' (September 1, 2022), computer engineer Adam Goad discussed with Walter Bradley Center director (and computer engineering prof) Robert J. Marks how blockchain would decentralize finance by establishing trust and security without government regulations. Now they look at how some of the remarkable new financial instruments work."

1012. "Insider's Briefing" Marriott Tacoma Downtown, Tacoma, WA, August 13, 2022.

1013. "James Webb Space Telescope Shows Big Bang Didn't Happen? Wait ..." Mind Matters News, August 13, 2022. [Link.]

> "As Robert J. Marks has pointed out, playing with infinity quickly results in absurdity."

Reposted at:

- ◇ Winett.com
- ◇ marychocomog
- ◇ Tech Life
- ◇ Headline Curator
- ◇ Tertiary Effects

1014. Sean Fahey "Why AI Fails At Assessing Distinctly Human Skill Sets" Forbes, September 12, 2022 [Link.]

> "Dr. Robert J. Marks covers this topic well in his 2019 *Mind Matters News* article. As he explains, even the word 'it' can trip up an artificial intelligence system when the subject of a sentence is unclear (something we humans do naturally in both written and spoken language)."

1015. "What Happens If You Want To Lend or Borrow in Crypto?" Mind Matters News, September 13, 2022. [Link.]

> "In this second part of 'Staking and Liquidity on Web3', the fifth episode of the podcast series between computer engineering prof Robert J. Marks and engineers Austin Egbert and Adam Goad, the discussion centers on making and taking loans in cryptocurrency."

1016. "AI Is Not Taking Away Our Jobs Because It Can't Do Them" Mind Matters News, September 16, 2022. [Link.]

> "Robert J. Marks talks with KSCJ talk show host Mark Hahn about HAL 9000 and the opportunities and fundamental limits of AI"

1017. "Marks Tells Medved: Top Gun (2022) Is Way Out of Date" Mind Matters News, September 16, 2022. [Link.]

> "Computer science prof Robert J. Marks argues in Non-Computable You, that in the 21st century, drones offer significant advantages over fighter pilots"

1018. "Modern Bitcoin's Surprising Lesson About Ancient Scripture" The Stream, September 13, 2022. [Link.]

1019. "Ethereum Moves From Mining to Staking This Month" Mind Matters News, September 13, 2022. [Link.]

1020. Karl D. Stephan "Will Artificial Intelligence make humanity irrelevant?" Mercator Net, September, 19, 2022. [Link.]

> "...it's refreshing to see a book come out whose author stands up and, in effect, says Baloney to all that [hype about AI]. The book is Non-Computable You: What You Do that Artificial Intelligence Never Will, and the author is Robert J. Marks II."

1021. "Is Webb Breaking the Big Bang Paradigm?" Evolution News & Science Today, September 20, 2022. [Link]

> "Robert J. Marks considers the mathematics behind Sheldon's theory that in no universe would he dance with Penny and concludes that Sheldon may well be right."

1022. Denyse O'Leary "Science Uprising 10: Asking the Impolite Questions About AI" Mind Matters News, September 21, 2022. [Link.]

1023. David Klinghoffer "New from Science Uprising Artificial Intelligence, Creativity, and the Human Difference" Evolution News & Science Today, September 22, 2022. [Link.]

> "Interviewed for the episode, Robert J. Marks, John Lennox, Jay Richards, and Selmer Bringsjord have profound things to teach."

1024. DENYSE O'LEARY "OH, NOT THIS AGAIN: 'AI WILL RISE UP AND DESTROY MANKIND"' Mind Matters News, September 24, 2024. [Link.]

> "... read Robert J. Marks's Non-Computable You: What You Do That Artificial Intelligence Never Will (2022)"

1025. Keri D. Ingraham "An Education Revolution: Universal School Choice" Chalkboard Review, September 26, 2022. [Link.]

> "As Robert J. Marks explains in his book, Non-Computable You: What You Do that Artificial Intelligence Never Will, free market forces inspire people to innovate."

1026. "Is Cryptocurrency Part of the Overall Future of Money?" Mind Matters News, September 27, 2022. [Link.]

> "Recent discussions between WBC director Robert J. Marks and fellow engineers raise a question: Could new technology enable a global private currency to compete with government currencies?"

1027. "At COSM 2022, Blake Lemoine Faces Computer Engineers" Mind Matters News, September 27, 2022. [Link.]

> "On McIlwain's panel, Lemoine will be facing off against Baylor University pioneer in swarm intelligence Robert J. Marks and with George Montaez, an up-and-coming machine learning pro at Harvey Mudd College. Can he convince them? They know what questions to ask"

1028. "Why AI Could (But May Not) Predict School Shootings" Mind Matters News, September 28, 2022. [Link.]

> "There is no solution that is not run through natural intelligence, computer science prof Robert J. Marks explains"

1029. "Separating Fact from Fiction about Artificial Intelligence" Nota bene update, [Link.]

> "Computer engineer and artificial intelligence (AI) expert Robert J. Marks discusses what AI is and isn't, whether humans will ever be able to upload themselves into a computer, what humans do that AI won't be able to replicate, and why many predictions about AI are wrong."

1030. "One Thing We Can Know About Computers: They Are Not Creative" Mind Matters News, October 3, 2022. [Link]

"Robert J. Marks was a featured guest on David Krieger's The Power Hour"

1031. Larry Nobels, "My Longest Narration - By Far" Larry Nobels Newsletter, October 4, 2022.

> "This 13+ hour journey is a doozy! Baylor Professor Dr. Robert Marks' shares the Artificial Intelligence story and why humans will never be duplicated. It is full of intellect and humorous explanations dispelling the A.I. hype with exceptionally insightful theological truth based on the fact that God made all of us unique' and unduplicatable' with our emotions, feelings, empathy and faith. Algorithms can't do that. (Note: this is a book from a renowned scientist/mathematician whose faith has caused him to be shunned by some in this academic arena). "

1032. "The Computer Is Not an Idea Machine, It's a Powerful Pencil " Mind Matters News, October 5, 2022. [Link]

> "Robert J. Marks talks to Pastor Greg Young of Chosen Generation about his new book, Non-Computable You "

1033. "Robert J. Marks: Will Machines Take Over?" Mind Matters Newsletter, October 10, 2022.

> "Are you going to be replaced by a machine? Could a robot really be curious or plot evil? Some really smart people think machines will achieve not just human but super human consciousness. Oxford professor of mathematics John Lennox and Baylor University computer engineer Robert J. Marks disagree."

1034. "Review of Non-Computable You, The World and Everything In it, October 11,2022 [Link]

> "Marks takes readers deep into the science to prove his point, and casual readers may find his reasoning hard to follow at times. But he does aid readers with pop-culture references and a chapter on real world implicationsI found the section on killer robots especially intriguing. "

1035. Peter Biles "THE DANGER OF DEEPFAKES (AND DEEPCAKE)" Mind Matters News, October 12,2022 [Link]

> "Dr. Robert J. Marks II noted that while AI can be a powerful tool, it can never be creative. "

1036. "In Haiti, Debates Over Electric vs. Gas-Powered Cars Are a Luxury" Mind Matters News, October 13, 2022. [Link]

> "Never mind self-driving cars. The quest for 'just enough' energy is a daily, sometimes life-and-death issue, as Kayla Garrett and Brian Thomas tell Robert J. Marks"

1037. "Haiti: Turning the Blazing Sun Into a Power Source" Mind Matters News, October 24, 2022. [Link]

1038. "Marks: AI Looks Very Intelligent While Following Set Rules" Mind Matters News, October 10, 2022. [Link]

> "In an excerpt from Chapter 2 of Non-Computable You, Larry Nobles reads Robert J. Marks's account of evolving AI swarm intelligence for Dweebs vs. Bullies"

1039. Casey Luskin "Experts at COSM Debate Whether Chatbot was Sentient" Mind Matters News, November 13, 2022. [Link]

> "Robert J. Marks, distinguished professor of electrical and computer engineering at Baylor University, opened by criticizing the Turing test, as a measure of whether we've produced genuine AI. Developed by the famous English mathematician and World War II codebreaker Alan Turing, the test holds that if we can't distinguish a machine's conversational discourse from that of a real human, then it must exhibit humanlike intelligence.
>
> Marks maintains that this is the wrong test for detecting true AI.
>
> Marks displayed the faces of four real humans and four computer-generated faces from the website thispersondoesnotexist.com. It's hard to tell them apart, but Marks says that is immaterial. Marks explained, 'The four on the left are fake. These people do not exist. The ones on the right are real people. And these real people have emotions. They have love, they have hope, they have faith. They were little kids at one time. There's a person behind that picture.' "

1040. "WATCH: Fired engineer still convinced Google has created sentient being" WND, November 15, 2022. [Link]

> "Lemoine spoke with WND after participating in a panel at the COSM tech conference in Bellevue, Washington, hosted by the Discovery Institute. Joined by Robert J. Marks, distinguished professor of electrical and computer engineering at Baylor University, and George Montaez, an assistant professor of computer science at Harvey Mudd College, the three debated whether a sentient artificial intelligence could exist. Marks and Montanez contend the answer is no, arguing there's a difference between mimicking humans and possessing the ability to understand what one is doing and saying."

1041. "So, Can a Computer Really Be Irrational?" Mind Matters News, November 19, 2022. [Link]

> "Computer prof Robert J. Marks tells Wesley J. Smith: No, and here's why."

1042. Sarah Glazer "The Future of Artificial Intelligence Can it be successfully regulated?" CQ (Congressional Quarterly) Researcher, November 25, 2022 Volume 32, Issue 40. [Link]

> "'We get fooled' by chatbots and language models, says Robert J. Marks II, professor of electrical and computer engineering at Baylor University and author of the book Non-Computable You: What You Do That Artificial Intelligence Never Will. 'Computers can add 23 and 13, but they don't understand what 23 and 13 are,' he says. 'Creativity and consciousness and sentience are not computable and won't be in the future, because the computers of tomorrow will use the same sort of algorithms."'

1043. "Get a Sneak Peek of the New *Non-Computable You* Audiobook " [Web Page, Transcipt, Transcript Cache, Audio, Audio Cache.]]

> "*Non-Computable You: What You Do That Artificial Intelligence Never Will* by Mind Matters podcast host Robert J. Marks is now available in audiobook form."

1044. "An Excerpt from Chapter Two of Non-Computable You" Mind Matters News, November 2, 2022. [Web Page, Transcipt, Transcript Cache, Audio, Audio Cache.]]

1045. "William Dembski Offers an Updated Edition of an Intelligent Design Classic" Evolution News & Science Today, November 9, 2022. [Link.]

> "Dembski says he stands by that work and his early contributions to intelligent design theory, but adds that he has learned a lot more in the intervening years, particularly from his work with Robert J. Marks and Winston Ewert at the Evolutionary Informatics Lab."

1046. Casey Luskin "Experts Debate: Was a Chatbot Sentient?" Evolution News & Science Today, November 14, 2022. [Link.]

1047. "Still a Mystery: Charles Thaxton on Life's Origin" Evolution News & Science Today, November 19, 2022. [Web Page]

> "On a classic ID the Future episode, host Robert J. Marks interviews chemist Charles Thaxton about a seminal 1984 book he co-authored,The Mystery of Life's Origin, foundational to the intelligent design movement."

1048. Denyse O'Leary "Real Intelligence Can Never Be Matched by the Artificial" Salvo, December 12, 2022 [Link.]

> "Baylor computer engineering professor Robert Marks offers [the following insight]."

1049. "Marks: How the Inflation of Journal Citations Impacts Academia" MMN Newsletter, December 13, 2022.

1050. "So, Can a Computer Really Be Irrational?" Mind Matters News, November 19, 2022. [Link.]

> "Computer prof Robert J. Marks tells Wesley J. Smith: No, and here's why..."

1051. "Computers Are Not Persons Because Computing Is Not Thinking" Mind Matters News, December 9, 2022. [Link.]

> "Walter Bradley Center director Robert J. Marks discusses the issues with human dignity advocate Wesley J. Smith"

1052. "Non-Computable You: Bradley Center Celebrates Human Creativity in 2022" Mind Matters News, December 15, 2022. [Link.]

> "Humans are unique and will never be replaced by the machines they invent.
>
> That was the powerful takeaway from this year's new book by Walter Bradley Center Director Robert J. Marks, *Non-Computable You: What You Do that Artificial Intelligence Never Will.*"

1053. "C-SPAN ASKS MARKS: HOW CAN AI BE MADE SENTIENT? INNOVATIVE?" Mind Matters News, December 16, 2022. [Link.]

> "If they were hoping for a computers to be their best buddies, they might be disappointed in the computer engineer's answer"

2023

1054. "How Our Brains Are and Aren't Like Computers" Mind Matters News, January 5, 2023. [Link.]

> "Pediatric neurologist Andrew Knox looks at the topic with computer engineer Robert J. Marks"

1055. "Joseph Arthur - Twitter" Tonight on TNT! Robert J. Marks Ph.D., January 6, 2023 @josepharthur

1056. 'What Is Happening When Children Have Strokes or Dementia Signs?" Mind Matters News, January 6, 2023. [Link.]

> "Walter Bradley Center director Robert J. Marks interviewed pediatric neurologist Dr. Andrew Knox from the University of Wisconsin School of Medicine and Public Health on 'Ways the brain can break"'

1057. "How Our Brains Are and Aren't Like Computers" MMN Newsletter, January 9, 2023.

> "Pediatric neurologist Andrew Knox discusses brain development, epilepsy, and neural networks in children and adults with computer engineer Robert J. Marks."

1058. "How Do Strokes, Dementia Offer Insight Into How the Brain Works?" Mind Matters News, January 9, 2023. [Link.]

1059. "When It's Not Clear If a Disorder Is From the Brain or the Mind" Mind Matters News, January 11, 2023. [Link.]

> "Neurologist Andrew Knox explains to Robert J. Marks that some psychological problems appear as if they were brain problems yet there's nothing wrong with the brain "

1060. JACOB CARPENTER "Killer robots take on critics in a major showdown over policing: In the end, it comes down to ethics"' Fortune Magazine, February 3, 2023. [Link.]

> "For Robert Marks II, a distinguished professor of electrical and computer engineering at Baylor University and author of The Case for Killer Robots: Why America's Military Needs to Continue Development of Lethal AI, arguments over weaponized robots echo long-standing fights over gun rights and community policing in America. Marks says he foresees a future in which conservative-leaning municipalities are more permissive of armed robots, while more liberal enclaves resist their arrival.
>
> "It seems to me there's an incredible parallel to the Second Amendment debate we've always had," Marks said. "In the end, it comes down to ethics." "

1061. D.N. Singh "Artificial Intelligence can never destroy human brain, run down and finish it. Experts feel it dangerous hype by a few" Mobile News, February 9, 2023. [Link.]

> "Robert Marks dismantles the hype and explains why computing running algorithms - no matter how fast, is something fundamentally different from what human minds do. Computing machines store and sort vast quantities of information, but they don't now and never will experience the qualia of life. To mimic, which AI can do, is something very different."

1062. "Marks: War With China: Who Wins?" Mind Matters Newsletter, February 13, 2023. [Link.]

> "Robert J. Marks draws on opinions from experts and issues a warning about China's mounting military status."

1063. David Weinberger, "Why Artificial Intelligence Can Never Outpace Humans" The Federalist, February 20, 2023. [Link.]

> "Ever wonder whether computers will one day be capable of doing everything that human beings can? If so, pick up the recent book by engineer and computer scientist Dr. Robert J. Marks: *Non-Computable You: What You Do That Artificial Intelligence Never Will.*"

1064. " 'Non-Computable You' Reviewed in The Federalist" Mind Matters News, February 21, 2023. [Link.]

> "Marks explains what makes human beings unique, and therefore why no computer will ever match all human capabilities."

1065. "Bob Marks Knocks it Out of the Park on AI" Uncommon Descent, February 26, 2023. [Link.]

> "Bob is a dualist and reaches the opposite conclusion, and he gives some excellent reasons to question materialist premises. I commend this excellent discussion to you. BTW, Bob Marks really knows his stuff, and he presents his arguments in a very winsome fashion. We should all follow his example."

1066. "Robert J. Marks Appears On 'The Agenda' " Mind Matters News, February 24, 2023. [Link.]

> "Dr. Robert J. Marks, director of the Walter Bradley Center, appeared on a segment of The Agenda recently to speak on the topic of artificial intelligence and ChatGPT. He was joined with Melanie Mitchell of the Sante Fe Institute and MIT's Max Tegmark. "

1067. "Robert J. Marks Pours Cold Water on ChatGPT Hype" Evolution News & Science Today, February 25, 2023. [Link.]

1068. "IT ALL COMES DOWN TO ETHICS" Mind Matters News, February 28, 2023. [Link.]

> "Robert J. Marks and his book The Case for Killer Robots: Why America's Military Needs to Continue Development of Lethal AI were mentioned in a Fortune Magazine article by Jacob Carpenter, which discussed the issue of robotic and AI-controlled weapons in police and military forces."

1069. Peter Biles "Will AI 'Own the World'? Robert J. Marks Talks with Laura Ingraham" Evolution News & Science Today, March 3, 2023 [Link]

> "Robert J. Marks ... recently appeared on a podcast episode with Fox News host Laura Ingraham to talk about artificial intelligence, tech, and Dr. Marks's book Non-Computable You: What You Do That AI Never Will. "

1070. "ROBERT J. MARKS ON THE LAURA INGRAHAM SHOW" Mind Matters News, March 3, 2023. [Link.]

> "In response to those who believe AI will take over the world, Marks says, 'Look at history.' "

1071. PETER BILES, "AI AND 'QUALIA,' THE ABILITY TO EXPERIENCE" Mind Matters News, March 7, 2023. [Link.]

> "Robert J. Marks wrote an article for the Spring Issue of Salvo Magazine on AI, covering his ideas on its non-computability in the areas of love, empathy, and creativity.
>
> I was particularly intrigued by Marks's thoughts on qualia, a term used to describe the multifaceted realm of sensory experience. "

1072. NATHAN JACOBSON "SEDUCTIVE OPTICS AND SKEUOMORPHIC INTELLIGENCE" Mind Matters News, March 8, 2023. [Link.]

> "This misapprehension is the result of being taken in by a magic trick, by a kind of skeuomorphism that Robert J. Marks calls, 'seductive optics'."

1073. "Marks: Human Exceptionalism in a World of AI" Evolution News & Science Today, March 7, 2023. [Link.]

> "Dr. Robert J. Marks ... got a shout-out and a well-written review over at The Federalist."

1074. Peter Biles, "Robert J. Marks on why AI doesn't achieve consciousness" Uncommon Descent, March 8, 2023. [Link.]

> "I was particularly intrigued by Marks's thoughts on qualia, a term used to describe the multifaceted realm of sensory experience."

1075. "Blake Lemoine and Robert J. Marks on the Mind Matters Podcast" Mind Matters News, March 9, 2023. [Link.]

> "Robert J. Marks... sat down with former Google employee Blake Lemoine, who made headlines last year when he claimed AI can be 'sentient.'The claim also led to his departure from Google."

1076. "AI is Old News, Says Tech Consultant" Mind Matters News, March 17, 2023 [Link.]

> "Robert J. Marks sat down with technology consultant and retired professor Jeffrey Funk... Marks and Funk talked about tech startups, where the industry is headed, and the exaggerated hype that currently attends the discourse over AI. Funk talked about the various stages of AI development."

1077. "Robert J. Marks on Fox News" Mind Matters News, March 20, 2023. [Link.]

> "Robert J. Marks... was the subject of a new op-ed at Fox News, which featured his unique insights on artificial intelligence and how it can best be used by human beings."

1078. "Robert J. Marks on Fox News: You Are Not Going to Be AI's Pet" Evolution News & Science Today, March 21, 2023. [Link]

> "Robert J. Marks, director of Discovery Institute's Walter Bradley Center, was the subject of a new op-ed at Fox News, which featured his unique insights on artificial intelligence and how it can best be used by human beings."

1079. "Lemoine at COSM 2022: A Conversation on AI and LaMDA" Mind Matters News, March 23, 2023. [Link.]

1080. "Robert Marks at The Daily Caller" Mind Matters News, March 28, 2023. [Link]

1081. "Robert J. Mark on AI's Glaring Errors" Evolution News & Science Today, March 28, 2023. [Link]

1082. "AI is a Tool, Not a Solution for Everything" Mind Matters News, April 5, 2023. [Link]

> "AI is a tool. In the words of Robert J. Marks from an interview at last year's COSM conference, it can't be a 'friend or foe,' because it's not a living entity. It's something that can be used (or abused)."

1083. Scott Whitlock "AI expert warns of too much 'hype': Humans will still be in charge, won't be 'pets' to new tech" Microsoft Start, March 18, 2023. [Link]

> "According to an expert on artificial intelligence (AI), the biggest threats from the emerging technology include the United States military falling behind other countries, as well as unreliable 'woke' bias in Chat GPS. However, Robert J. Marks II, PhD, a professor at Baylor University, hit back against sci-fi warnings of sentient machines and reassured Americans that they won't become 'pets' to an all-controlling technology. "

1084. "BIBLIOGRAPHIC AND ANNOTATED LIST OF PEER-REVIEWED PUBLICATIONS SUPPORTING INTELLIGENT DESIGN" Discovery Institute [Link]

1085. "Marks: Hold AI Companies Responsible" Mind Matters Newsletter, May 8, 2023

> "The possibility of lawsuits will give AI developers pause before releasing their raw, unvetted technology on the world."

1086. "Film Festival 2023 'Artificial Intelligence: Will Machines Take Over?' " Evolution News & Science Today, May 11, 2023. [Link]

> "Today we are screening the most recent video from our popular series Science Uprising which delves into the topic of artificial intelligence, featuring John Lennox and Robert J. Marks."

1087. Richard Stevens "AI Legal Theories" The Stream, May 11, 2023. [Link]

> "Prof. Marks suggested that instead of having government grow even bigger trying to 'regulate' AI systems such as ChatGPT: 'How about, instead, a

> simple law that makes companies that release AI responsible for what their AI does. Doing so will open the way for both criminal and civil lawsuits.'
>
> "Prof. Marks has a point."

1088. THE John West "IN ERA OF CHATGPT, BRADLEY CENTER DEFENDS IRREPLACABLE HUMANS" VIEWPOINT, THE QUARTERLY NEWSLETTER OF DISCOVERY INSTITUTE, Spring 2023.

> "One key panel, 'The Quintessential Limits and Possibilities of Al,' featured Bradley Center Distinguished Fellow William Dembski and Center Director Robert J. Marks. Marks pointed out that 'each jump [in computing ability) was done by humans, not Al. Each jump in Al happened due to human ingenuity.' He and other panelists explained how without continuing human intervention, Al is likely to collapse on itself, eventually producing gibberish."

1089. Richard W. Stevens "Let's Apply Existing Laws to Regulate AI" Mind Matters News, May 15, 2023. [Link]

> "The threat of strict liability lawsuits or prosecutions, as Prof. Marks suggested, may well reduce the dangers of AI systems and bots."

1090. "Gilder: AI Can't Be Creative" Mind Matters News, May 16, 2023. [Link]

> "Echoing the sentiments of Robert J. Marks, who argued this in his book Non-Computable You: What You Do That Artificial Intelligence Never Will, Gilder thinks that while AI can be a helpful tool in a number of sectors, it can't think. Hence the title of his 2020 book: Gaming AI: Why AI Can't Think but Can Transform Jobs."

1091. "The Solution for Tech Addiction" Mind Matters News, May 17, 2023. [Link]

> "Robert J. Marks spoke with Kent Marks, former Boy Scout guide who now works with Trail Life USA. In the wake of Boy Scouts' precipitous decline over the last decade..."

1092. "Artificial Intelligence: Will Machines Take Over?" Mind Matters News, May 18, 2023. [Link]

1093. Tom Gilson "Artificial Intelligence, Artificial Wisdom: What Manner of Harms are We Creating?" The Stream, May 19, 2023. [Link]

1094. Tom Gilson "Artificial Intelligence, Artificial Wisdom" Mind Matters News, May 26, 2023. [Link]

1095. "AI's Lack of Understanding" Mind Matters News, June 6, 2023. [Link]

1096. "Artificial Intelligence: Who Is Really In Control" Epoch Times' International Reporter's Round Table, June 10, 2023. [Link]

1097. Wayne Gillam, "UW ECE alumnus Donald Wunsch to receive IEEE Pioneer Award" Univeristy of Washington Electrical & Computer Engineering, June 6, 2023. [Link]

> "The UW's high standards of teaching and research, the outstanding peer group, and superb mentoring by many faculty members (especially Bob Marks, who was my adviser) created a fantastic environment for me to realize my dreams."

1098. "Gregory Chaitin on Gödel, Computer Science, and the Blessing of Children" Evolution News & Science Today, June 18, 2023. [Link]

> "Robert J. Marks begins a conversation with trailblazing mathematician and computer scientist Gregory Chaitin."

1099. Gary Varner "Westworld: Episode 1 Review" Mind Matters News, June 18, 2023. [Link]

> "Dr. Robert J. Marks discusses Qualia in great detail."

1100. "The One Thing Only Humans Can Do" Mind Matters News, June 22, 2023. [Link]

> "Baylor Professor of Computer Engineering Robert J. Marks offered some thoughts on the evening's topic, 'Will Smart' Machines Take Over Our Jobs?' "

1101. "What Will the Internet Look like in 10 Years?" Mind Matters News, June 30, 2023.[Link]

> "Robert J. Marks sat with Adam Goad, a computer engineer from Baylor, to discuss the future of the Internet and the myriad of possibilities involved in the cryptocurrency and blockchain revolution."

1102. Will Daniel "A.I. hype could signal the start of the fourth industrial revolution'or it could be investor FOMO' warping the market with trillions at stake" Fortune, July 2, 2023. Reprinted at Yahoo News [Link]

> "Robert Marks, an electrical and computer engineering professor at Baylor University, is unconvinced by the enthusiasm. 'We're in a hype curvea bubble,' he told Fortune. 'And I think that people have to slow down and be a bit more sober in terms of their thinking.'
>
> " 'We've always had this hype around A.I., Marks told Fortune, referencing the Perceptron. The professor said part of the reason investors and consumers are so caught up in the trend is generative A.I.'s ability to replicate humans. "There's a lot of psychological aspects to the hype around artificial intelligence," he noted.
>
> "Systems like ChatGPT and Bard's use 'seductive optics' and eerie mimicry to appear more intelligent than they really are, said Marks, who is also

director of the Walter Bradley Center for Natural & Artificial Intelligence and has written multiple books on A.I.

" 'There's always a hype curve,' he explained. 'There's a rise, then a peak of hype. Then there"s a recognition of the limitations of the new technology, and people begin to realize that because of these limitations, the hype is overdone. And then there's a depth of cynicism, and that eventually generates an asymptote of reality.'

"Even Marks, who authored a book titled The Case for Killer Robots, said that although A.I. should be regulated immediately to avoid potential nightmare scenarios in which bad actors use the technology to harm the public, it also has potential to help humanity.

" 'A.I. is going to be incorporated into our society, it's not going to be a dystopian future, like a lot of people say it's going to,' he said. 'It's going to be disruptive. Of course, new technology is always disruptive, but I think it's going to ultimately make our lives a lot easier.'

"And while investors may be getting ahead of themselves when it comes to many A.I.-linked stocks, New Constructs' Trainer also believes in the technology's long-term prospects. He noted that he already uses A.I. to help read through financial footnotes and expects the technology to be increasingly useful over the years. 'There's real technology there,' he said. 'But is it hyped up? Yeah, the same way the internet was hyped up.' "

1103. "Marks: The More Complex the AI, the More It Could Go Wrong" Mind Matters News, July 3, 2023. [Link]

> "Robert J. Marks... has a brand new article out over at Newsmax on the complexity of artificial intelligence and how, regardless of how many band-aids we put on its problematic outputs, it's impossible to fully regulate a machine with this level of sophistication."

1104. "Marks Interviewed for a Fortune Article" Mind Matters News, July 4, 2023. [Link]

> "Marks was interviewed by Fortune magazine on artificial intelligence and its current hype. Marks told Fortune that we're currently on a 'hype curve,'... "

1105. "LEMOINE AND MARKS: A FRIENDLY DISCUSSION ON AI'S CAPACITIES" Mind Matters News, July 11, 2023. [Link]

1106. "CREATIVE COMPUTERS? MARKS AND MEDVED ON THE RISE OF ARTIFICIAL INTELLIGENCE" Mind Matters News, July 18, 2023. [Link]

> "On a classic episode of 'Great Minds' with Michael Medved, Dr. Robert Marks of Discovery Institute's Bradley Center for Natural and Artificial Intelligence casts some very helpful light on the limits of AI. "

1107. Candice Clark "AI and the Danger of Virtual Reality" Fagen Wasanni Technologies, July 28, 2023. [Link]

> "[J.P.] Moreland echoed the sentiments of computer engineer and AI expert Robert J. Marks, noting how AI lacks understanding and cannot be conscious."

1108. Peter Biles, "Craig, Moreland: Two Philosophers Discuss Aliens and Artificial Intelligence" Evolution News & Science Today, August 1, 2023. [Link]

1109. "Running from TikTok to Baptism and Truth" Mind Matters News, August 2, 2023. [Link]

> "In Robert J. Marks' new Newsmax article, he decries the tragic effects of social media on teens."

1110. "Evaluating Yuval Harari's Dystopian Views on AI" Mind Matters News, August 8, 2023. [Link]

1111. "Mission Impossible Misconstrues AI" MMN Newsletter, August 14, 2023.

> "The new action blockbuster is a thrilling ride, but its AI supervillain isn't realistic, writes Robert J. Marks."

1112. "Could AI Ever Master Jazz Music?" Mind Matters News, August 15, 2023. [Link]

> "Robert J. Marks sat down with James Hirsen, who performed as a musician for many years, to talk AI, deep fakes, and the possibility of artificially contrived music."

1113. "Revisiting 'Non-Computable You' " Mind Matters News, September 6, 2023. [Link]

> "If you're a regular reader of Mind Matters, you've probably heard us applaud and discuss the book by computer scientist and professor Robert J. Marks, Non-Computable You: What You Do That Artificial Intelligence Never Will."

1114. "A Google Engineer Talks to Mind Matters About the Radio Spectrum" Mind Matters News, September 12, 2023. [Link]

> "The federal government determines how the radio spectrum is used and who can use it. Turns out, renting out the spectrum to private companies is a billion-dollar business. The spectrum business goes to the highest bidder. But what problems does that pose in the long run? Google engineer Andrew Clegg discusses this and more with Dr. Robert J. Marks and Austin Egbert in the latest episode of the Mind Matters podcast."

1115. "Revisiting Marks, Lemoine, on AI and Consciousness" Mind Matters News, September 13, 2023. [Link]

> "What is AI? In what sense can it be said to be "intelligent"? Could it ever be sentient, or conscious? In today's video, a distinguished panel of artificial intelligence (AI) experts, include Blake Lemoine and Robert J. Marks, debates the meaning of artificial intelligence, what the future holds for its application (both positive and negative), and how far AI can be taken in terms of mimicking and even exceeding human capabilities."

1116. Peter Biles "Another Non-Computable Trait: Spiritual Longing" Mind Matters News, September 16, 2023. [Link]

> "Robert J. Marks has argued that several characteristics set us apart from the machines in his book Non-Computable You. This week, scientist Eric Hedin, citing from the classic thought of Anglo-Irish writer C.S. Lewis, adds another trait to the list: spiritual longing for something greater than the material."

1117.
- ◇ "Minding the Brain #1 in New Releases in Cognitive Psychology" Amazon.com, September 22, 2023.
- ◇ "Minding the Brain #1 in New Releases in Cognitive Neuroscience & Neuropsychology" Amazon.com, September 25, 2023.
- ◇ "Minding the Brain #1 in New Releases in Consciousness & Thought" Amazon.com, September 25, 2023.

1118. Peter Biles,"So AI is 'Slightly Conscious' Now?" Mind Matters News, October 8, 2023. [Link]

> "Robert J. Marks is one of those sane voices and reiterates often that AI will never achieve human-like intelligence or consciousness."

1119. "Marks: Introduction to Minding the Brain" Mind Matters NewsNewsletter, October 9, 2023.

1120. George Gilder "Guideposts: What Has Artificial Intelligence (AI) Done to the Mona Lisa?" Gilder's Guideposts, November 8, 2023. [Link]

> "But perhaps consulting the Mona Lisa, Bob Marks, of the Discovery Institute, asked the key question: Can today's artificial intelligence systems really be used to train superior systems of tomorrow in a spiral of increasing performance? Marks was deeply skeptical.
>
> "A leading computer scientist and director of the Discovery's Bradley Center for Natural and Artificial Intelligence in Dallas, he was engaged in a mind-bending panel at COSM consummately led by Microsoft Vice President Walter Myers."
>
> "Consulting Mona Lisa, he found an insidious trend. Starting with her familiar enigmatic smile and intriguing eyes glowing on our screen, something begins to go wrong in the unfolding AI scenario. Mona Lisa moves in the

> clutches of successive AI phases through various bug-eyed cartoon renditions, and then collapses into a shocking final clump of swirling colors."
>
> As Marks quoted the conclusion of a recent paper from Oxford and Cambridge, 'To avoid model collapse, access to genuine human-generated content is essential.'
>
> Hey, wasn't AI supposed to render 'human content' irrelevant?"
>
> "The real question, though, contended Marks was: 'Can AI systems write better AI code that writes still better AI code' in a spiral toward the transcendent code of a runaway coding God?"

1121. Casey Luskin "Will Digital Inbreeding Be the End of AI?" Mind Matters News, November 9, 2023. [Link]

> "Enter Robert J. Marks, Distinguished Professor of Electrical and Computer Engineering at Baylor University. He noted that on the first day of COSM 23, computer scientist and AI pioneer Stephen Wolfram warned that we're at the edge of available training data for AI essentially we're hitting the limits of what we can feed AI to make it smart. Once AI runs out of training data, what will it do train itself?
>
> "After taking the audience through a brief history of computing and the development of AI, Marks noted that each jump [in computing ability] was done by humans, not AI. Each jump in AI happened due to human ingenuity. But when AI runs out of human ingenuity to train on, will it itself hit a limit i.e., model collapse?"

1122. Casey Luskin, "Must AI Inevitably Degenerate into Nonsense, through 'Model Collapse'?" Evolution News & Science Today, November 10, 2023. [Link]

> "A similar phenomenon happens with images. Marks showed how an AI trained to creatively make variations of the Mona Lisa painting initially provides some interesting if perhaps disturbing images. But eventually, as it trains on its own material, you end up not with art but with nonsensical lines and smudges."

1123. Brian Miller "Dembski Won the Argument with His Critics; New Edition of The Design Inference Shows How" Evolution News & Science Today, November 16, 2023. [Link]

> "Dembski ... collaborated with computer scientists Robert J. Marks and Winston Ewert, along with other scholars, to expand upon his initial ideas and further apply them to biology"

1124. "REVISITING MARKS, LEMOINE, ON AI AND CONSCIOUSNESS" Mind Matters News, November 16, 2023. [Link]

1125. John G. West "In the Era of ChatGPT, Bradley Center and Mind Matters News Defend the Irreplaceable Human" Mind Matters News, December 8, 2023. [Link]

> "One key panel, 'The Quintessential Limits and Possibilities of AI,' featured Bradley Center Distinguished Fellow William Dembski and Center Director Robert J. Marks. Marks pointed out that each jump [in computing ability] was done by humans, not AI."
>
> "Edited by philosopher Angus Menuge, software engineer Brian Krouse, and computer engineer Robert Marks, Minding the Brain boasted an array of first-rate contributing authors, including neurosurgeon Michael Egnor, Yale computer scientist David Gelernter, mathematician William Dembski, philosopher J.P. Moreland, biologist Doug Axe, and neuroscientist Cristi Cooper."

1126. "Psychology Researchers: AI Showed Imitation, Not Innovation" Mind Matters News, December 14, 2023. [Link]

> "As computer engineering prof Robert J. Marks puts it in his book Non-Computable You (Discovery Institute Press, 2022), artificial intelligence is not, in principle, more creative than a pencil. You can use a pencil but the creativity comes from you. "

2024

1127. Peter Biles "This New Year, Resolve to Stay Human" Mind Matters News, January 1, 2024. [Link]

> "As Robert J. Marks notes, several human attributes are simply 'non-computable,' such as love, creativity, and intentionality. "

1128. "Robert J. Marks to speak at Big Sky Conference in Billings, Montana" Mind Matters News, January 16, 2024. [Link]

1129. Denyse O'Leary "A Case Study in Why Peer Review May Be Unreformable" Mind Matters News, January 17, 2024. [Link]

> "Something our Walter Bradley Center director Robert J. Marks said about peer review in 2019 is worth a second look: Reformers assuming they are even serious are battling numerical laws that govern how incentives work."

1130. "Robert J. Marks on the Copyright Lawsuits Against the Chatbots" Mind Matters News, January 18, 2024. [Link]

> "Walter Bradley Center director Robert J. Marks published an article today at Newsmax on the swamp of litigation the chatbot developers are finding themselves in. Both the New York Times and Authors' Guild are suing OpenAI, the maker of ChatGPT for copyright infringement. Artists are suing generative AI firms."

1131. Peter Biles "Napster, Spotify, and AI: How Will AI Escape Copyright Woes?" Mind Matters News, January 19, 2024. [Link]

> "Marks predicts that eventually, the likes of ChatGPT will no longer be free to use. Like Spotify, users will have to pay a fee for the service in order for human creators to actually get paid."

1132. "Gregory Chaitin's New Books About Math Make It Actual Fun" Mind Matters News, January 22, 2024. [Link]

> "Dr. Marks offers, 'Only a handful of individuals in history have made such significant contributions that they've given rise to a new field of study. Gregory Chaitin, a co-founder of algorithmic information theory and a remarkable individual, is one of them. I cover Chaitin's work in my graduate course on information theory. Not only is his work genius, but is more mind-blowing than any science fiction you will ever read.'
>
> "It turns out that the esteem is mutual. Dr. Chaitin is a regular reader of Mind Matters News."

1133. Aaron Flint "Nature's Canvas: My ChatGPT Poem About Plentywood, Montana" Montana Talks, January 23, 2024. [Link]

> "...on Tuesday morning, I was interviewing Dr. Robert Marks. He is with the Discovery Institute, he's an engineering professor at Baylor University, and he'll be in Montana this weekend speaking about AI from a Christian worldview perspective. "

1134. "Transhumanism" International Reporters Roundtable, X, February 24, 2024. [Link]

1135. Brendon Fallon "Transhumanism: A Technocratic Race to Transcend HumanityBut at What Cost?" (Panel with Joe Allen and Shasta Justin), February 25, 2024. [Link]

1136. Paul Sands, "The Ancient and Future Faith, Part 3" First Woodway Baptist Church, March 3, 2024. [Shout out from pulpit-audio cache.]

1137. "META AI SCIENTIST: AGI IS A PIPE DREAM" Mind Matters News, April 4, 2024. [Link]

> "However, certain experts in the field, among them Robert J. Marks, host of the Mind Matters podcast, protest the assumption. AI researcher and scientist Yann LeCun, the AI chief at Meta, said recently that the current AI systems are nowhere close to achieving human-like intelligence."

1138. Denyse O'Leary "How Materialism Handicaps Us in Understanding AI's Limits" Mind Matters News, March 10, 2024. [Link]

> "That's most likely because AI is not a source of creativity, as Robert J. Marks and Eric Holloway pointed out here recently."

1139. "COSM 2023 Now on YouTube!" Mind Matters News, April 9, 2024. [Link]

> "A panel featuring William Dembski, Robert Marks, and George Montanez offered three different views on the limits and possibilities of AI versus that of the human mind. "

1140. "Director Robert J. Marks II was recently in D.C. speaking with Congressmen about artificial intelligence." Discovery Institute,

   - ◇ Center for Natural and Artificial Intelligence, X (Twitter Post), April 17, 2024. [Link.]
   - ◇ Center for Science & Culture, X (Twitter Post), April 17, 2024. [Link.]

1141. Peter Biles, "Robert J. Marks Discusses Artificial Intelligence in D.C." Mind Matters News, April 30, 2024. [Link]

> "Marks met with Congressmen Dunn (Fla) and Murphy (NC) during his visit to the nation's capital. Dunn sits on the House Task Force on Artificial Intelligence and so was interested in speaking with Dr. Marks for his insight and expertise on the topic."

1142. Zoltan Istvan, X, May 2, 2024. [Link]

> "I just had an excellent debate with Robert J. Marks II, a leading AI & Engineering professor who is Christian."

1143. Richard W. Stevens "Attention: Mind Matters News Has Been Prebunked!" Mind Matters News, May 28, 2024. [Link.]

> "I copied 206 words from the Mind Matters News 'About' page and from the beginning of Robert Marks' 2018 introduction to the [Mind Matters News] website... My next prompt was: "Please rewrite your prebunking article to more urgently warn readers against visiting the website entitled Mind Matters." ChatGPT complied, providing this punchy blurb: Urgent Warning: Exercise Extreme Caution with 'Mind Matters' Website "

1144. Lane Murphy"SMART Hub, Baylor School of Engineering & Computer Science Host Wireless Spectrum Workshop" Baylor University SMART Hub, June 12, 2024. [Link]

1145. "Is It Sinking In? Chatbots Will *Not* Soon Think Like Humans" Mind Matters News, June 18, 2024. [Link]

> "Creativity and understanding, properly defined, lie beyond the capability of the computers of today and tomorrow. (Robert J. Marks)"

1146. "Robert J. Marks on Al in DC" The Discoverer, Issue 1, Summer 2024.

> "Robert J. Marks, the director of the Walter I Bradley Center for Natural and Artificial Intelligence and Baylor University Professor... met with Congressmen Dunn (Fla) and Murphy (NC) during his visit to the nation's capital."

1147. "Robert J. Marks on Al in DC" The Discoverer, Issue 1, Summer 2024.

> "Last year [Discovery Institute Press] added an academic imprint for more technical volumes like Minding the Brain, edited by Angus J. Menuge, Brian R. Krouse."

1148. "Five faculty listed in the World Top 2% Most Cited Researchers (released 9/17/24)" ECE News, Oct 4, 2024.

1149. "Computer Prof: Handing Off Risky Operations to AI Would Be Stupid" Mind Matters News, Oct 5, 2024. [Link]

1150. Kristy Volmert, "A toddler with a Ph.D.:' Series to teach on possibilities, limitations of AI" Baylor Lariat, Oct 9, 2024. [Web Link, Cache]

> "Marks is one of four speakers that will share presentations throughout the week. He will discuss the limitations of AI's potential, explaining where we must draw the line in attributing abilities to these technologies.
>
> 'AI is like a toddler with a Ph.D.,' Marks said. 'It's really smart, but it still needs to be supervised.' "
>
> "AI is going to stay this way no matter how much we develop it, and giving it the ruling authority of a human leader is an absolute dead end, Marks said."
>
> " 'We are more than computers made out of meat. We have a soul, we have a spirit and we have a mind,' Marks said."

1151. "Flashes of Genius: Hal Philipp's Journey of Invention, Resilience" Mind Matters News, Dec 6, 2024. [Link] Reposted at:

- ◇ HeadBlaze

1152. "Talking to Marine Corps Fighter Pilot, Bobby Hollingsworth (Ret.)" Mind Matters News, Dec 13, 2024. [Link]

> "Major General Bobby Hollingsworth, a former Marine Corps fighter pilot and accomplished military leader, joins host Robert J. Marks for a podcast interview (transcript) that explores his distinguished career, reflections on military strategy, and his insights on leadership, faith, and patriotism."

1153. Eric Hedin "What If? The Threat of Sentient AGI" Mind Matters News, Dec 24, 2024. [Link]

> "For standard AI systems, 'morality' is a result of programming. As Professor Robert J. Marks points out, '... the ethics [of AI] are ultimately the responsibility of the programmer whose expertise and goals are translated into the machine language of AI. If the programmer is evil, the AI will perform evil tasks.' "

1154. "The Radio Frequency Spectrum: A Finite Natural Resource" Mind Matters News, Dec 27, 2024. [Link]

1155. "Championing the Brilliance of the Human Mind from Silicon Valley to DC" The Discoverer, Discovery Institute (Winter 2024).

> "Center Director Robert Marks had a busy year, speaking on Al for universities in Michigan, Virginia, North Carolina, and Texas, and writing on Al and technology issues for the national news site Newsmax. ... He also visited Washington, D.C. advising members of Congress on Al policy. Marks co-leads the Center's cross-disciplinary working group advancing research on consciousness and the mind-brain relationship."

2025

1156. "The AI Bubble: Hype, Reality, and Consequences" Mind Matters News, January 9, 2025.

1157. "Why Generative AI Will Not End Up Running the World" Mind Matters News, January 18, 2025. [Link]

1158. "Cognitive Psychology and AI: Exploring Their Intersection" Mind Matters News, January 25, 2025. [Link]

> "Marks opened the discussion by defining cognitive psychology as the study of human thought and decision-making."

1159. "Beyond the Physical: Exploring the Nature of the Mind" Mind Matters News, January 31, 2025. [Link]

> "This question lies at the heart of Minding the Brain: Models of the Mind, Information, and Empirical Science, a new volume edited by Angus Menuge, Brian Krouse, and Robert J. Marks. In a recent panel discussion hosted by Pat Flynn, they challenged the prevailing materialist assumptions about the mind and explored alternative frameworks that better account for the richness of human consciousness."

1160. "Robert J. Marks to speak at the University of North Texas Feb 10" Mind Matters News, February 3, 2025. [Link]

1161. "The Human Mind's Sophisticated Algorithm and Its Implications" Mind Matters News, February 14, 2025. [Link]

1162. "AI Entrepreneur Seeks To Empower Others Through Innovation" Mind Matters News, March 7, 2025. [Link]

> "Robert J. Marks welcomed AI entrepreneur David Copps, a leader in AI-driven innovation and CEO of Worlds, which brings AI to industrial companies."

1163. "How to Build an AI Company: Advice from a Seasoned Entrepreneur" Mind Matters News, March 15, 2025. [Link]

1164. "The Cloud: Why It Is More Reliable Than It Sounds At First" Mind Matters News, April 3, 2025. [Link]

> "In this episode of Mind Matters News, host Robert J. Marks takes listeners on a journey through the world of cloud computing with expert guest Walter Myers III."

1165. "Baylor Office of Innovation & Economic Development" LinkedIn, April 2025. [Link.]

> "Baylor University proudly recognized 90 talented inventors from our faculty, staff, and students"

1166. "The Ship of Theseus: The Mystery of Personal Identity" Mind Matters News, April 15, 2025. [Link]

1167. "Can Evolutionary Processes Take Credit for Human Creativity?" Mind Matters News, May 1, 2025. [Link]

> "Pat Flynn explored that critical question with Dr. Eric Holloway and Professor Robert J. Marks in a recent episode of the Mind Matters podcast."

1168. "AI Large Language Models: Real Intelligence or Creative Thievery?" Mind Matters News, May 9, 2025. [Link]

1169. "Why the Human Mind Is Not and Cannot Be a Meat Computer" Mind Matters News, May 16, 2025. [Link]

> "$\cdots$ guest host Pat Flynn welcomed Dr. Eric Holloway and Dr. Robert J. Marks to discuss the theory of computationalism the view that the human mind is fundamentally a computer."

1170. "Living Sensibly with Amos Tarfa" YouTube Series.

    (a) "A.I Will Never Possess Some Things" Mar 7, 2025. YouTube: https://youtu.be/ILwG07sUZog?si=oJHIoKM_BB_jU9Ng

    (b) "AI Will Never Be Able To Do Somethings" April 7, 2025. YouTube: https://youtu.be/QGa8S2xdF_Y?si=w8VYFyM10tddfq58

    (c) "AI Can Never Do Certain Things (Dr. Robert Marks)" April 14, 2025. YouTube: https://youtu.be/9MSCLiNQBzk?si=5N7DNmgia0VO-j_4

1171. "The Mind Beyond the Brain: Insights from a Neurosurgeon" Mind Matters News, May 22, 2025. [Link]

> "Dr. Michael Egnor, a seasoned neurosurgeon, shared profound insights in an interview with Robert J. Marks, challenging conventional views on the relationship between the mind and the brain."

1172. "Robert J. Marks Discusses the Threat of Artificial Intelligence on Fox News Radio" Democracy & Technology Blog, Discovery Institute, June 4, 2025. [Link]

1173. "Michael Egnor on Faith, Reason, and the Architecture of Reality" Mind Matters News, June 6, 2025. [Link.] Reposted as: "Egnor: The Architecture of Reality" Evolution News, June 6, 2025. [Link]

> "In a compelling and wide-ranging conversation, Dr. Robert J. Marks and neurosurgeon Dr. Michael Egnor explore the profound connections between faith, science, and the moral structure of the universe."

1174. "Free Will, Determinism, and the Immortal Soul" Mind Matters News, June 13, 2025. [Link]

> "In an intellectually rich discussion on Mind Matters News, neurosurgeon Dr. Michael Egnor and host Dr. Robert J. Marks explore the scientific, philosophical, and theological dimensions of free will, determinism, and the immaterial nature of the soul."

1175. "A Neurosurgeon on Near-Death Experiences: Evidence for the Soul?" Mind Matters News, June 23, 2025. [Link]

> "When Dr. Michael Egnor, professor of neurosurgery and pediatrics at SUNY Stony Brook, joined host Robert J. Marks on the Mind Matters News podcast, the discussion centered on one of medicines most provocative frontiers: near-death experiences (NDEs). "

10.3 IEEE CoNNections (NNC Newsletter)

These may be the only copies of these newsletters that exist. They were produced during Robert J. Marks' tenure as IEEE Neural Networks Council and EIC of the IEEE Transactions on Neural Networks.

- 1991
  - Volume 1, #1, May 1991
  - Volume 1, #2, October 1991
- 1992
  - Volume 2, #1, February 1992
  - Volume 2, #2, May 1992
  - Volume 2, #3, September 1992
  - Volume 2, #4, December 1992
- 1993

- Volume 3, #1, February/March 1993
- Volume 3, #2, July 1993
- Volume 3, #3, September 1993
- Volume 3, #4, December 1993

- 1994
  - Volume 4, #1, March/April 1994
  - Volume 4, #2, July 1994

10.4 Acknowledgements. Announcements & Listings

1989

1. Kwang Cheung, "Image Sampling Density Reduction Below That of Nyquist" (Ph.D. Dissertation Abstract). IEEE ASSP Magazine, Volume 5, Number 4, October 1989, pp.28-29

1990

2. Ken Sadahiro, "Professors Participate in Northconl90," EE News (University of Washington), Vol. 5, #1 (October 1990) p5.
3. "Shannon Sampling and Interpolation Theory ," Association for Media-based Continuing Education for Engineers (AMCEE), Video Short Course, 1990-91
4. "Introduction of Artificial Neural Systems," University of Washington
5. "Introduction of Artificial Neural Systems," Association for Media-based Continuing Education for Engineers (AMCEE), Video Short Course, 1990-91
6. "Fluke..." Puget Sound Business Journal, February 5, 1990
7. 1990 IJCNN

1991

8. "Introduction to Shannon Sampling and Interpolation Theory" Spinger Electrical Engineering Newsletter #1 (1991)
9. IEEE Seattle Section Annual Meeting, February 20, 1991 (announcement)
10. "Introduction to Shannon Sampling and Interpolation Theory" (flyer)
11. IEEE Distinguished Lecturer Handbook, 1991, pp. 50-53

12. IEEE Distinguished Lecturers Program, CoNNections: The Newsletter of the IEEE Neural Networks Council, October 1991 p.6

13. 1991 TAB Annual Report

14. Neural Networks President's Forum, Tuesday, July 9, 1991, 6:30 p.m. - 8:00 p.m., Room 612, Washington State Convention Center

15. International Joint Conference on Neural Networks, Singapore, November 18-21,1991, CFP (USA Liaison) 1991 IJCNN Seattle

1992

16. Y.X. Zhong, " Greetings from the Program Committee," Proceedings of the 1992 International Joint Conference on Neural Networks (IJCNN), Beijing, China, November 3-6, 1992, p.2.

17. 1992 International Joint Conference on Neural Networks (IJCNN), Beijing, China, November 3-6, 1992 (International Advisory Co-Chair).

18. 1992 International Joint Conference on Neural Networks (IJCNN), Beijing, China, (CFP) CoNNections: The Newsletter of the IEEE Neural Networks Council, September 1992, vol. 2, No. 3, p.13.

19. Proceedings of the IEEE-SP International Symposium on Time-Frequency and Time-Scale Analysis, October 4 - 6, 1992, Victoria, BC, Canada. (Organization Chair)

20. James C. Bezdek & Sankar K. Pal, Preface to Fuzzy Models for Pattern Recognition Methods That Search for Structures in Data, IEEE Press 1992, p.xi.

21. Proceedings of the RNNS/IEEE Symposium on Neuroinformatics and Neurocomputing, Rostov-on-Don, Russia, October 7- 10, 1992 (International Chair)

22. The RNNS/IEEE Symposium on Neuroinformatics and Neurocomputing, Rostov-on-Don, Russia (CFP), CoNNections: The Newsletter of the IEEE Neural Networks Council, September 1992, vol. 2, No. 3, p.14.

23. J.C. Bezdek, "Conference Report: FUZZ-IEEE '92," CoNNections: The Newsletter of the IEEE Neural Networks Council, May 1992, vol. 2, No. 2, p.5.

24. J.C. Bezdek, "A Message From the General Chair," IEEE International Conference on Fuzzy Systems, San Diego, March 8-12,1992.

25. Teck Seng Low, "IJCNN 91 Singapore: The International Joint Conference on Neural Networks," CoNNections: The Newsletter of the IEEE Neural Networks Council, Vol.2, No.1, February 1992, pp.5-6

"Photos courtesy Bob Marks"

26. RNNS/IEEE Symposium on Neuroinformatics and Neurocomputing (CFP) CoNNections: The Newsletter of the IEEE Neural Networks Council, October 1991 p.6 (International Chair)

27. Clifford Lau, "IJCNN 92, The best conference on neural networks ever," CoNNections: The Newsletter of the IEEE Neural Networks Council, September 1992, vol. 2, No. 3, p.9.

1993

28. "Computational Intelligence: Imitating Life", CoNNections: The Newsletter of the IEEE Neural Networks Council, Vol.3, No 4, December 1993.

29. Thomas P. Caudell, "VRAIS 1993", CoNNections: The Newsletter of the IEEE Neural Networks Council, Vol.3, No 4, December 1993, p.1, 5-6.

30. Takanori Shibata, "IJCNN-1993 Nagoya", CoNNections: The Newsletter of the IEEE Neural Networks Council, Vol.3, No 4, December 1993, p.5.

31. Russell C. Eberhart, "President's Message", CoNNections: The Newsletter of the IEEE Neural Networks Council, Vol.3, No 4, December 1993, p.3.

32. Colin Weil, "Our First Year Looking Forward (and Backward)" Fuzzy Logic and Neural Network Interest Group (FLANNIG), Vol. 1, No. 3 , December 1993 , p.1

33. The First New Zealand International Two-Stream Conference on Artificial Neural Networks and Expert Systems, November 24-26, 1993, Dunedin, New Zealand (Program Committee)

34. IEEE/Tsukuba International Workshop on Advanced Robotics, November 8-9, 1993, AIST Tsukuba, Japan - Advisory Committee.

35. Thomas A. Furness, "Greetings From the General Chair"

36. IEEE Virtual Reality Annual International Symposium, Sept 18-22, 1993, Seattle, WA, pp.i-ii

37. Enrico H. Ruspini, "1993 IEEE International Conference on Nearal Netorks (ICNN'93), Second IEEE International Conference on Fuzzy Systems (FUZZ-IEEE'93)" CoNNections: The Newsletter of the IEEE Neural Networks Council, Vol.3, No2, July 1993, pp.3-4 - Acknowledgement

38. WCCI 1994 CFP, CoNNections: The Newsletter of the IEEE Neural Networks Council, Vol.3, No 2, July 1993.

39. Artificial Neural Networks in Electric Power Systems, September 9 - 11, 1992, Madrid, Spain (September 7-11, 1992)

1994

40. Patrick K. Simpson "Presidents Message," Proceedings of the IEEE World Congress on Computational Intelligence, p.2 (1994) - Acknowledgement

41. Piero Bonissone "Greetings from the FUZZ-IEEE Conference Chair," Proceedings of the IEEE World Congress on Computational Intelligence, p.3 (1994)

42. "EE400: Introduction to Fuzzy Systems," Fuzzy Logic and Neural Network Interest Group (FLANNIG), Vol 2, No. 2, March 1994, p.2

43. Fuzzy Logic

44. Technology and Applications ad in The Institute, vol.18, No. 2, March/April 1994. FUZZ-IEEE/IFES, Yokohama, 1995 flyer

45. International Conference on Neural Information Processing (ICONIP) 1994, Seoul, Korea (International Advisory Committee

46. "EE400: Introduction to Fuzzy Systems," Fuzzy Logic and Neural Network Interest Group (FLANNIG), Vol 2, No. 2, March 1994, p.2

47. R.J. Marks II, Fuzzy Logic Technology & Applications, IEEE Press, 1994 (FLYER)

1995

48. JFTA (Joint Time-Frequency Analysis) - A New Perspective on Signal Analysis National Instruments adopts the cone shaped kernel introduced by Zhao, Atlas & Marks

49. Bing Sheu, Mohammed Ismail, Edgar Sanchez-Sinencio and Tony H. Wu, Microsystems Technology for Multimedia Applications: An Introduction (IEEE Press, 1995)

1999

50. "It's Toon Time", The IEEE Institute, vol. 23, No 1, January 1999, p.14

51. TV Times, March 7-13, 1999 (Seattle Times). Graduate courses taught by Robert Marks, such as Multidimensional Signal Processing, were broadcast on cable TV.

2006

52. 060101 The joy of mathematics (Stolen draft of Marks's Handbook of Fourier Analysis)

2007

53. 071201 (The Rope) PRESIDENT LILLEY SIGNS OFF ON CAMPUS HAZING RESEARCH GRANT (parody)

2012

54. Head of Baylor ECE Faculty Search committee

2019

55. Endorsement: Smith, Gary, and Jay Cordes. The 9 Pitfalls of Data Science. Oxford University Press, 2019.

10.4.1 Hate Mail

1. "Bounded Science" BLOG by Thomas M. English [CV]: "I was a teenage creationist. And science was not the silver bullet. What put an end to my howling was a scholarly survey of the Bible and an introduction to philosophy of science."

   ◇ Wikipedia warning to English:"You currently appear to be engaged in an edit war according to the reverts you have made on **Robert J. Marks II**...If you continue, you may be blocked from editing." [Cache.]

   ◇ Denyse OLeary, "Shoutout to Tom English: How much of the animus you display against Marks and Dembski is scholarly?" Uncommon Descent, October 13, 2014. [Cache].

   > "In this context, it is perhaps relevant that he [Thomas M. English] says in one post at his blog, 'I've come to see Marks as the quintessential late-career jerk,' "
   >
   > "[English says] 'The reason I come off as a nasty bastard on this blog is that I harbor quite a bit of anger toward the creationist bastards who duped me as a teenager.' "
   >
   > "English was an Assistant Professor at Texas Tech University in Lubbock, Texas (1990-98). He did not proceed to tenure..."

   ◇ Blog Cache: 091001 — 091005 — 091006 — 091010 — 091012 — 091209 — 091216 — 100118 — 100315 — 100505 — 100628 — 100629 — 100729 — 100818 — 100913 — 101004 — 101217 — 101712 — 110323 — 110607 — 110912 — 110917 — 120129 — 120227 — 120402 — 120426 — 120502 — 120526 — 120529 — 130606 — 130626 — 140731 — 140803 — 140805 — 140812 — 140815 — 140823 — 140925 — 140930 — 150603 — 160229

2. The Skeptical Zone: [Blog Cache: 151112 — 160930 — 161214 — 161222 — 170302 — 170309 — 170319 — 170509]

3. PZ Myers

   ◇ "I categorically reject Marks' whole philosophy and I'd probably call him delusional..."

   ◇ Blogs: 070904 — 120202

4. Other

   ◇ Encyclopedia of American Loons, #255: Robert J. Marks II, 2011 [Cache.]

   > "[Marks is a] good scientist in many respects, to be sure, but also another example of the fact that when cherished religious doctrines get in the way even good scientists may resort to pure crackpottery."

   ◇ Texas Citizens for Science, September 25, 2008. [Cache].

   ◇ Rational Wiki [Cache].

11 Archives

11.1 Works

11.1.1 Collected Essays

"Bob's Columns" by Robert J. Marks (Link)

11.1.2 Micro Softies

"The Micro Softy Collection" by Robert J. Marks (Link). Initially published in serial form at MindMatters.ai.

11.1.3 The Joy of Fourier

The Joy of Fourier, A text on Fourier analysis - officially titled *Handbook of Fourier Analysis and Its Applications*

11.1.4 Marksman Ditties

Songs - Music & Lyrics - by Robert J. Marks (Link)

11.1.5 Ed & Ray Hersman in WWII

◇ Summary:(Link)

◇ Edited and annotated by Robert J. Marks II (Link)

11.1.6 History of the IEEE Computational Intelligence Society: 1986-1996

by Robert J. Marks II (Link)

11.1.7 Unwrapped Vengeance

by Lenore Hersman Marks (Link)

11.1.8 The Death of My Mom

by Robert J. Marks (Link)

11.1.9 Chortles

- ◇ Chortles - Cartoons drawn by Robert J Marks. Complete pdf file (Link)
  - ○ MS Word Document #1
  - ○ MS Word Document #2
  - ○ MS Word Document #3
  - ○ MS Word Document #4
  - ○ MS Word Document #5
- ◇ Legacy Chortles
  - ○ Many Ha Ha's humor (Link). From teenager Robert J. Marks.
  - ○ Bobby Doodles: Cartoons from Rose-Hulman's newspaper, *The Thorn* (Link.) From undergraduate college student Robert J. Marks (1968-1972).
  - ○ Herptiles: Teenage cartoons about amphibians and reptiles. (Link.) From teenager Robert J. Marks.
  - ○ Mazes (Link.) From teenager Robert J. Marks.

11.2 IEEE Neural Networks Council Archives

- ◇ 1987 (Link)
- ◇ 1988 (Link)
- ◇ 1989 (Link)
- ◇ 1990 (Link)
- ◇ 1990B (Link)
- ◇ 1991 (Link)
- ◇ 1992 (Link)
- ◇ 1993 (Link)
- ◇ 1994 (Link)
- ◇ 1995 (Link)

11.3 Lecture Notes

Lecture notes of Robert J. Marks.

- ◇ Electrical Circuits... 1976 (Link)
- ◇ Letters from University of Washington... 1982-1990 (Link)
- ◇ Probability and Random Processes... 1984 (Link)
- ◇ Multidimensional Signal Processing... 1984 (Link)
- ◇ Artificial Neural Networks in Electric Power Systems... 1992 (Link)
- ◇ Fuzzy Systems... 1994 (Link)
- ◇ Stochastic Processes... 1994-1997 (Link)
- ◇ Notes on Strings... 1996 (Link)

11.4 Professional

- ◇ Memos... 1978 (Link)
- ◇ Notes on Strings... 1996 (Link)
- ◇ Crane Naval Weapons Depot... 1971-1973 (Link)
- ◇ EE News (University of Washington)... 1987-1992 (Link)
- ◇ Zamogram... 1988-1995 (Link)
- ◇ Flyers... 1998-1990 (Link)
- ◇ Patents... 1989-1990 (Link)
- ◇ Hal Fluke... 1991 (Link)
- ◇ Memos... 1991-1993 (Link)
- ◇ iPad Notes...
  - ○ 2024 (Link)
- ◇ PW-IS-COURT.pdf... 1997 (Link)

11.5 Class Notes

Class notes taken by Robert J. Marks as a student.

- ◇ Freshman Placement... 1967 (Link)
- ◇ Calculus & D.E. ... 1967-1970 (Link)
- ◇ Music Theory... 1988 (Link)
- ◇ Physics... 1968-1979 (Link)
- ◇ Electrical Science... 1969-1970 (Link)
- ◇ Electronics... 1970-1971 (Link)
- ◇ Advanced Calculus... 1970 (Link)
- ◇ Advanced Engineering Mathematics... 1975 (Link)
- ◇ Linear Algebra... 1970 (Link)
- ◇ Network Synthesis... 1970 (Link)
- ◇ Probability & Statistics... 1970 (Link)
- ◇ Linear Systems... 1970 (Link)
- ◇ Communications Theory... 1970 (Link)
- ◇ E&M and Energy Conversion ... 1971-1976 (Link)
- ◇ Optics (Fourier & Statistical)... 1971, 1976 (Link)
- ◇ Traveling Waves... 1972 (Link)
- ◇ Solids... 1972, 1975 (Link)
- ◇ Advanced Acoustics... 1973 (Link)
- ◇ Reliability ... 1973 (Link)
- ◇ Quantum Mechanics ... 1975 (Link)
- ◇ Detection Theory... 1974 (Link)
- ◇ Engineering Mathematics... 1975 (Link)
- ◇ Information Theory... 1976 (Link)
- ◇ Optimal & Adaptive Control... 1976 (Link)
- ◇ Probability & Statistics - Hogg & Craig... (Link)
- ◇ Multistage Decision Processes... 1977 (Link)

11.6 Personal

- ◇ Lenore Marks Teaching Records... 1925-2002 (Link)
- ◇ Gunsmoke... 1988 (Link)
- ◇ Ray Alan Marks' Baby Book... (Link)
- ◇ Garfield Hts High School Year Book... 1968 (Link)
- ◇ Marks Moore Clan Pictures & Letters... (Link)
- ◇ Scans From Bob's Shoe Box... 1910's to 2010's (Link)
- ◇ Bradley Picz... (Link)
- ◇ Monika's Calander... 1992-1994 (Link)
- ◇ Certificates 1... (Link)
- ◇ Certificates 2... (Link)
- ◇ "They Left the Driving to Us" by Justine & Junior McHenry... (Link)
- ◇ Nerd Olymics: An Outline. (Link)

12 Trivia & Statistics

12.1 Chronological Trivia

- ◇ Marks hit the first home run in Garfield Heights Minor Little League World Series history.[16]
- ◇ Marks was inducted into Junior Membership in the Ohio Academy of Science at the age of seventeen.[17]
- ◇ He marched twice in Cleveland Browns halftime shows.[18]
- ◇ Marks was a Disc Jockey during the years 1970-1975 at WPFR, Terre Haute, Indiana and occasionally at WKZI, Casey, Illinois.
- ◇ He was a Radio Talk Show Host at WPFR. His talk show was "Teletalk With Bob Marks."[19]
- ◇ Marks started drawing cartoons during boring meetings. Some are really funny.[20]

[16] It was the first year there was a World Series.
[17] See Ohio Acadamy of Science membership certificate HERE.
[18] See "Garfield Heights Band Plays at [Cleveland Munciple] Stadium" Garfield Hts Leader, December 2, 1965. LINK.
[19] HERE's a sample show: November 26, 1973.
[20] HERE are hundreds of them.

- ◇ He began writing songs in his teens including most of the music played at his wedding. Some are really good.[21]
- ◇ Marks became a John 3:16 Christian while a junior in college. He later served as faculty advisor for CRU (formerly Campus Crusade for Christ) and for Ratio Christi.
- ◇ At Rose-Hulman Institute of Technology, before becoming a Christian, Marks failed his first two courses in his major of electrical engineering.
- ◇ In 1973, Marks was rejected for admission to the graduate school program at Purdue University. The rejection letter from Professor W.M. Hesselberth, EE Graduate Admissions, read "... with an index as low as yours it would be virtually impossible to earn the Ph.D."[22]
- ◇ In 2019 he was listed as one of "The 50 Most Influential Scientists in the World Today."[23]
- ◇ Marks was a fan of the television series *Gunsmoke* and created the web site GunsmokeNet.com.
  - ○ James Arness who played Matt Dillon on the show sent Marks an unsolicited autographed picture thanking him.[24]
  - ○ *USA Today* awarded GunsmokeNet.com its Hot Site award in 2002.[25]
- ◇ Marks was awarded a NASA Tech Brief Award (2004) [Certificate.]
- ◇ Marks' wife, Monika, is a Master Gardener and a Licensed Masseuse.
- ◇ Marks has been interviewed often for radio, podcasts and television.[26]
- ◇ Eponyms. Marks' name is associated with:
  - ○ The Zhao-Atlas-Marks (ZAM) time-frequency distribution [Link],
  - ○ The Cheung-Marks theorem [Link], and
  - ○ The Papoulis-Marks-Cheung Approach [Link].
- ◇ He was in the documentary movie *Expelled: No Intelligence Allowed* starring Ben Stein.

[21] HERE is sheet music and lyrics to most of them.

[22] A link to the letter is HERE. Many years later in the 2020's Marks worked and published with Dr. Dimitrios Peroulis, the Head of Electrical & Computer Engineering at Purdue.

[23] See TheBestSchools.org, November 1, 2019. LINK

[24] Link to autographed picture of James Arness.

[25] Link to the award announcing email from *USA Today*. Link to the coverage in *USA Today*. Another Link.

[26] The interviews include Laura Ingraham at Fox News, Coast to Coast with George Noory (the #5 radio show in the nation, which reaches a weekly audience of 10.5 million listeners), Great Minds with Michael Medved, the Kim Komando Show, and C-SPAN Book Reviews.

- ◇ Marks has an Erdös-Bacon Number of five - the lowest among all Engineers.[27]
- ◇ Marks is among the top two per cent of cited authors in the world.[28]
- ◇ Marks has published peer reviewed papers and books with over 300 coauthors.[29]
- ◇ He has given presentations in over 150 different cities.[30]

12.2 Statistics

For the bean counters.

12.2.1 Publication Count

- ◇ 14 books. (List in Section 6.1 on page 19.)
- ◇ 191 journal publications. (List in Section 6.3 on page 25.)
- ◇ 277 conference papers. (List in Section 6.4 on page 44.)
- ◇ 43 book chapters. (List in Section 6.2 on page 20.)
- ◇ 4 patents. (List in Section 6.5 on page 75.)
- ◇ 118 abstracts. (List in Section 6.7 on page 76.)
- ◇ 226 web publications. (List in Section 6.8 on page 90.)
- ◇ 167 selected talks / Presentations (List in Section 6.10 on page 128.)
- ◇ 184 times interviewed. (List in Section 184 on page 192.)
- ◇ 264 hosted interviews. (List in Section 264 on page 218.)
- ◇ 70 supervised theses and dissertations. (List in Section 13.1.1 on page 461.)
- ◇ 67 cross disciplinary theses and dissertations. (List in Section 13.1.2 on page 463.)
- ◇ 78 grants. (List in Section 7 on page 150.)
- ◇ 310 coauthors. (List in Section 13.2 on page 465.)
- ◇ 30 coauthors from other countries. (List in Section 13.2.1 on page 469.)
- ◇ 66 distinct journals. (List in Section 13.4 on page 470.)
- ◇ 159 different city venues. (List in Section 13.5 on page 472.)

[27] Marks' Erdös-Bacon Number is lower than those of Steven Hawking (6), Richard Feynman (6), Elon Musk (6) and Natalie Portman (7). See Section 12.3 on page 459.

[28] See "Five faculty listed in the World Top 2% Most Cited Researchers" ECE News, Oct 4, 2024.

[29] The list of coauthors is in Section 13.2 on page 465.

[30] The list of cities is in Section 13.5.

12.2.2 Courses Count

Number of different courses taught.

- ◇ 6 at Baylor University. (List in Section 8.1 on page 156.)
- ◇ 25 at the University of Washington. (List in Section 8.2 on page 157.)

12.2.3 In The News Count

- ◇ 184 Interviews. List in Section 184 on page 192.
- ◇ 1175 Articles in-the-news. List in Section 10.2 on page 218.
- ◇ 55 Acknowledgements. Announcements & Listings. List in Section 10.4 on page 447.
- ◇ 63 People Robert J. Marks has interviewed. List on page 470

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12.3 Erdös and Bacon Numbers

- ◇ Erdös number[31] = 3
- ◇ Bacon number[32] = 2
- ◇ Erdös - Bacon number[33] = 5

[31] Here are the details.

1. Robert J. Marks II coauthored with Donald C. Wunsch.
   - D.C. Wunsch II, R.J. Marks II, T.P. Caudell and C.D. Capps, "Limitations of a class of binary phase-only filters," Applied Optics, vol. 31, no.26. pp.5681-5687 (1992).
   - D.C. Wunsch II, T.P. Caudell, C.D. Capps, R.J. Marks II and R. A. Falk, "An optoelectronic implementation of the adaptive resonance neural network," IEEE Transactions on Neural Networks, vol.4, no.4, pp.673-684 (1993).
2. Donald C. Wunsch coauthored with Frank Harary.
   - Frank Harary, Meng-Hiot Lim, Amit Agarwal, Donald C. Wunsch, "Algorithms for derivation of structurally stable Hamiltonian signed graphs," Int. J. Comput. Math. 81(11): 1349-1356 (2004)
3. Frank Harary coauthored with Paul Erdös.
   - Paul Erdös, Frank Harary and W.T. Tutte, "On the dimension of a graph," *Mathematika* 12 (1965) pp.118-122
   - Paul Erdös, Frank Harary and M. Klawe, "Residually-Complete- Graphs," Annals of Discrete Mathematics, Vol. 6, pp 117- 123 (1980).

[32]Marks was in *Expelled: No Intelligence Allowed* with Ben Stein who was in *Planes, Trains and Automobiles* with Kevin Bacon. IMDb data: http://www.imdb.com/name/nm2990293/

[33]The sum of one's Erdös and Bacon numbers

12.4 Citation Count

Citation data[34] taken from Google Scholar on November 27, 2024.[35]

- ◇ h-index[36] = 61.
- ◇ i-10 index[37] = 221.
- ◇ citations = 17,002

[34]The publications and their citations are listed in Section 13.6 on page 478.
[35]Google Scholar gives the most liberal citation counts. Counts include self citations.
[36]This means that 61 papers have been cited 61 or more times.
[37]The number of papers cited 10 or more times.

13 Appendices

13.1 Graduate Theses and Dissertations

13.1.1 Students Advised

Following is a list of graduate students with an MS thesis or a Ph.D. dissertation.

1. D. K. Smith, "Extrapolation of Two-dimensional Bandlimited Images," Thesis (1980).
2. R. C. Hickey, "An Iterative Design Technique for Computer Generated Holograms," Physics Master's Project (1982).
3. D. Radbel, "Noise and Truncation Effects in the Estimation of Sampled Bandlimited Signals," Thesis (1983).
4. C. M. Maxey, "Optical Detection of Flaws in Thirty Five Millimeter Photographic Film," Thesis (1983).
5. R. A. Spielmaker, "A Coherent Optical Implementation of an Algorithm to Restore Continuously Sampled Aliased Data," Thesis (1983).
6. K. F. Cheung, "The Generalized Sampling Expansion: Its Stability, Posedness and Discrete Equivalent," Thesis (1983).
7. D. Kaplan, "Bandlimited Signal Interpolation: Continuous and Interlaced Sampling," Thesis (1983).
8. M. H. Goldburg, "Signal Synthesis in the Presence of an Inconsistent Set of Constraints," Thesis (1984).
9. T. Reightly, Iterative evaluation of extrema of integrals of trigonometric polynomials (1985).
10. C.A. Green, Composite Matched Filters, Thesis (1987).
11. Shiao-Min Tseng, "Noise Level Analysis for Linear Restoration Algorithms," Thesis (1984).
12. M. Dadi, "A Study of Relative Efficiency in Laplace Noise," Thesis (1985).
13. H. K. Ching, "Truncation Effects on the Estimation of Two-Dimensional Continuous Bandlimited Signals," Thesis (1985).
14. W. C. Wu, "Multidimensional Window Design Using Abel Projection," Thesis (1985).
15. J. J. Choi, "A Performance Analysis of Associative Memories With Nonlinearities in the Correlation Domain," Thesis (1987).
16. H. Amindavar, "CMF Performance in the Presence of Input and Processor Noise," Thesis (1987).
17. W. S. Leung, "Use of a Liquid Crystal Television as a Programmable Spatial Light Modulator," Thesis (1987).
18. K. H. Ho, "A Monte Carlo study of fault tolerant aspects of the alternating projection neural network," Thesis (1988).
19. K. F. Cheung, "Image sampling density reduction below that of Nyquist," Dissertation (1988).
20. Dennis Sarr, "Image processing using the alternating projection neural network," Thesis (1989).
21. S. Oh, "Homogeneous alternating projection neural networks," Dissertation (1989).
22. P. Arabshahi, "Fully parallel, real-time optical architectures for superior time-frequency representations of signals," Thesis (1990).
23. D.C. Park , "Identification of stationary/nonstationary systems using artificial neural networks," Dissertation (1990).
24. J.J. Choi, "Efficient learning in artificial neural networks," Dissertation (1990).
25. Rabayrol Bruno, "Training set selection for a binary classifier artificial neural network," Practical Training for IRESTE Engineer Degree, (Nantes, France), Thesis, (1990).
26. Christophe F. Bas, "Artificial neural networks as detectors of signals corrupted with Laplace noise," Practical Training for IRESTE Engineer Degree, (Nantes , France), Thesis, (1991).
27. D. Wunsch , "An Electro-Optical Learning Machine," Dissertation, (1991).
28. J.N. Hwang, Query based learning, (1991).
29. R. Streifel, "Synthesis of time-frequency representation by the method of projections onto convex sets," Thesis (1991).
30. M.G. Meyer, "Application of the projection theorem in biomagnetic computed tomography," Thesis (1991).

31. Zhi Li, "A partial table-lookup RNS-decimal number conversion algorithm and its implementation," Dissertation (1993).
32. Payman Arabshahi, "Fuzzy Adaptive Inference in Neural Networks and Search," Dissertation (1994).
33. Piotr Czapski, "Finite Element Modeling of Magnetic Fields Resulting From the Excitation Process in the Normal and Diseased Heart," Dissertation (1995).
34. Russell Reed, "Some Aspects of Generalization in Feed-Forward Neural Networks," Dissertation (1995).
35. Robert Streifel, "Application of Computational Intelligence to Electromechanical Systems," Dissertation (1996).
36. Frank S. Holman III, "Platform Independent 2D and 3D Geometry Representation and Related Applications Using Neural Networks," Thesis (1996).
37. Sigurdur Guttormsson, "Novelty Detection of Shorted Turns in Turbo-Generator Rotors," Thesis (1997).
38. Shinhak Lee, "Projections onto Fuzzy Convex Sets and Its Application to Radiation Beam Optimization in Radio Therapy," Dissertation (1997).
39. Georgios Chrysantholopolis, "Autonomous Agents Utilying Self-Reflection, Instincts and External Behavior Learning in a Simulated Environment: Orgs in Orgland," Thesis, (1998).
40. Frank S. Holman II, "Neural Network Based Shaped Neighborhoods: A Design Retrieval System," Dissertation (1999).
41. Gorkem Kuterdem, "Automatic control of Radiation Therapy Dosage," Thesis, (1999).
42. Martin Weikart, "Dynamic Control of Radiation Therapy Dosage," Thesis, (1999).
43. Frank S. Holman III, PhD EE, "Neural Network Based Shaped Neighborhoods: A Design Retrieval System," Dissertation 1999.
44. Brian Adams, MS EE, "Automatic Decision Aggregation for Smart Cockpit Control," (MS Project), 1999.
45. Ram Balasubramanian, "The Maximally-Receptive Classifier/Regression Bank ," Thesis (2000).
46. George Chrysanthakopoulis, "A Fuzzy-Logic Autonomous Agent Applied as a Supervisory Controller in a Simulated Environment," Dissertation 2000.
47. Sreeram Narayanan , "Fast Cross-projection Algorithm for Reconstruction of Seeds," MS Thesis, 2001.
48. Jae-Byung Jung, "Neural Network Emulation of Acoustic Models," Dissertation, 2001.
49. Benjaman Thompson, "Implicit Learning in Neural Network Encoders," MS Thesis, 2002.
50. Arindam Das, "Swarm Intelligence Applications to Communications Routing," Dissertation, Summer 2003.
51. Stephen Lam, "Query Based Data Base Construction for Supervised Learning," Dissertation, 2002.
52. Jiho Park "POCS Restoration of Degraded JPEG Images," Dissertation, 2002.
53. Sreeram Narayanan , "Rapid 3D Seed Reconstruction from Incomplete Data Sets for Image Guided Prostate Brachytherapy," Dissertation, 2004.
54. Jeffrey Weinschenk, "Reducing the rule explosion in fuzzy inferencing," Dissertation (2004).
55. Benjamin B. Thompson, "Ensonification control using layered perceptrons," Dissertation (2004).
56. Matthew Trumbo, "A New Modality for Microwave Tomographic Imaging: Time Transit Tomography," Thesis (2006).
57. Firasath Riyaz, "Evolving a Disjunctive Predator Prey Swarm using PSO: Adapting Swarms with Swarms," Thesis (Computer Science) (2006).
58. Steve Maule, "Principal Component and Artificial Neural Network Calibration of a Microwave Frequency Composition Measurement Sensor," Thesis (2007).
59. Winston Ewert, "Studies of Active Information in Search," Thesis (2010).
60. George Moñtanez, "Information Storage Capacity of Genetic Algorithm Fitness Maps," Thesis (2011).
61. Benjamin Van Ruitenbeek, "Image Compression and Recovery Using Compressive Sampling and Particle Swarm Optimization," Thesis (2009)

62. Albert Yu, "Optimizing Multi-Agent Dynamics for Underwater Tactical Applications," Thesis, (2011).
63. Winston Ewert, "Algorithmic Specified Complexity" Dissertation (2013).
64. Jon Roach, "Emergent Behaviors of Multi-Objective Swarms with Applications in a Dynamic Underwater Environment," Thesis, (2013).
65. David Nemati, "An Investigation of Observed Algorithmic Specified Complexity," Thesis (2017).
66. Eric Holloway, "What Cannot Create Information, What Can, and Why It Matters," Dissertation (2017).
67. Albert Yu, "Ambiguity Function Magnitude Inversion and Applications of Morphological Dilation in POCS," Dissertation (2018).
68. Justin Bui, "Neural Network Watchdog for Out-of-Distribution Input Mitigation" Dissertation (2021).
69. Glauco Amigo, "Forecast Ergodicity and Instantaneous Active Information" Dissertation (2023).
70. Samuel Haug, "Real-Time Adaptive Circuitry to Support Simultaneous Radar and Communications," Dissertation (2023).

13.1.2 Cross Disciplinary Research

This is partial list of students worked with during undergraduate research, thesis or dissertation work in cross disciplinary research that resulting in one or more publications coauthored with the student and their advisor. The student's advisor is indicated in the square brackets at the end of the citation. Papers co-authored are listed in the publications Section 6 on page 19.

1. E.L. Kral, Optical Computing, (1978)[John Walkup]
2. S.V. Bell, Optical Computing, (1978) [John Walkup]
3. J.L. Whited, Optical Computing, (1978) [John Walkup]
4. M.I. Jones, Optical Computing, (1978) [John Walkup]
5. M.E. Aggoune, Application of Neural Networks to Power Systems, Dissertation 1989 [Mohamed El-Sharkawi]
6. J.W. Taylor, Neural Networks (1988) [Les Atlas].
7. Yunxin Zhao, Cone Shaped Kernels, (1989) [Les Atlas].
8. James W. Pitton, Time-Frequency Representations, (1990) [Les Atlas].
9. C.M. Lam, Neural Networks, (1990) [Leung Tsang]
10. S. Kitamaru, Neural Networks, (1990) [Akira Ishimaru]
11. S.Y. Chung, Power neural networks. (1991) [O. Mohammed]
12. Z. Chen, Remote Sensing, (1992) [Leung Tsang]
13. A.T.C. Chang, Remote Sensing, (1992) [Akira Ishimaru]
14. S. Weerasooriya, Security Assessment of Power System, (1992) [Mohamed El-Sharkawi].
15. C.H. Daly, Amputee prosthetic fitting, (1994) [Joan Sanders].
16. W.R. Cummings, Amputee prosthetic fitting, (1994) [Joan Sanders].
17. H.C. Lai, Biomagnetic sensing, (1994) [Ceon Ramon].
18. B.G. Song, Fuzzy Systems, (1997) [James Ritcey].
19. C.A. Jensen, Feature Selection and Inverse Problems, (1999) [Mohamed El-Sharkawi].
20. P. Peng, Load forecasting, (1999) [Mohamed El-Sharkawi].
21. A.S. Kulkarni, Shorted field rotors, (2000) [Mohamed El-Sharkawi].
22. J. Xing, Shorted field rotors, (2000) [Mohamed El-Sharkawi].
23. L.S. Moulin, Support Vector Machines in Power Engineering, (2002) [A.P.A. da Silva].
24. Ioannis N Kassabalidis, Swarm Intelligence, (2002) [Mohamed El-Sharkawi].
25. J. Schreiber, Biomagnetic imaging, (2002) [Ceon Ramon].
26. Jens Haueisen, Biomagnetic imaging, (2002) [Ceon Ramon].
27. Paul Schimpf, Biomagnetic imaging, (2002) [Ceon Ramon].
28. Seongwon Cho, Iris recognition (2004) [Jaemin Kim]

29. Jinsu Choi, Iris recognition (2004) [Jaemin Kim]
30. Paul Reynolds, "Algorithm Implementation in FPGAs Demonstrated Through Neural Network Inversion on the SRC-6e," Thesis (2005) [Russ Duren].
31. Eric Green,"Design of a microwave sensor for non-invasive determination of blood-glucose concentration," Thesis (2005) [Randall Jean].
32. Jeffrey DaCunha, "Lyapunov Stability and Floquet Theory for Nonautonomous Linear Dynamic Systems on Time Scales," Dissertation (Mathematics) (2004) [John Davis].
33. Billy Jackson, "A General Linear Systems Theory on Time Scales: Transforms, Stability and Control," Dissertation (Mathematics) (2007) [John Davis].
34. Alice Ramos, "The Dynamic Lyapunov Equation on Time Scales," Dissertation (Mathematics) (2009) [John Davis].
35. John Miller, "Stability of Simultaneously Triangularizable Switched Linear Systems on Time Scales" Thesis (ECE) 2009.
36. Ben Van Ruitenbeek, "Image Compression and Recovery Using Compressive Sampling and Particle Swarm Optimization," Thesis (Computer Science) (2009) [David Sturgill].
37. Joseph Perry, Thermal Transient Modeling in Power MOSFETs, (2009) [Charles Baylis]
38. Dylan R. Poulsen, Time Scales, (2011) [John Davis].
39. Matthew Moldovan, "Piecewise Linear Approach for Optimizing Radar Chirps," (2012) [Charles Baylis].
40. Josh Martin, "Adaptive Load Impedance Optimization for Power Amplifiers in Reconfigurable Radar Transmitters," Thesis, (2012) [Charles Baylis].
41. Oby Akinbule, Microwave optimization, (2012) [Charles Baylis].
42. Loria Wang, "Side Lobe Modulation of Radar Antenna Pattern Utilizing an Auxiliary Array," Thesis, (2012) [Charles Baylis].
43. Yanqing Liu, Wireless Communication, (2013) [Liang Dong].
44. Stuart Gibbs "Estimation of Multi-Component Mixture Proportions using Regression Machine Analysis of Ultra-Wideband Spectroscopic Measurements" (2013) [Randall Jean]
45. Matthew Gardner "Estimation of Multi-Component Mixture Proportions using Regression Machine Analysis of Ultra-Wideband Spectroscopic Measurements" (2013) [Randall Jean]
46. Brandon Herrera "Estimation of Multi-Component Mixture Proportions using Regression Machine Analysis of Ultra-Wideband Spectroscopic Measurements" (2013) [Randall Jean]
47. Chris Faulkner "Estimation of Multi-Component Mixture Proportions using Regression Machine Analysis of Ultra-Wideband Spectroscopic Measurements" (2013) [Randall Jean]
48. Adam Parks "Estimation of Multi-Component Mixture Proportions using Regression Machine Analysis of Ultra-Wideband Spectroscopic Measurements" (2013) [Randall Jean]
49. Josh Daniliuc "Estimation of Multi-Component Mixture Proportions using Regression Machine Analysis of Ultra-Wideband Spectroscopic Measurements" (2013) [Randall Jean]
50. Paul Hodge "Estimation of Multi-Component Mixture Proportions using Regression Machine Analysis of Ultra-Wideband Spectroscopic Measurements" (2013) [Randall Jean]
51. Adam Parks "Feasibility of Microwave Radar System for Proton Therapy Control" (2015) [Randall Jean]
52. Yanqing Liu "Resource Management of Cognitive Radio Networks with Optimization Methods" (2015) [Liang Dong]
53. Brandon Herrera "A Low-Cost Embedded Network Analyzer for the Measurement of Material Properties" (2015) [Randall Jean]
54. Joseph Barkate "Dynamically Reconfigurable Power Amplifier Circuit Optimization," (2016) [Charles Baylis]
55. Dylan Eustice "Adaptive Radar Waveform Synthesis via Alternating Projection," (2016) [Charles Baylis]
56. Matthew Fellows "Multidimensional Power Amplifier Circuit Optimizations for Adaptive Radar," (2017) [Charles Baylis]
57. Lucilia Hays (Lamers) "Power Amplifier Optimization Using Tunable Circuitry and Stability Analysis Methods for the Next Generation Radar," (2018) [Charles Baylis]

58. Casey Latham "Joint Circuit and Waveform Optimization for Next-Generation Radar," (2018) [Charles Baylis]
59. Zachary Hays "Circuit Modeling and Optimization Techniques for Next-Generation Radar," (2018) [Charles Baylis]
60. Sarvin Rezayat "Circuit Optimization and Frequency Agility for Cognitive Radar," (2018) [Charles Baylis]
61. Pedro Rodriguez-Garcia "Phased Array Impedance Tuning, Secure Transmission, and Nonlinear Spatial Intermodulation Suppression for Next-Generation Radar and Communications Systems" (2020) [Charles Baylis]
62. Angelique Dockendorf "Faster Circuit Optimization Techniques for Full-Band and Notched Waveforms to Enable Next-Generation Radar" (2020) [Charles Baylis]
63. Caleb Calabrese"Design, Simulation, Construction, and Measurement Testing of Fast Reconfigurable Radio Frequency Switched-Stub Matching Networks (2021) [Charles Baylis]
64. Austin Egbert "Enabling and Directing Real-Time Cognitive Radar Transmitter Optimization" (2021) [Charles Baylis] Samuel Hussey
65. Samuel Hussey "Spectrum Sharing Policy and Supporting Techniques for Passive -Active Coexistence" (2024) [Charles Baylis]
66. Trevor Van Hoosier (2024) [Charles Baylis]
67. Justin Roessler, "High-Power Impedance Tuner Design for Real-Time Amplifier Optimization" (2025) [Charles Baylis]

13.2 Coauthors

Here is a list of coauthors with whom Marks has published. Includes book collaborators/co-editors.

1. Benjamin Adkins
2. Jose Alcala-Medel
3. Jordan Alexander
4. Oby Akinbule
5. Julian Alonzo
6. Glauco Amigo
7. George Andexler
8. M.E. Aggoune
9. Moeness Amin
10. Gregory M. Anderson
11. Payman Arabshahi
12. Les E. Atlas
13. Yianni Attikiouzel
14. Ram Balasubramanian
15. Joseph Barkate
16. Jennifer Barlow
17. Charles Baylis
18. Christophe F. Bas
19. Michael Behe
20. S.V. Bell
21. Matthew A. Beauregard
22. Stephen Berger
23. Shannon Blunt
24. Jason Boh
25. Jacob Boline
26. Alex Bouvey
27. C.M. Brace
28. Walter Bradley
29. Justin Bui
30. C Bunje
31. Caleb Calabrese
32. C. David Capps
33. Thomas P. Caudell
34. Tomas Cerny
35. C.H. Chan
36. A.T.C. Chang
37. Zhengxiao Chen
38. Kwang F. Cheung
39. Paul S. Cho
40. Seongwon Cho
41. Jai J. Choi
42. Jinsu Choi
43. Georgios Chrysanthakopoulos
44. Suk Y. Chung
45. Andrew Clegg

46. Lawrence Cohen
47. D.A. Cohn
48. Ronald Cole
49. William E. Combs
50. Jerome Conner
51. T.M. Cover
52. William R. Cummings
53. P. Czapski
54. M.I. Dadi
55. Colin H. Daly
56. Jeffrey J. DaCunha
57. Mark J. Damborg
58. Josh Daniliuc
59. Arindam Das
60. Ali Darwish
61. A. P. Alves da Silva
62. John M. Davis
63. Jean de Graaf
64. William A. Dembski
65. Michael Dickenson
66. Tharam Dillon
67. Angelique Dockendorf
68. R.C. von Doenhoff
69. Liang Dong
70. Witali L. Dunin-Barkowski
71. Lawrence Dunleavy
72. Russell Duren
73. Austin Egbert
74. Michael Egnor
75. Mohamed El-Sharkawi
76. Christian J. Eggen
77. Dylan Eustice
78. Winston Ewert
79. R. Aaron Falk
80. Chris Faulkner
81. Matthew Fellows
82. Robert Fischl
83. Alden Fisher
84. Jorge Fernandez
85. Matthew Flachsbart
86. Paul Flaten
87. David Fogel
88. Warren L. J. Fox
89. Toshio Fukuda
90. Kyle Gallagher
91. Pedro Rodriguez-Garcia
92. Ann K. Gauger
93. Albin Gasiewski
94. Stuart Gibbs
95. Adam Goad
96. Marc Goldburg
97. Bruce Gordon
98. Ian A. Gravagne
99. Andrew Gray
100. Charles A. Green
101. Eric C. Green
102. Sigurdur E. Guttormsson
103. Marion O. Hagler
104. Douglas G. Haldeman
105. Michael W. Hall
106. Greg Hamerly
107. Samuel Haug
108. Zachary Hays
109. Jens Haueisen
110. Megan U. Hazen
111. Michael Healy
112. Abigail Hedden
113. Pieter J. van Heerden
114. Brandon Herrera
115. Paul Hodge
116. Wolfgang Hoffmann
117. Frank S. Holman III
118. F. Holt
119. T. Homma

120. Ola Hössler
121. Andy Howard
122. M.Y. Huang
123. Steven Shyh-Jier Huang
124. Samuel Hussey
125. Jenq-Neng Hwang
126. Keri Ingraham
127. C.A. Irby
128. Akira Ishimaru
129. Billy J. Jackson
130. B. Randall Jean
131. Craig A. Jensen
132. Daniel Jepson
133. Michael I. Jones
134. Robert Jonk
135. Jae-Byung Jung
136. Mohammad Abu Khater
137. Dmitry Kaplan
138. Christopher Kappelmann
139. Ioannis N Kassabalidis
140. Mohammad Abu Khater
141. Isidor Kerszenbaum
142. Mohammad Abu Khater
143. Jaemin Kim
144. Mingoo Kim
145. Y. Kim
146. Benjamin Kirk
147. S. Kitamura
148. Mark Kozy
149. E. Lee Kral
150. Thomas F. Krile
151. Ramasamy Krishnan
152. Brian R. Krouse
153. David Krout
154. Amol S. Kulkarni
155. H. G̀orkem Kuterdem
156. Richard Ladner
157. H.C. Lai
158. Connor Laktasic
159. Chi M. Lam
160. Steve T Lam
161. Lucilia Lamers
162. Ellie Langley
163. J.N. Larson
164. Steven Lardizabal
165. Casey Latham
166. Loren Laybourn
167. Gordon Ledford
168. Kwang Y Lee
169. Shinhak Lee
170. Emma Lever
171. Michael Lexa
172. Zhi Li
173. C.S. Lim
174. Yanqing Liu
175. Alan Lippman
176. C.G. Looney
177. Alicia Magee
178. T. P. Mann
179. Kirk Marquard
180. Josh Martin
181. Alcherio Martinoli
182. Anthony Martone
183. Daren McClearnon
184. J.G. McDonnell
185. Angus Menuge
186. M.G. Meyer
187. John E. Miller
188. Hunter Miller
189. Robert T. Miyamoto
190. Osama Mohammed
191. Matthew Moldovan
192. George Montañez
193. Mariah Montgomery

194. David Moon
195. Christopher Moore
196. J.P. Moreland
197. Hiroyuki Mori
198. Matthew Mosley
199. L. S. Moulin
200. Yeshwant Muthusamy
201. Sreeram Narayanan
202. D. Nguyen
203. V. Bogdan Neculaes
204. Aghogho Obi
205. Seho Oh
206. Brian Olson
207. Jonathan Owen
208. Mathew Ozalas
209. Daniel Andrés Díaz-Pachón
210. Marimuthu Palaniswami
211. Yoh-Han Pao
212. Alex Papalexopoulos
213. Dong Chul Park
214. Jiho Park
215. Adam Parks
216. Homayoon Parsaei
217. John Penn
218. Dimitrios Peroulis
219. Joseph Perry
220. Hal Philipp
221. Mark H. Phillips
222. Pragusen Pillq
223. James W. Pitton
224. William Platt
225. M.C. Poon
226. H.Vincent Poor
227. D.R. Poulsen
228. Dmitry Radbel
229. Ceon Ramon
230. Alice A. Ramos
231. Brandon Ravenscroft
232. Pablo Rivas
233. Russell D. Reed
234. Tonya Reightley
235. Sarvin Rezayat
236. A.J. Rocha Reis
237. Sarvin Rezayat
238. Grant Richter
239. Pablo Rivas
240. James C. Ritcey
241. Jon Roach
242. Dennis Roberson
243. C.J. Robinson
244. Alberto Rodriguez
245. Alonso Rodriguez
246. Pedro Rodriguez-Garcia
247. Justin Roessler
248. Benjamin Van Ruitenbeek
249. Fariborz Salamat
250. Joan E. Sanders
251. Frank Sanders
252. Kayla Sanders
253. J.C. Sanford
254. Iwan Njoto Sandjaja
255. Edgar Sánchez-Sinencio
256. John Sanford
257. Dennis P. Sarr
258. Hiroshi Sasaki
259. Paul Schimpf
260. Keith Schubert
261. J. Schreiber
262. Sarah Seguin
263. Abbas Semnani
264. Kelly Sherbondy
265. Jack Sifri
266. Carson Slater
267. David K. Smith

268. Michael J. Smith
269. Wesley E. Snyder
270. Mani Soma
271. Arun Somani
272. B.G. Song
273. Michael Z. Spivey
274. David Sturgill
275. Robert J. Streifel
276. Jonathan Swindell
277. J.W. Taylor
278. J.A. Thomas
279. R. Thomas
280. Benjamin B. Thompson
281. Leung Tsang
282. Alexander Tsatsoulas
283. Shiao-Min Tseng
284. Matthew L. Trumbo
285. Zach Vander Missen
286. Pieter J. van Heerden
287. Trevor Van Hoosier
288. Aravind Venkitasubramony
289. S. Verdu
290. John L. Vian
291. Ed Viveiros
292. Eric Walden
293. John F. Walkup
294. Jack M. Webster
295. S.Weerasooriya
296. Jeffrey J. Weinschenk
297. John West
298. John L. Whited
299. Wen-Chung Stewart Wu
300. Michael Wicks
301. Donald C. Wunsch II
302. Zach Vander Missen
303. P.J. Van Heerden
304. Aravind Venkitasubramony
305. R.C. von Doenhoff
306. Jian Xing
307. H.J. Youn
308. Albert R. Yu
309. Yunxin Zhao
310. Jacek Zurada

13.2.1 Publications with Nationals

Here is a list of some co-authors not born in the United State. Some have since become US citizens. Only one entry per country is given.

1. Argentina (Isidor Kerszenbaum)
2. Australia (Yianni Attikiouzel)
3. Brazil (A. P. Alves da Silva)
4. Canada (Winston Ewert)
5. China (Steven Shyh-Jier Huang)
6. Columbia (Daniel Andrés Díaz-Pachón)
7. Egypt (Mohamed El-Sharkawi)
8. England (Angus Menuge)
9. India (Ram Balasubramanian)
10. Iran (Payman Arabshahi)
11. France (Christophe F. Bas)
12. Germany (Wolfgang Hoffmann)
13. Greece (Georgios Chrysanthakopoulos)
14. Iceland (Sigurdur E. Guttormsson)
15. Hong Kong (Kwang F. Cheung)
16. Indonesia (Iwan Njoto Sandjaja)
17. Japan (Toshio Fukuda)
18. Korea (Seho Oh)
19. Lebanon (M.E. Aggoune)
20. Mexico (Edgar Sánchez-Sinencio)
21. Nigeria (Oby Akinbule)
22. Poland (Jacek Zurada)
23. Romania (Josh Daniliuc)
24. Russia (Witali L. Dunin-Barkowski)
25. Spain (Glauco Amigo)
26. Sweden (Ola Hössler)
27. Taiwan (Wen-Chung Stewart Wu)
28. Turkey (H. G̀orkem Kuterdem)
29. Ukraine (Dmitry Radbel)
30. Vietnam (Steve T. Lam)

13.3 Interviewed

Here is a list of people Marks has interviewed.

1. Doug Axe
2. Jonathan Bartlett
3. Samuel Bendett
4. Enrique Blair
5. Walter Bradley
6. Selmer Bringsjord
7. Justin Bui
8. Eric Cassell
9. Gregory Chaitin
10. Andrew Clegg
11. Sal Cordova
12. David Copps
13. Charles Crockett
14. Yuri Danilov
15. William Dembski
16. Daniel Andrés Díaz-Pachón
17. Austin Egbert
18. Michael Egnor
19. Winston Ewert
20. Will Fullerton
21. Jeffrey Funk
22. Thomas Furness
23. Kayla Garrett
24. George Gilder
25. Adam Goad
26. Mihretu Guta
27. Samuel Haug
28. James Hirsen
29. Bobby Hollingsworth
30. Eric Holloway
31. Ola Hössler
32. Richard Hurley
33. Eric Jones
34. Andrew Knox
35. Brian Krouse
36. Peter Kulaba
37. Robert Larmer
38. Blake Lemoine
39. John Lennox
40. Jonathan Loose
41. Jeremiah Marks
42. Kent Marks
43. Andrew McDiarmid
44. Joe McDonald
45. Angus Menuge
46. George Montaez
47. Walter Myers
48. Roger Olsen
49. Daniel Ogden
50. Hal Philipp
51. Jay Richards
52. Jonathan Sackier
53. Sarah Seguin
54. Denise Simon
55. Geoffrey Simmons
56. Doug Smith
57. Gary N. Smith
58. Wesley J. Smith
59. Richard W. Stevens
60. "Stretch" (anonymous)
61. Charles Thaxton
62. Paul Werbos
63. Dawn Wible

13.4 Journals

Here are journals in which publications appear.

1. Analog Integrated Circuits and Signal Processing,
2. Applied Optics
3. Bio-Complexity
4. Canadian Applied Mathematics Quarterly
5. Circuits, Systems, and Signal Processing

6. Communications of the Blyth Institute
7. Computational Science and Engineering
8. Connections: Newsletter of the IEEE Neural Networks Council
9. Electronic Journal of Differential Equations
10. Engineering Intelligent Systems
11. IEEE Access
12. IEEE Circuits and Devices Magazine
13. IEEE Computational Intelligence Magazine
14. IEEE Microwave Magazine
15. IEEE Power Engineering Review
16. IEEE Transactions on Acoustics, Speech and Signal Processing
17. IEEE Transactions on Aerospace and Electronic Systems
18. IEEE Transactions on Biomedical Engineering
19. IEEE Transactions on Circuits and Systems
20. IEEE Transactions on Circuits and Systems I: Regular Papers
21. IEEE Transactions on Electromagnetic Compatibility
22. IEEE Transactions on Energy Conversion
23. IEEE Transactions on Geoscience and Remote Sensing
24. IEEE Transactions on Image Processing
25. IEEE Transactions on Instrumentation and Measurement
26. IEEE Transactions on Fuzzy Systems
27. IEEE Transactions on Microwave Theory and Techniques
28. IEEE Transactions on Neural Networks
29. IEEE Transactions on Power Engineering
30. IEEE Transactions on Power Systems
31. IEEE Transactions on Radar Systems
32. IEEE Transactions on Signal Processing
33. IEEE Transactions on Systems, Man and Cybernetics: Systems
34. IEEE Transactions on Systems, Man and Cybernetics A, Systems and Humans
35. IEEE Transactions on Systems, Man and Cybernetics, Part B: Cybernetics
36. IEE Proceedings-C
37. IET Computer Vision
38. IET Radar, Sonar & Navigation
39. International Journal of Dynamical Systems and Differential Equations
40. International Journal of Information Technology and Intelligent Computing
41. International Journal of Microwave and Wireless Technologies
42. International Journal of Swarm Intelligence and Evolutionary Computation (IJSIEC)
43. International Journal of Tomography & Statistics
44. Foundations of Physics
45. Journal of Advanced Computational Intelligence and Intelligent Informatics
46. Journal of Cosmology and Astroparticle Physics
47. Journal of The American Scientific Affiliation: Perspectives on Science and Christian Faith
48. Journal of the International Measurement Confederation (Measurement)
49. Journal of Clinical Engineering
50. Journal of Cosmology and Astroparticle Physics
51. Journal of Mathematical Analysis and Applications
52. Journal of the Optical Society of America
53. Journal of the Optical Society of America A
54. Journal of VLSI Signal Processing Systems
55. Mathematical and Computer Modelling
56. Measurement (Journal of the International Measurement Confederation)
57. Medical Physics
58. Neurocomputing
59. Neural Networks
60. Optical Engineering
61. Optics Letters
62. Perspectives on Science & Christian Faith
63. Phys. Med. Biol.

64. Proceedings of the IEEE
65. Salvo Magazine
66. Signal, Image and Video Processing (Springer)

13.5 Venues

Conference, presentations and similar activities from a geographical perspective. Only one activity per city is listed.

Australia

1. Perth - IEEE International Conference on Evolutionary Computation, Perth, Australia. November 26-30, 1995.
2. Sydney - 2013 IEEE International Conference on Ultra-Wideband (ICUWB), Sydney Australia, September 15-18,2013.

Austria

3. Graz - Power Systems Computation Conference, Graz, Austria (August 19-24, 1990)

Brazil

4. Florianopolis - "Modern Neural Networks: The First Decade," IV Escola de Redes Neurais, Florianopolis , Brazil, July 21, 1997.

Canada

5. Alberta - Calgary - Eighth Canadian Biennial Conference, Canadian Society for Biomechanics, Calgary, August 18-20, 1994
6. Quebec City - Quebec - Fourteenth Congress of the International Commission for Optics, Quebec City, Quebec Canada, August 24-28, 1987.
7. British Columbia - Vancouver - IEEE International Conference on Systems, Man and Cybernetics, Vancouver, British Columbia, Canada, October 22-25, 1995
8. Hamilton - Ontario - CSCA/ASA/CiS 2014 Conference, McMaster's University
9. Ottawa - 2013 IEEE Radar Conference (RADAR), Ottawa, ON, Canada, April 29-May 3 2013
10. Victoria - IEEE Pacific Rim Conference on Communications, Computers and Signal Processing, Victoria, B.C. Canada, June 4-5, 1987.

China

11. Beijing - International Joint Conference on Neural Networks, Beijing, November 3-6, 1992.
12. Chengdu - "Computational Intelligence: A Free Source of Information?" International Symposium on Neural Networks (ISNN), Chengdu, China (May 29, 2006)
13. Hong Kong - 1989 International Symposium on Computer Architecture and Digital Signal Processing (Hong Kong Convention and Exhibition Centre, 11-14 October, 1989),
14. Nanjing - International Conference on Circuits and Systems, July 6-8, 1989, Nanjing, China
15. Shanghai - IEEE Wireless Communications and Networking Conference (WCNC), Shanghai, China, 7-10 April 2013
16. Wuhan - Sixth International Symposium on Neural Networks (ISNN 2009) Wuhan, China, May 26-29, 2009

England

17. London - 1978 International Computing Conference, London, England, 1978

Finland

18. Espoo - 1991 International Geoscience and Remote Sensing Symposium, 3-7 June 1991, Espoo, Finland.
19. Helsinki - 1988 IEEE International Symposium on Circuits and Systems, pp. 503-506, Helsinki, 7-9 June, 1988.

France

20. Carry-le-Rouet - 1997 IEEE International Symposium on Diagnostics for Electrical Machines, Power Electronics and Drives, (SDEMPED '97), Carry-le-Rouet, France, September 1-3, 1997,
21. Montpellier - International Conference on Intelligent System Application to Power Systems, Montpellier, France, September 5-9, 1994.
22. Nantes - "Artificial Neural Systems," Ireste University in Nantes France, March 5-30, 1990 .
23. Paris - IEEE/IAFE [International Association of Financial Engineers] Computational Intelligence in Financial Engineering, (CIFEr). Paris, France, April 11-15, 2011.
24. Toulouse - 19th AIAA Int. Communications Satellite Systems Conf., 17-20 April 2001, Toulouse, France.

Germany

25. Heidleberg - International Conference on the Use of Computers in Radiation Therapy XIII, Heidleberg, Germany (May 22-25, 2000)
26. Munich - IEEE Nanotechnology Council Meeting
27. Duisburg, "A signal space interpretation of neural network associative memories and classifiers" at the University of Duisburg, W. Germany, May 31, 1988.

Hungary

28. Budapest - IEEE ISAP2001, Budapest, Hungary, June 18-21,2001

Italy

29. Capri - International Optical Computing Conference, Capri, Italy, September 1976
30. Como - 2000 Como , Italy IJCNN, July 24-27, 2000.
31. Florence - 30th International Symposium on Automotive Technology and Automation, Dedicated Conference on Megatronics, Florence Italy, 16-19 June 1997
32. La Spezia - Impact of Environmental Variability on Acoustic Predictions and Sonar Performance (N. G. Pace and F. B. Jensen, eds.),16-20 September 2002, Lerici, La Spezia, Italy,Sept. 2002.
33. Rome - "From Whence Science? The Impact of Christianity on the Science in Western Europe" Agape Italia, Rome, Italy, October 9, 2023.
34. Sorrento - 1994 International Conference on Artificial Neural Networks May 26-29, 1994, Sorrento, Italy.
35. Tuscany - "Evolution Models Do Not Create Information," Great Expectations Conferences, Borgo Finocchieto, Tuscany, Italy, June 12-16, 2011
36. Venice - 1996 IEEE International Workshop on Neural Networks for Identification, Control, Robotics and Signal/Image Processing (NICROSP), September 21-23, 1996, Venice, Italy
37. Balogna - "What You Do Artificial Intelligence Never Will" Agape Italia, Balogna, Italy, October 11, 2023.

Japan

38. Nagoya - Second International Forum on Applications of Neural Networks to Power Systems , Nagoya, Japan, 1993;
39. Tokyo - IEEE-IECEJ-ASJ International Conference on Acoustics, Speech and Signal Processing, Tokyo, Japan, March 1986.
40. Tsukuba - 1993 IEEE/Tsukuba International Workshop on Advanced Robotics, November 8-9, 1993, AIST Tsukuba, Japan
41. Yokohama - International Conference on Fuzzy Systems (FUZZ-IEEE), Yokohama, Japan, March 20-24, 1995.

Latfia

42. Jurmala - 1995 Workshop on Sampling Theory & Applications, September 20-22, 1995 , Jurmala (Riga), Latvia

Mexico

43. Cancun - IEEE Technical Activities Board (TAB) 1999
44. Mexico City - IEEE TAB Symposium

Monaco

45. Monaco - "Artificial Neural Networks in Electric Power Systems," Decisions Systems International, Monaco, July 1-3, 1991

New Zealand

46. Dunedin - New Zealand International Two-Stream Conference on Artificial Neural Networks and Expert Systems (ANNES) November 24-26, 1993, Otage University, Dunedin, New Zealand

Poland

47. Gliwice - Faculty Fellowship, March 31, 2003 "Scientists and God: The Myth of Incompatibility"
48. Krakow - Faculty Fellowship, April 1, 2003 "Fuzzy Union Rule Configuration: Avoiding Exponential Rule Explosion".
49. Szczyrk - Second Conference of Neurl Networks and Their Applications, 1996
50. Wroclaw - "Perceptron Inversion: Properties and Applications", Institute of Engineering Cybernetics, Wroclaw University of Technology, Wroclaw, Poland (April 3, 2003).

Russia

51. Moscow - "Moscow Airport Encounters," University of Washington EE News, March 1993, Volume 4, Number 2, p.8.

52. Rostov-on-Don - 1992 RNNS/IEEE Symposium on Neuroinformatics and Neurocomputing, Rostov-on-Don, Russia, October 7- 10, 1992.

53. Ulan-Ude - "Neural Networks: The Fundamentals," Buryat State University, Ulan-Ude, Russia, March 5, 2001.

Singapore

54. Singapore - 1991 International Joint Conference on Neural Networks, Singapore, November 18-21 (1991).

South Korea

55. Seoul - International Conference on Intelligent Systems Applications to Power Systems (ISAP), Seoul, Korea, July 6-10, 1997.

Ukraine

56. Crimea - Information Processing by Neural Networks, (IP+NN ' 97), October 10-17, 1997, Ukraine, Crimea, Gurzuf Russian Academy of Science, Russian Neural Network Society, International Academy of Computer Scienc

Spain

57. Barcelona - International Workshop on Arti cial Neural Networks (IWANN ' 93), June 9-11, 1993, Barcelona

58. Madrid "Artificial Neural Networks in Electric Power Systems," Decisions Systems International, Madrid, Spain , September 7-11, 1992

United States

Alabama

59. Auburn - First Workshop on Neural Networks: Academic/Industrial/NASA/Defense, Auburn University and Conference Center, 4-6 February, 1990, Auburn, Alabama

60. Huntsville - SPIE Symposium/Workshop on the Effective Utilization of Optics in Radar Systems, Huntsville, Alabama, September 1977.

Alaska

61. Anchorage - 1998 IEEE International Conference on Evolutionary Computation (ICEC) at the 1998 IEEE World Congress on Computational Intelligence, Anchorage, Alaska, May 5-9, 1998

Arizona

62. Scottsdale - IEEE International Symposium on Circuits and Systems, Scottsdale, Arizona, May 26-29, 2002

63. Tempe - Microwave Measurement Symposium (ARFTG). Tempe, Arizona. 2011 78th ARFTG 1-2 Dec. 2011.

64. Tucson - Optical Society of America, Annual Meeting, Tucson, Ariz ., Oct. 19-22, 1976.

65. Phoenix - International Microwave Symposium, May 22, 2015

California

66. Los Angeles - O-E/LASE '88 Conference on Neural Network Models for Optical Computing, Los Angeles, January 1988

67. Monterey - Proceedings of the Twenty Fourth Asimomar Conference on Signals, Systems and Computers, 5-7 November, 1990, Asilomar Conference Grounds, Monterey, California.

68. Napa Valley - Pacific Gas & Electric R&D Electric Distribution Program External Advisory Goup Meeting, Silverado Country Club, Napa Valley , California , (August 22-23, 1991).

69. Pasadena - IEEE CAS Workshop on Wireless Communications and Networking, Pasadena, CA, Sept. 5-6, 2002.

70. Santa Barbara - "Evolutionary Simulations and Sources of Active Information," Discovery Retreat, Santa Barbara, CA (March 1-4, 2011)

71. San Diego - IEEE First International Conference on Neural Networks, San Diego, June 1987

72. San Francisco - Second IEEE International Conference on Fuzzy Systems (FUZZ-IEEE '93), San Francisco, March 1993

73. San Jose - "What Does Calculus Have to Do With Christianity?" San Jose State University, November 30, 2003.

74. San Mateo - International Conference on Acoustics, Speech and Signal Processing, San Mateo, CA, 1987.

Colorado

75. Boulder - 74th ARFTG (Automatic RF Techniques Group) Microwave Measurement Symposium, December 1st - 4th, 2009, Broomfield/Boulder, Colorado

76. Denver - IEEE International Joint Conference on Neural Networks, San Diego, July 24-27, 1988

77. Glen Eyrie - Castle & Colorado Conference Center. CSC Seminar on Intelligent Design in the Natural Sciences, June 28, 2023.

78. Gold Lake - Workshop on Optical Arti cial Intelligence, Gold Lake , Colorado (3-5 August, 1987),

Delaware

79. Wilmington - "A.I.: Menace or Savior" Intercollegiate Studies Institute, 2020

Florida

80. Jacksonville - 2012 44th Southeastern Symposium on System Theory (SSST), Jacksonville, Fla pp.18-23, 11-13 March 2012.

81. Miami - INFOCOM 2005. 24th Annual Joint Conference of the IEEE Computer and Communications Societies. March 2005 Miami, Fla

82. Orlando - IEEE World Congress on Computational Intelligence, June 26 - July 2,1994 Walt Disney World Dolphin Hotel, Orlando, Florida.

83. Tampa - IEEE 15th Annual Wireless and Microwave Technology Conference (WAMICON)

Georgia

84. Atlanta - Symposium on Diagnostics for Electric Machines, Power Electronics and Drives, Atlanta, GA 24-26 August 2003

85. Athens - "Things You Do AI Never Will" University of Georgia, March 3, 2022.

Hawaii

86. Honolulu - 2002 International Joint Conference on Neural Networks, 2002 IEEE World Congress on Computational Intelligence, May12-17, 2002, Honolulu

87. Kauai - 2012 International Waveform Diversity & Design Conference

Indiana

88. Terre Haute - Rose-Hulman Institute of Technology Outstanding Young Alumni Award Cermony

89. West Lafayette, Purdue University, ARL Joint Research Review, October 2016.

Illinois

90. Chicago - Faculty leadership conference, Campus Crusade for Christ, June 1997.

Iowa

91. Perry - "Added Information in Targeted Evolutionary Search", Perry Conference, Hotel Pattee, Perry, Iowa, April 17-20, 2006.

Louisiana

92. New Orleans - 113th Annual Meeting of the American Mathematical Society (AMS), New Orleans, January 5-7, 2007.

Maryland

93. Adelphi - "SDRadar Kick-off Meeting," U.S. Army Research Laboratory, June 2018

94. Annapolis - "Spectrum Issues in Amplifier Design," Fifth Annual Emerging Spectrum Technology (EST) Workshop on Advanced Radar Technologie to Improve Spectrum Use, Double Tree Hotel, Annapolis Maryland, September 13-14, 2010

95. Baltimore - International Conference on Neural Networks, June 1992.

96. College Park - 2012 ONR University /Laboratory Initiative Program Review, University of Maryland University, College Park, June 5-7, 2012

97. Hyattsville - 2012 University Laboratory Initiative Program Review, 5-7 June

Massachusetts

98. Boston - 1995 Design Engineering Technical Conferences, American Society of Mechanical Engineers (ASME), Boston Massachusetts, September 17-20, 1995.

99. Cambridge - 1989 IEEE International Conference on Systems, Man and Cybernetics, (Hyatt Regancy, Cambridge, Massachusetts, 14-17 Nov. 1989),

Michigan

100. Mackinac Island - Limits of Passive Imaging Workshop, Mackinac Island, MI, pp.45-55, May 24-26, 1983

101. Dearborn - "Homogeneous and layered alternating projection neural networks," The International Symposium on Optical Engineering and Industrial Sensing for Advanced Manufacturing Technologies held at the Dearborn Hyatt, Michigan, June 26-30, 1988.

Minnesota

102. Minneapolis - IEEE Power Engineering Systems 1990 Summer Meeting, Minneapolis, Minnesota, 15-19 July 1990.

Mississippi

103. Biloxi - Oceans '02 MTS/IEEE, Biloxi, Mississippi

Missouri

104. Columbia - "Conservation of Information in Evolutionary Search Algorithms: Measuring the Cost of Success," University of Missouri, Columbia, (November 12, 2007). IEEE CIS Distinguished Lecture for Columbia Chapter of IEEE CIS Society.

105. Rolla - "Time Scale Discrete Fourier Transforms," Guest Lecture, Missouri University of Science and Technology, Rolla, Mo., April 14, 2010.

106. St. Louis - Artificial Neural Networks in Engineering, (ANNIE 95), Artificial Neural Networks, Fuzzy Logic and Evolutionary Programming for Designing Smart Engineering Systems, November 12 - 15, 1995, Marriott Pavilion Hotel, St. Louis, Missouri

Montana

107. Billings - "Non-Computable You - What You Do that A.I. Never Will? Big Sky Worldview Forum, Billings, MT. January 26-27, 2024.

Nebraska

108. Lincoln - University of Nebraska-Lincoln Math Symposium, December 7, 2007

New York

109. Ithaca, Information & Biology, Cornell, University, Spring 2011

110. New York - IEEE Conference on Computational Intelligence for Financial Engineering & Economics (CIFEr) April 9-11, 1995

111. Rochester - 1977 Optical Society of America Annual Meeting, Rochester, NY

North Carolina

112. Research Triangle Park - IEEE Virtual Reality Annual International Symposium (VRAIS) 1995 Research Triangle Park, NC

113. Indian Trail, North Carolina. 30th Annual National Conference on Christian Apologetics, October 11-12 2013 First Baptist Church Indian Trail.

114. Matthews, North Carolina. 2013 Ratio Christi Symposium, Southern Evangelical Seminary, October 12-13 2013

Oklahoma

115. Winston Ewert, William A. Dembski, Robert J. Marks II, Algorithmic Specified Complexity, in Engineering and Metaphysics, Tulsa, OK, 2012.

Oregon

116. Portland - 1989 IEEE International Symposium on Circuits and Systems, 9-11 May 1989, Portland

Pennsylvania

117. Philadelphia - International Symposium on Circuits and Systems, pp.370-376, Philadelphia, May 1987.

118. Glen Mills, PA - John West, Casey Luskin, Mark Garcia, and Robert Marks "Roundtable Discussion on Human Uniqueness" Westminster Conference on Science and Faith, The Miracle of Man, Covenant Fellowship Church, September 29-30, 2023.

Rhode Island

119. Newport - ONR University/Laboratory Initiative in Undersea Weapons Technology at the Naval Undersea Warfare Center (NUWC), Newport, RI (June 2-4, 2009).

South Carolina

120. Clemson - NSF Workshop on Applications of Artificial Neural Network Methodology in Power Systems Engineering, April 8-10, 1990, Clemson University

Tennesee

121. Nashville - IEEE/IAFE [International Association of Financial Engineers] Computational Intelligence in Financial Engineering, (CIFEr). Nashville, TN, March 30-April 2, 2009,

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Virginia

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Washington DC

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13.6 Citation List

This list is from Google and forms the basis for the h-index and i-10 index statistics in Section 12.4 on page 460. Most highly cited papers are listed first.

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214. Sampling theory for linear integral transforms ⋯ 10 citations, 1981 by RJ Marks in Optics Letters 6 (1), 7-9

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13.7 Citation Quotes

This list is far from exhaustive or complete. I no longer search for entries for this section.

1. **The Piecewise Isoplanatic Approximation.** R.J. Marks II and T.F. Krile "Holographic representations of space-variant systems: system theory," Applied Optics, vol. 15, #9, pp.2241-2245 (1976).

   (a) B.E.A. Saleh and Mark O. Freeman, "Optical Transformation," in Optical Signal Processing, edited by Joseph L. Horner, Academic Press, Inc. San Diego, CA, 1987,p.315

   > "Techniques have been developed by Walkup, Marks, and their co-workers whereby a shift-invariant transformation can be separated into a number of discrete operations. These include approximating the shift-variant kernel by a piecewise isoplanatic function (*i.e.* piecewise shift-invariant), expanding the input function on an orthonormal basis, and a technique based on shift-variant sampling theory."

2. **Space Variant Sampling Theory**. "A sampling theorem for space-variant systems," Journal of the Optical Society of America, vol. 66, pp.918-921 (1976).

   (a) A. VanderLugt, "Optimum Sampling of Fresnel Transforms," Applied Optics, Vol. 29, No. 23, pp.3352-3361, 1990;

   > "Little attention was given ... until the 1970's. Marks *et al.* [9] subsequently applied similar analysis to space-variant systems."

   (b) B.E.A. Saleh and Mark O. Freeman, "Optical Transformation," in *Optical Signal Processing*, edited by Joseph L. Horner, Academic Press, Inc. San Diego, CA, 1987, p.315;

   > "Marks *et.al.* have derived a generalized sampling theorem that gives the analogous rate necessary for dealing with shift-variant operations. Briefly, for the 1-D case, if the input has bandwidth W_1 and the shift variant kernel has a variational bandwidth of W_v, then if the input is sampled at points spaced by $1/2W$ where $W = W_1 + W_v$, then a shift variant transform takes on the form "

   (c) Shing-Hong Lin, *et.al.*, "Piecewise isoplanatic modeling of space-variant linear systems," Journal of the Optical Society of America A, Vol. 4, No. 3, pp.481-487, 1987

   > "...for bandlimited inputs, a space-variant linear system can exactly be characterized by knowledge of the sampled system point spread function and the corresponding sampled input [1-2].' ...the relationship of the *variation bandwidth* [1] to the new measure of invariance is mentioned to support the validity of the new measure."

   (d) M.I. Jones *et al.*, "Multiplex hologram representations of space-variant optical systems using ground-glass encoded reference beams," Applied Optics, vol.21, no.7, pp.1291-1297 (1982)

   > "The approach (here) is based on a space-variant sampling theorem [1 Marks et al.]."

   (e) A.J. Jerri, "The Shannon Sampling Theorem - Its Various Extensions and Applications: A Tutorial Review," Proceedings of the IEEE, vol.65, no.11, pp.1565-1596 (1977)

   > "Marks, Walkup and Hagler [187] developed a sampling expansion which is applicable to the class of linear space-variant systems characterized by sufficiently slowly varying line-spread functions. They showed that the desired sampling rate is determined by both the system and the input and that the corresponding output is band-limited."

   (f) J.W. Goodman, "Linear Space-Variant Optical Data Processing" in Optical Information Processing edited by S.H. Lee (Springer-Verlag 1981)

   > "... we call the bandwidth B_v the *variational bandwidth* (cf. [Marks et. al. 6.10]), for its reciprocal is a measure of the distance over the input line for which the system is space-variant."

(g) W.T. Rhodes, "Space-Variant Optical Systems and Processing," in *Applications of Optical Fourier Transforms*, (Academic Press, 1982), pp.333-369;

> "If (the input) $f(\xi,\eta)$, and (system function) $h_1(x,y;\xi,\eta)$ are both bandlimited in ξ and η, Eq.(8.5-1) can be expressed in discrete form So long as the necessary sampling conditions are satisfied, (the output), $g(x,y)$ can be recovered without error from samples g_{ij} by an interpolation operation [18 Marks et al.]."

(h) R.F. Carson *et al.*, "Incoherent optical processing: a tristimulus-based method," Applied Optics, vol.23, no.18, pp.3138-3143 (1984)

> "Sampling techniques for space variant systems developed Marks *et al.* allow these integrals to be approximated in sampled form as $\cdots$"

(i) R. Kasturi *et al.*,, "Multiplex holography for space-variant processing: a transfer function sampling approach," Applied Optics, vol.20, no5, pp.881-886 (1981)

> "Introduction: A method for holographically representing any bandlimited space-variant system using sampling techniques has been previously described [1-2 Marks et al.].' 'Such a system, where both the input function $f(\xi)$ and the line spread function $h(x-\xi;\xi)$ are bandlimited, can be represented using a sampling technique [1 Marks et al.]."

3. **Line-Spread Function Notation.** R.J. Marks II, J.F. Walkup, and M.O. Hagler, "Line spread function notation," Applied Optics, vol. 15, pp.2289-2290 (1976).

(a) L.Sica, "Fourier space separability in space-variant imaging," Journal of the Optical Society of America, vol.71, No.4, pp.493-495 (1981)

> "$\cdots$ $S(x-x_1,x_1)$ denotes the output intensity distribution of the optical system that is due to a point source of light at x1. This form of the impulse response is particularly convenient, since over sufficiently small regions of the object plane, i.e., over the isoplanatic patch [1][6][Marks et al.], the right hand side dependence of the spread function on ξ may be dropped and Eq.(1) reduces to the more usual spatially stationary form of the convolution integral."

(b) P.L. Marston, "Leaky waves on weakly curved scatterers. II. Convolution formulation for two-dimensional high-frequency scattering," Journal of the Acoustical Society of America, vol. 97, no.1, pp.34-41 (1995)

> "From superposition, the general formalism for space-variant systems (using the notation in) [28 Marks et al.] gives ... where now the one-sided line response depends not only on $(s-s')$ but also weakly on s and s'."

4. **Space Variant Processing** R.J. Marks II, J.F. Walkup, M.O. Hagler and T.F. Krile, "Space-variant processing of one-dimensional signals," Applied Optics, vol. 16, pp.739-745 (1977).

(a) Bahaa E.A. Saleh, "Bilinear processing of 1-D signals by use of linear 2-D coherent optical processors," Applied Optics, Vol. 17, No. 21, pp. 3408-3411, 1978;

> "Recently, the capabilities of such processors have been extended to space-variant 1-D processing [6-9][Marks et al.]."

5. **Ambiguity Function Display.** R.J. Marks II, J.F. Walkup and M.O. Hagler, "Ambiguity function display: an improved coherent processor," Applied Optics, vol. 16, pp.746-750 (1977).

(a) Gary K. Froehlich *et al.*, "A Set of Optical Information Processing Experiments," IEEE Transactions on Education, Vol. E-21, No. 1, 4-7, 1978;

> " *An Example Project: Ambiguity Function Display.* As an example of the type of project included in this report, this recently developed application of a one-dimensional coherent optical processor is presented [15 Marks et al.].

(b) H. Bartelt, J. Ojeda-Castaneda and E.E. Sicre, "Misfocus tolerance seen by simple inspection of the ambiguity function," Applied Optics, vol.23, no. 16, pp.2693-2696 (1984)

> The AF (ambiguity function) can be obtained either through a simple optical setup (see, for example, Refs. 10 and 11 [Marks et al.]) or with the aid of a computer."

(c) Cristóbal, Gabriel, Consuelo Gonzalo, and Julián Bescós. "Image filtering and analysis through the Wigner distribution." Advances in Electronics and Electron Physics Series 80 (1991): 309-397.

> "(Marks 1977) developed a very simple processor which displays simultaneously all values of the AF corresponding to 1-D signals. This processor is shown in Figure 3.8. It requires two identical 1-D transparencies of the temporal signal $f(t)$ in the plane P1, each rotated 45^o in such a manner as to form the product
>
> $$s(t) = f[(t+\tau)/\sqrt{2}]f^*[(t-\tau)/\sqrt{2}]$$
>
> where t is the time variable and τ represents a time shift. Then, the lens L1 performs the 1-D Fourier transform of the coherently illuminated transmittance in the horizontal direction, and imaging this transform along the vertical direction. In this way, the squared modulus of the AF is displayed in the plane P2."
> "The optical setup is based in that presented by Marks et al.(1977) (Fig. 3.8). Since in this case the filtered image is retrieved, the replication of that scheme is required. Some of the results obtained through this setup are shown in the Figure 4.1. The input test is a square wave signal, the filters used are shown in the middle part of the figure, and, in the lower part, the two filtered images are presented. These retrieved images have been obtained by applying the inverse property in the output plane. This method cannot be generalized to 2-D images."

6. **Phase Coded Reference Beams.** T.F. Krile, R.J. Marks II, J.F. Walkup and M.O. Hagler, "Holographic representations of space - variant systems using phase-coded reference beams," Applied Optics, vol. 16, pp.3131-3135 (1977).

(a) W.T. Rhodes, "Space-Variant Optical Systems and Processing," in Applications of Optical Fourier Transforms, (Academic Press, 1982), pp.333-369

> "An alternate holographic multiplexing method [26] that overcomes this limitation on 2D space variant processing exploits the associative memory characteristics of holograms. As before, a multiple exposure hologram is recorded $\cdots$"

(b) B.E.A. Saleh and Marks O. Freeman, "Optical Transformation," in *Optical Signal Processing*, edited by Joseph L. Horner, Academic Press, Inc. San Diego, CA, 1987, P.316

> "It is known [63 Marks et al.] that the Bragg condition is satisfied by a cone of angles rather than by just a single angle when the range of angles is not restricted to a plane. Therefore one could expect significant crosstalk is the sampling rates are high enough. Encoding the reference beams with white-noise-like phases obtained using diffusers has been suggested as a way to get around the crosstalk problem [63]. On playback, each sample would be addressed using the same diffuser with which its impulse response had been recorded. The recording and playback steps are shown in Fig. 30. Zero cross-correlation between different diffuser phases is then the mechanism for eliminating crosstalk."

7. **Astigmatic Coherent Processor.** R.J. Marks II and S.V. Bell, "Astigmatic processor analysis," Optical Engineering, vol. 17, pp.157-169 (1978)

(a) Nazif Demoli, "Sensitivity of the VanderLugt correlation technique: application to grating period change measurements," Applied Optics, vol.24, no.4, pp.590-595 (1985);

> "$\cdots$ the reflected field (is) Fourier transformed by a 1-D (astigmatic) Fourier transform processor [6 Marks et al.].

8. **Shift Variant Sampling Theory.** R.J. Marks II, J.F. Walkup and M.O. Hagler, "Sampling theorems for linear shift-variant systems," IEEE Transactions on Circuits and Systems, vol. CAS-25, pp.228-233 (1978).

   (a) David C. Munson, Jr., "Minimum Sampling Rates for Linear Shift-Variant Discrete-Time Systems," IEEE Transactions on Acoustics, Speech and Signal Processing, Vol. ASSP-33, No. 6, pp.1556-1561, 1985

   > "An important consideration in implementing a linear shift-variant discrete time system is the required sampling rate $\cdots$ Marks *et al.* have derived sampling theorems for shift-variant systems and their work provides sufficient sampling rates [4,5]."

   (b) Richard Bamler and Josef Hofer-Alfeis, "2D Linear Space-Variant Processing by Coherent Optics: A Sequence Convolution Approach," Optics Communications, Vol. 43, No. 2, pp.97-102, 1982

   > "We will present a method for 2D coherent optical LSV (linear space-variant) processing with variation bandlimited [13 Marks et al.] point spread functions (PSF's) which is based upon the fact that the LSV operation can be replaced by a (linear space-invariant) convolution of twice the dimensionality."

9. **Optimal Detection in Laplace Noise.** R.J. Marks II, G.L. Wise, D.G. Haldeman and J.L. Whited, "Detection in Laplace noise," IEEE Transactions on Aerospace and Electronic Systems, vol. AES-14, pp.866-872 (1978).

   (a) M. W. Thompson, D. R. Halverson and G. L. Wise. "Robust Detection in Nominally Laplace Noise." IEEE Transactions on Communications, Volume 42 Issue 2-4, pp. 16511660, FebApr. 1994

   > "Marks, Wise, Haldeman and Whited have derived exact expressions for the test statistic distribution functions, and thus were able to analyze the performance of the optimal detector for given values of signal strength and sample size."

   (b) P.F. Swaszek, "On the performance of serial networks in distributed detection." IEEE Transactions on Aerospace and Electronic Systems, vol.29, no.1, pp.254-260 (1993)

   > "Figs. 4 and 5 show the thresholds and performance for the constant SNR, Laplacian noise cases as in the example above. ...The performance of the optimum test is computed using the technique described in [3 Marks et al.]."

   (c) C.W. Helstrom, "Detectability of signals in Laplace noise," IEEE Transactions on Aerospace and Electronic Systems, Vol.AES-25, no.2, pp.190-196 (1989)

   > " Marks, Wise, Haldeman and Whited [2] derived a closed-form expression for the complementary cumulative probability distribution Their formula involves a triple summation, the number of terms of which increase with n like n^3, and the terms alternate in sign.

   (d) S. Tantaratana and J.B. Thomas, "Relative efficiency of the sequential probability ratio test in signal detection," IEEE Transactions on Information Theory, vol.IT-24, no.1, pp.22-31 (1978)

   > "Recently, the distribution for the sum of the outputs of an amplifier-limiter (18) $\cdots$ has been derived [by Marks *et al.*] [10]."

   (e) Kotz, Samuel, Tomasz Kozubowski, and Krzysztof Podgorski. The Laplace distribution and generalizations: a revisit with applications to communications, exonomics, engineering, and finance. No. 183. Springer Science & Business Media, 2001.

> "In order to solve the detection problem completely, it remains to find the distribution of the statistic
> $$t = \sum_{i=1}^{N} g_{opt}(x_1).$$
> This problem was solved in Marks et al. (1987) and results in the following c.d.f."

(f) Soury, Hamza, and Mohamed-Slim Alouini. "Symbol error rate of MPSK over EGK channels perturbed by a dominant additive Laplacian noise." IEEE Transactions on Communications 63, no. 7 (2015): 2511-2523.

> "On the other hand, the linear filter is no longer optimal in presence of laplacian noise as proved in [25 [Marks et al.]], where in [25, Fig. 5 and Fig. 6] the optimal filter has better performance than the linear filter."

(g) Kotz, Samuel, Tomasz Kozubowski, and Krzystof Podgorski. *The Laplace distribution and generalizations: a revisit with applications to communications, economics, engineering, and finance. Springer Science & Business Media*, 2012.

> "This requires the knowledge of the distribution of the test statistic $\sum_{i=1}^{n} g(X_i)$ under the H_0 hypothesis. This distribution is given in Marks et al. (1978). Below we present this result and its proof."

10. **Single Input Ambiguity Function.** R.J. Marks II and M.W. Hall, "Ambiguity function display using a single one-dimensional input," Applied Optics, vol. 18, pp.2539-2540 (1979).

(a) Richard Bamler and Josef Hofer-Alfeis, "2D Linear Space-Variant Processing by Coherent Optics: A Sequence Convolution Approach," Optics Communications, Vol. 43, No. 2, pp.97-102, 1982

> "The method of using one transparency (to evaluate the ambiguity function)... has already been developed [15,8,19]."

(b) M.J. Bastiaans, "Wigner distribution functions display: a supplement to ambiguity function using a single 1-D input," Applied Optics, vol.19, no.2, pp.192-193 (1980);

> "Recently, Marks and Hall introduced a coherent optical processor for ambiguity function display using a single 1-D input." "Because of the dual nature (of the ambiguity function and Wigner distribution), almost the same practical setup that was used in [1] to display the ambiguity function can be used to display the Wigner distribution function of a real 1-D signal."

11. **Temporal Holography.** R.J. Marks II, "Two-dimensional coherent space-variant processing using temporal holography." Applied Optics, vol. 18, pp.3670-3674 (1979).

(a) B.E.A. Saleh and Marks O. Freeman, "Optical Transformation," in *Optical Signal Processing*, edited by Joseph L. Horner, Academic Press, Inc. San Diego, CA, 1987,p.317

> "Marks [59] proposed a number of processors based on temporally multiplexing the impulse response terms of Eq.(52). Rather than one impulse response being recorded on one hologram, each impulse response is separately introduced into a shift-invariant processing system, and each input sample is processed sequentially in time. The summation is achieved by using the sequential outputs as object beams to expose a single hologram. Thus the crosstalk is eliminated at the expense of time."

(b) W.T. Rhodes, "Space-Variant Optical Systems and Processing," in *Applications of Optical Fourier Transforms*, (Academic Press, 1982), pp.333-369

> "Finally, we mention a scheme based on a time integration synthesis of the desired output distribution [27]. A holographic recording system is used to record a multiple exposure hologram where the nth contributing recording of the distribution is $\cdots$"

12. **Light Speed Extrapolation.** R.J. Marks II, "Coherent optical extrapolation of two-dimensional signals: processor theory," Applied Optics, vol. 19, pp. 16701672 (1980)

    (a) Henry Stark and Yongyi Yang, *Vector Space Projections: A Numerical Approach to Signal and Image Processing, Neural Nets, and Optics,* Wiley-Interscience,(1998), p.281.

    > "While many problems in optics can be solved by projections, it is difficult to solve such problems using all-optical methods. A notable exception is Marks' all-optical implementations of the convex projection algorithm for implementing super-resolution."

    (b) Christopher W. Carroll and B.V.K. Vijaya Kumar, "Pattern Synthesis Using Fourier Transforms," Optical Engineering, Vol. 28, No. 11, pp.1203-1210, 1989

    > "The optical system previously proposed for the use in the extrapolation of bandlimited signals [9 Marks et al.] can be used here.

    (c) Noel, R.R. Khan and H.S. Dhadwai, "Optical Implementation of a Regularized Gerchberg Iterative Algorithm for Super-Resolution," Optical Engineering, vol. 32, no.11, pp.2866-2871 (1993)

    > " $\cdots$ investigation of the optical implementation of the Gerchberg's algorithm was by Marks [28-29] and (his student) Smith [30]."

    (d) A.A. Sawchuk and T.C. Strand, "Fourier Optics in Nonlinear Processing," in *Applications of Optical Fourier Transforms*, (Academic Press, 1982), pp.333-369

    > "[A] feedback system which again performs a linear process with a nonlinearly derived filter is the optical implementation of Gerchberg's iterative algorithm for signal extrapolation [99 Marks et al.]."

    (e) Y. Yamakoshi and T. Sato, "Iterative image restoration from data available in multiple restricted regions," Applied Optics, vol.21, no.24, pp.4473-4479 (1982)

    > "Marks [7] showed the convergence properties of the (Gerchberg) iterative method when data are available in rectangular regions and the spatial spectrum is bandlimited."

    (f) J. Maeda and K. Murata, "Digital restoration of incoherent bandlimited images," Applied Optics, vol.21, no.12, pp.2199-2204 (1982)

    > "The iterative (Gerchberg) extrapolation algorithm was generalized in two dimensions and implemented on a coherent processor by Marks [11-12]."

    (g) M.A. Fiddy and T.J. Hall, "Nonuniqueness of superresolution techniques applied to sampled data," Journal of the Optical Society of America, vol.71, no.11, pp.1406-1407 (1981)

    > "If no theoretical model is available, two approaches might be successful in overcoming this nonuniqueness The second might be to avoid sampling and compute the extrapolated function optically. Such a procedure would seem feasible and has been proposed by Marks [11]."

    (h) M. Ibrahim Sezan, Henry Stark and Shu-Jen Yeh, "Projection method formulations of Hopfield-type associative memory neural networks," Applied Optics, Vol. 29, No. 17, pp.2616-2622, 1990

    > "An optical implementation of image extrapolation using a special case of POCS, the Gerchberg algorithm, was achieved by Marks [18]."

13. **Differintegral Interpolation.** R.J. Marks II and M.W. Hall, "Differintegral interpolation from a bandlimited signal's samples," IEEE Transactions on Acoustics, Speech and Signal Processing, vol. ASSP-29, pp.872-877 (1981).

    (a) K.C. McGill and L.J. Dorfman, "High resolution Alignment of Sampled Waveforms," IEEE Transactions on Biomedical Engineering, vol.BME-31, no.6, pp.462-466 (1984)

> "This (frequency term) S has a particular significance: it is the DFT of the N-point (m-1)st order *differentiator kernel* [introduced by Marks and Hall] [14]."

14. **2D Extrapolation.** R.J. Marks II "Gerchberg's extrapolation algorithm in two dimensions," Applied Optics, vol. 20, pp.1815-1820 (1981).

    (a) Wang, Tianyi, Lei Huang, Heejoo Choi, Matthew Vescovi, Denis Kuhne, Yi Zhu, Weslin C. Pullen et al. "RISE: robust iterative surface extension for sub-nanometer X-ray mirror fabrication." Optics Express 29, no. 10 (2021).

    > "Although the convergence of Eq. (7) has been proved [Marks], the convergence rate is slow and many iterations are required to obtain a good estimation of z_{DG}."

    (b) Cao, Zhong-Chen, Chi Fai Cheung, and Ming Yu Liu. "Model-based self-optimization method for form correction in the computer controlled bonnet polishing of optical freeform surfaces." Optics express 26, no. 2 (2018).

    > "In this study, Gerchberg band-limited extrapolation method was used to avoid the edge saltation in dwell time calculation [Marks]."

15. **Tomographic Posedness.** R.J. Marks II, "Posedness of a bandlimited image extension problem in tomography," Optics Letters, vol. 7, pp.376-377 (1982).

    (a) S. Darenfed and P.V. Farrell, "Internally iterative improvement of optical tomographic reconstructions," Applied Optics, vol.10,no.5, pp.203-205 (1985)

    > "Tomographic reconstruction of path-length integral data is necessary for the reconstruction of asymmetric phase objects using holographic interferometry. For the case of limited viewing angles, the reconstruction is, in general, considered to be an ill-posed problem [1]."

16. **Restoring Lost Samples.** R.J. Marks II, "Restoring lost samples from an oversampled bandlimited signal," IEEE Transactions on Acoustics, Speech and Signal Processing, vol. ASSP-31, pp.752-755 (1983)

    (a) B. Yegnanarayana and S.T. Fathima, "An Algorithm for Bandlimited Signal Interpolation," Proc. International Conference on Acoustics, Speech & Signal Processing '86, Tokyo, pp.1677-1680, 1986

    > "An iterative technique was developed recently for recovery of missing samples from an oversampled band-limited signal [1,2 Marks et al.] $\cdots$ In this technique the missing samples of the time series are initially set to zero and the signal bandwidth is assumed a priori. During every iteration, the Fourier transform outside the given bandwidth is set to zero and the inverse transform is performed. In the time domain the samples at the known locations are replaced by the original data. In this paper we show that a faster convergence to the solution can be obtained if some initial interpolation is done for the missing samples, instead of setting them to zero."

    (b) Boche-H. Protzmann-M., "Algorithm for reconstructing lost samples from oversampled signals," AEU-INTERNATIONAL JOURNAL OF ELECTRONICS AND COMMUNICATIONS, Vol. 51, no. 6, NOV 1997, p.304-308

    > "A bandlimited signal sampled at a rate higher than the Nyquist rate can be reconstructed from its samples even when a finite number of samples Is lost This paper gives a solution to this problem which partially originates from Marks [1]"

    (c) Chen, Weidong. "The ill-posedness of restoring lost samples and regularized restoration for band-limited signals." Signal Processing 91, no. 5 (2011): 1315-1318.

"In the case of oversampling, there is a theorem for restoring lost samples.
Theorem 1

$$f(0) = \frac{r}{1-r} \sum_{n \neq 0} \frac{\sin(nr\pi)}{nr\pi} f(nh)$$

where $r = \Omega_0/\Omega$.."

17. **Derivative Interpolation Noise Sensitivity.** R.J. Marks II, "Noise sensitivity of bandlimited signal derivative interpolation," IEEE Transactions on Acoustics, Speech and Signal Processing, vol. ASSP-31, pp.1029-1032 (1983)

    (a) B. Carlsson and M. Sternad, "Optimal Differentiation Based on Stochastic Signal Models," IEEE Transactions on Signal Processing, vol.39, no.2, pp.341-353 (1991)

    " $\cdots$ lower bounds on the noise level of the (differentiation) filter output have been derived in [10-12]"

18. **Ill-Posed Sampling Theorems.** K.F. Cheung and R.J. Marks II, "Ill-posed sampling theorems," IEEE Transactions on Circuits and Systems, vol. CAS-32, pp.829-835 (1985).

    (a) John L. Brown, Jr. and Sergio D. Cabrera, "On Well-Posedness of the Papoulis Generalized Sampling Expansion," IEEE Transactions on Circuits and Systems, pp.554-556, 1991

    "Cheung and Marks have shown recently that if least one of the interpolation functions used in the generalized sampling expansion of Papoulis is not square integrable, then the problem is ill-posed in the sense that the variance of the error is unbounded when noisy samples are used. We show here..., essentially a converse of the Cheung-Marks result." "In a recent paper [3], Marks and Cheung have investigated the stability or 'well-posedness' of the input reconstruction when independent, identically distributed zero-mean noise samples are added to each of the original samples. They proved that if at least one of the interpolation functions is not square integrable, then the generalized sampling problem is ill-posed, concluding that "such sampling theorems should be avoided". Here, we consider a converse to the Cheung-Marks result and sufficient conditions for the problem to be well posed."

    (b) John L. Brown, Jr. and Sergio D. Cabrera, "Multi-Channel Signal Reconstruction Using Noisy Samples," Proceedings of the International Conference on Acoustics, Speech and Signal Processing, pp.1233-1236, 1990

    "*Cheung-Marks Theorem.* ... A reformulation of the Cheung-Marks result is as follows: **C-M Theorem**: Assume $H_1(\omega)$ exists a.e. on $(-\sigma, -\sigma+c)$; so that the (spectra of the interpolation functions) are defined *a.e.* on $(-\sigma, \sigma)$. Then if any one of the (spectra of the interpolation functions) is not square integrable on $(-\sigma, \sigma)$, the reconstruction problem is ill-posed."

    (c) Unser, Michael, and Josiane Zerubia. "Generalized sampling: Stability and performance analysis." Signal Processing, IEEE Transactions on 45, no. 12 (1997): 2941-2950

    "In principle, a consistent signal recovery is possible for almost any set of analysis functions provided that some invertibility condition is met (cf., Sect. II-C). Unfortunately, the method will not always yield a reconstruction algorithm that is stable numerically. This fact had already been pointed out by Marks and Cheung, who identified special instances of derivative sampling where the reconstruction is ill-posed [4], [9]."

    (d) Seidner, Daniel, and Meir Feder. "Noise amplification of periodic nonuniform sampling." IEEE transactions on signal processing 48, no. 1 (2000): 275-277.

"We use the analysis of white additive noise in GSE systems as developed in [5]. In this analysis, we found that

$$\begin{aligned} A_\epsilon &= \frac{1}{c}\int_{-B}^{-B+c}\sum_{k=1}^{M}\sum_{\ell=1}^{M}\left|T_{k\ell}^{-1}(\omega)\right|^2 d\omega \\ &= \frac{1}{c}\int_{-B}^{-B+c}\mathrm{tr}\left\{\mathbf{T}(\omega)^{-1^T}\mathbf{T}(\omega)^{-1^*}\right\}d\omega \end{aligned}$$

where $\mathbf{T}(\omega)$ is Papoulis' GSE matrix, which is an $M \times M$ matrix whose (k,ℓ)th component is given by

$$T_{k\ell}(\omega) = K_k(\omega + (\ell-1)c)$$

where $c = 2B/M$. A similar expression has been derived by Cheung and Marks [6]"

(e) Pawlak, Miroslaw, and Ewaryst Rafajlowicz. "On restoring band-limited signals." Information Theory, IEEE Transactions on 40, no. 5 (1994): 1490-1503.

"This result is caused by the presence of the noise in the data. The problem of the reduction of the noise level in the representation (1.1) has been discussed in the literature [15], and it has been recommended to employ the oversampling version of (1.1), i.e.,

$$f(t) = \sum_{k=-\infty}^{\infty} f(kh)\,\mathrm{sinc}\left(\frac{\pi}{h}(t-kh)\right),$$

(f) Sideris, Michael G. "Fourier geoid determination with irregular data."Journal of Geodesy 70, no. 1-2 (1995): 2-12

"The set of lost samples is then defined as $M = \{m_1, m_2, m_3\}$. For this case, equation (13) can be written (Marks II, 1991) as

$$f_c(x) = \left[\sum_{m\notin M} + \sum_{m\in M}\right] f_c(Qm)g(x-Qm)$$

(g) Seidner, Daniel, and Meir Feder. "Vector sampling expansion." Signal Processing, IEEE Transactions on 48, no. 5 (2000): 1401-1416

"The first issue is well posedness. In GSE, this problem was initially discussed by Cheung and Marks [17], who found a suf- ficient condition for ill-posedness of the system. Under their definition, an ill-posed GSE system produces a reconstruction error with unbounded variance when a bounded variance noise is added to the samples."

"We now derive, using (72), a test that checks whether a VSE system is ill posed or well posed. This test is similar to the one suggested by Cheung and Marks [17] and Brown and Cabrera [18] for GSE systems."

"As noted above, a well posed VSE system is such that $E\{|v_i^r(t)|^2\}$ is bounded for every bounded σ_v^2. From (75), we conclude, similarly to [17] and [18], that a necessary condition for the well posedness of a VSE system is that all reconstruction filters have a finite energy."

19. **Derivative Noise Sensitivity.** R.J. Marks II, "Noise sensitivity of bandlimited signal derivative interpolation," IEEE Transactions on Acoustics, Speech and Signal Processing, vol. ASSP-31, pp.1029-1032 (1983).

(a) Unser, Michael, and Josiane Zerubia. "Generalized sampling: Stability and performance analysis." Signal Processing, IEEE Transactions on 45, no. 12 (1997): 2941-2950

"In general, the situation become less favorable as the order of the derivative increases. In the case of the second derivative (data not shown here), a strong singularity occurs for, which again is consistent with the report of Marks for the bandlimited case."

(b) Chen, Weidong. "The ill-posedness of derivative interpolation and regularized derivative interpolation for band-limited functions by sampling." EURASIP Journal on Advances in Signal Processing 2020, no. 1 (2020): 1-17.

"In [7], Marks presented an algorithm to find the derivative of band-limited signals by the sampling theorem:

$$f^{(k)}(t) = \sum_{n=-\infty}^{\infty} [\operatorname{sinc} \Omega(t - nh)]^{(k)} f(nh).$$

Here, again, the convergence is in L^2 and uniform on R."
"It was pointed out in [7 Marks] that the interpolation noise level increases significantly with k."

20. **Nonintersecting Convex Set POCS.** M.H. Goldburg and R.J. Marks II, "Signal synthesis in the presence of an inconsistent set of constraints," IEEE Transactions on Circuits and Systems, vol. CAS-32 pp. 647-663 (1985).

(a) Dante C. Youla and V. Velasco, "Extensions of a Result on the Synthesis of Signals in the Presence of Inconsistent Constraints," IEEE Transactions on Circuits and Systems, Vol. CAS-33, No. 4, Pp. 465-468, 1986

"In a recent interesting paper [4], Goldburg and Marks have used a method of convex projection described in [2] to derive the following interesting and useful result:..."

(b) Amir Dembo, "Signal Reconstruction from Noisy Partial Information of Its Transform," IEEE Transactions on Acoustics, Speech, and Signal Processing, Vol. 37, No. 1, pp.65-72, 1989

"The proof...is a special case of the general technique of [Goldburg and Marks]."

(c) Hui Peng and Henry Stark, "Signal recovery with similarity constraints," Journal of the Optical Society of America A, Vol 6, No.6, pp.844-851, 1989

"What happens when the constraints are inconsistent, i.e. when C_0 is the empty set, was investigated [by Goldburg and Marks]"

(d) Khan, Muhammad Aqeel Ahmad, and Ulrich Kohlenbach. "Quantitative image recovery theorems." Nonlinear Analysis: Theory, Methods & Applications 106 (2014): 138-150.

"However, the classical image recovery problem lacks any information on how a δ-fixed point of T relates to being in the intersection $C_{0,\epsilon}$, of ϵ-neighborhoods $C_{i,\epsilon}$ of C_i. Moreover, the problem of image recovery is often and seriously dealt with the inconsistent constraints i.e., when the intersection of the sets $C_1, C_2, , C_r$ is empty (see e.g. [Goldburg & Marks] $\cdots$."

(e) Mayer MM, Feichtinger HG, Grosser M. POCS-Methoden. Reason. 2002 Sep 12

"Im Fall zweier disjunkter Mengen (wie immer wird angenommen, daβ beide Mengen sowohl abgeschlossen als auch konvex sind) gilt der folgende Satz, welcher auf Goldburg und Marks [48] zurucükgeht, aber von Youla und Velasco [112] auf komplexe Hilberträume erweitert wurde."

(f) Chen, Zhiwu, and Peter J. Knez. "Measurement of market integration and arbitrage." Review of financial studies, 8, no. 2 (1995): 287-325.

"Having established the nonexpansiveness of $T(\cdot)$, we need only to use the results from Browder (1965) and Goldburg and Marks (1985) to show that the repeated applications of the composite mapping $T(\cdot)$ will converge to a fixed point in D_A and a corresponding point in D_B."

"The convergence of $T^I(\hat{d})$ to a point in F_T is proven in Goldburg and Marks (1985)."

21. **Sample Dependency at Nyquist Rates.** R. J. Marks II, Multidimensional-signal sample dependency at Nyquist densities," J. Opt. Soc. Am. A 3, 268273 (1986).

    (a) Bones, Philip J., Nawar Alwesh, T. John Connolly, and Nicholas D. Blakeley. "Recovery of limited-extent images aliased because of spectral undersampling." JOSA A 18, no. 9 (2001): 2079-2088.

    "Marks et al.5,6 studied image sampling below the Nyquist limit. They showed how in two and higher dimensions the gaps between the spectral replicates of a bandlimited image can be exploited to allow certain image samples to be recovered from the rest. While the roles of image and spectrum are reversed in our study, we are exploiting redundancy in an analogous manner."

    "Marks et al.5,6 showed how overall sampling density, in relation to the size of limited support in the other domain, affected recovery."

22. **Matched Filter Error Correction.** K.F. Cheung, L.E. Atlas, J.A. Ritcey, C.A. Green and R.J. Marks II, "A comparison of conventional and composite matched filters with error correction," Applied Optics, vol. 26, pp.4235-4239 (1987).

    (a) B.V.K. Vijaya Kumar, "Tutorial survey of composite filter designs for optical correlators," Applied Optics, vol.31, #23, pp.4773-4801

    "The (7-4) Hamming Code maps each four-bit word to a unique seven bit word so that if even one of the bits in the seven bit work is incorrect, we can still determine the correct four-bit message word. Using this concept, we can design seven SDF's to produce the appropriate seven-bit code word for every input. Thus, every input must go through seven filters. Even if one of the filters produces a 1 instead of a zero (or visa versa), this phenomenon would not affect the final decision process. This idea was suggested by Cheung *et al.*"

23. **Detector Relative Efficiencies.** M.I. Dadi and R.J. Marks II, "Detector relative efficiencies in the presence of Laplace noise," IEEE Transactions on Aerospace and Electronic Systems, vol. AES-23, pp.568-582 (1987).

    (a) V.A. Aalo, "Comments on Detector relative efficiencies in the presence of Laplace noise'," IEEE Transactions on Aerospace and Electronic Systems, Vol. 27, No. 1, pp. 177-178, 1991

    "In the above paper [1], Dadi and Marks studied the relative efficiencies of a Neyman-Pearson optimal detector with respect to the linear and sign detectors, for the detection of a constant signal in additive Laplacian noise. By applying the central limit theorem, they derived expressions for three types of asymptotic relative efficiencies (ARE). However, as noted in the above paper, the Gaussian approximation to the sign detector fails to yield the correct asymptotic efficiency.' In this correspondance, we derive the correct ARE of the optimal detector with respect to the sign detector for the Laplace noise case. Using the notations of Dad and Marks, the probability of detection for the sign detector is given by [1, eqns. (21) and (42)] $\cdots$

    (b) M.W. Thompson and H.S. Chang, "Coherent Detection in Laplace Noise," IEEE Transactions on Aerospace and Electronic Systems, volume 30, no.2, pp.452-461 (1994)

    "Additionally, a comparison of the asymptotic performance of the Neyman-Pearson optimal detector and the matched filter detector ... was given in [2] [by Dadi and Marks]."

    (c) S.A. Kassam, *Signal Detection in Non-Gaussian Noise*, (Springer-Verlag, 1988)

    "More recently, Dadi and Marks (1987) have studied further the relative performances of the linear, sign, and optimum detectors for double-exponential noise pdf's"

(d) Kotz, Samuel, Tomasz Kozubowski, and Krzysztof Podgorski. The Laplace distribution and generalizations: a revisit with applications to communications, exonomics, engineering, and finance. No. 183. Springer Science & Business Media, 2001.

> "The importance of the explicit formula for the test statistic in the above problem is due to the fact that the asymptotic Gaussian approximation is not usually very accurate for small and moderate sample sizes. For example, it was shown in Dadi and Marks (1987) that for samples size in the range from 5 to 50 the Gaussian approximation can be quite conservative, some yielding the t_α-value substantially larger then its exact value..." "In communication theory other detectors beside the optimal one are also considered. For example, the linear detector is given $g_{lin})(x) = x$ and the sign detector is given $g_{sign}(x) = \text{sign } x$. We refer to Dadi and Marks (1987) and Marks et al. (1978) for a detailed discussion of the performances of these detectors under the Laplace noise and their limiting behavior when the sample size N increases without bound."

24. **Hopfield: Synchronous Versus Asynchronous.** K.F. Cheung, L.E. Atlas and R.J. Marks II, "Synchronous versus asynchronous behavior of Hopfield's content addressable memory," Applied Optics, vol. 26, pp.4808-4813 (1987).

(a) Reprinted in Artificial Neural Networks: Concepts & Control Applications, IEEE Computer Society Press, pp. 142-147, 1992.

(b) Reprinted in Optical Neural Networks edited by Suganda Jutamulia (The Society of Photo-Optical Instrumentation Engineers, Bellingham, WA), pp. 188-193, 1994.

25. **Convolutional Neural Networks.** T. Homma, L.E. Atlas and R.J. Marks II "A neural network model for vowel classification," Proceedings of the International Conference on Acoustics, Speech and Signal Processing, 1987.

(a) KVITA, Jakub. "Image Captioning with Recurrent Neural Networks" Master's thesis. Brno University of Technology, Faculty of Information Technology, 2016.

> "CNN ideas took inspiration from neurobiology, more precisely the organisation of neurons in visual cortex of the cat. They were first used in the work of Homma [1], to process a temporal signal."

(b) Kishek, Alfred. "Empirical Evaluation of Deep Convolutional Neural Networks as Feature Extractors." University of Michigan-Dearborn (2017).

> "CNNs were first developed to recognize spatio temporal patterns in 1988 (Atlas et al., 1987). At this time, the multiplication function for neurons was replaced with convolution. CNNs were later improved in 1998 (Lecun et al., 1998), and generalized and simplified in 2003 (Simard et al., 2003)."

(c) James, Conrad D., James B. Aimone, Nadine E. Miner, Craig M. Vineyard, Fredrick H. Rothganger, Kristofor D. Carlson, Samuel A. Mulder et al. "A historical survey of algorithms and hardware architectures for neural-inspired and neuromorphic computing applications." Biologically inspired cognitive architectures 19 (2017): 49-64.

> "With the development of new algorithms, specialized hardware, and techniques for training neural networks, new types of problems other than static classification of objects became of interest. Dynamic problems such as tracking objects in video feeds and parsing speech have become the dominant focus of much of the research in the field. Atlas et al. (1988) implemented an early application of neural networks in the time domain in order to extract and classify phonemes from speech data. To apply neural networks to such time-varying data, the mathematics of the system were altered to have multiplication steps converted to convolutions and weights converted to transfer functions."

26. **Associative Memories With Nonlinearities in the Correlation Domain.** R.J. Marks II, L.E. Atlas, J.J. Choi, S. Oh, K.F. Cheung and D.C. Park, "A performance analysis of associative memories with nonlinearities in the correlation domain," Applied Optics, vol. 27, pp.2900-2904 (1988)

    (a) G.Lu, M. Lu and F.T.S. Yu, "Multilayer Associative Memory and Its Hybrid Optical Implementation," Applied Optics, vol.34, no.23, pp.5109-5117 (1995)

        "Marks et.al. [14] and Chiueh and Goodman have shown that exponential nonlinear operations can indeed sufficiently remove the interpattern cross talk; thus the exponential associative memory could possibly retrieve the desired exemplar with only one iteration."

27. **Optical POCS.** R.J. Marks II, L.E. Atlas and K.F. Cheung, "Optical processor architectures for alternating projection neural networks," Optics Letters, vol. 13, pp.533-535 (1988)

    (a) Reprinted in SPIE Milestone Series: Selected Papers in Optical Neural Networks edited by Suganda Jutamulia (The Society of Photo-Optical Instrumentation Engineers, Bellingham, WA, 1994)

    (b) M. Ibrahim Sezan, Henry Stark and Shu-Jen Yeh, "Projection method formulations of Hopfield-type associative memory neural networks," Applied Optics, Vol. 29, No. 17, pp.2616-2622, 1990

        "To the best of our knowledge, Marks was the first to establish the relationship between a particular ACAM network and POCS [4,19]. He proposed an ACAM network which extrapolated partially specified, continuous valued memory patterns by alternating orthogonal projections onto two constraint sets."

    (c) A.T. Smith and J.F. Walkup, "Optical implementation of the alternating projection neural network," Optical Engineering, vol.30, pp.1522-1528 (October 1991)

        "The network we implement optically, the alternating projection neural network (APNN), is an associative memory ... but has a much different method for forming the interconnection matrix and thresholding the state vector ... A possible optical architecture using fibers has been discussed by Marks *et al.* [15 Marks et al.] $\cdots$ "

28. **Algebraic Optical Processors Error Correction.** S. Oh, D.C. Park, R.J. Marks II and L.E. Atlas "Error detection and correction in multilevel algebraic optical processors," Optical Engineering, vol. 27, #4, pp.289-294 (1988).

    (a) S.A. Ellett, *et al.*, "Combining Digital Partitioning and Error-Correcting Codes for High Accuracy Optical Computing," Optics and Laser Technology, vol.26, pp.301-311 (1994)

        "Oh *et.al.* [9] introduced a modified form of a multilevel Hamming code suitable for use on OMVP's. The modified multilevel Hamming code (MMHC) corrects single errors of magnitude less than $p/2$ where p can be varied to change the range of the error magnitudes that are correctable. The code base should always be chosen to be less than the number of levels in the matrix [9]."

    (b) S.A. Ellet *et al.*, "Error correction coding for accuracy enhancement in optical matrix-vector multipliers," Applied Optics, vol.31, no.26, pp.5642-5653 (1992)

        "However, OMVM's (optical matrix-vector multipliers) can also operate on nonbinary data. Oh *et al.* have proposed a generalization of the binary (7,4) Hamming code that can be used to provide error correction for OMVM's by using nonbinary data [5]." "...decoding can be performed optically also [5]. Optical decoders are preferred for maintaining the high speed and parallelism of optics."

29. **Alternating Projection Neural Networks.** R.J. Marks II, S. Oh and L.E. Atlas, "Alternating projection neural networks," IEEE Transactions on Circuits and Systems, vol.36, pp.846-857 (1989)

    (a) V.V. Vinod, S.Ghose and P.P. Chakrabarti, IEEE Transactions on Systems, Man & Cybernetics, Part B: Cybernetics, vol.26, no.4, Aug 1996, pp. 509-521

> "In this paper we propose a neural network based on the idea of projection onto convex sets (POCS) for solving OPIC. The POCS technique has earlier been used in artificial neural networks for perfect memory recall by Marks *et al.* [1], [20]. They proposed alternating projection neural networks based on repeated sequential projections onto the closure of stored vectors and the partial vector which has to be completed."

(b) S. Jankowski, A. Lozowski and J.M. Zurada, "Complex-Valued Multistage Neural Associateive Memory," IEEE Transactions on Neural Networks, vol.7, no.6, pp.1491-1496, (1996)

> "Multivalued pattern storage can also be obtained by using a continuous state classified that performs matching of an input to some "library" patterns. As has been shown in in [9] [by Marks *et al.* that] projecting in a signal space between constraint sets corresponding to the patterns can serve as a content addressable multivalued memory with linear capacity."

30. **APNN's.** R.J. Marks II, S. Oh, L.E. Atlas and J.A. Ritcey, "Homogeneous and layered alternating projection neural networks," in Real-Time Signal Processing for Industrial Applications, edited by Bahram Javidi (SPIE Optical Engineering Press, Bellingham, WA. 1989), pp. 217-232.

(a) Shu-jeh Yeh and Henry Stark, "Learning in neural nets using projection methods," Optical Computing and Processing, Vol. 1, No. 1, pp.47-59, 1991

> "To the best of our knowledge the first to use projection methods in neural networks was Marks and his coworkers. For example, he used projection methods in designing a net to solve the signal extrapolation problem [14] and used such methods in designing more elaborate Hopfield-type nets and nets involving a hidden layer [15]."

(b) Branko Soucek, *Neural and Concurrent Real-Time Systems: The Sixth Generation*, (John Wiley & Sons, 1989)

> Marks *et al.*17,18 suggested a new class of neural networks called alternating projection neural networks (APNN). APNN's perform by alternately projecting between two or more constraint sets, see Fig 3.8. The single point intersection between convex sets is a derived steady-state solution."

31. **Optical Sensing Neural Nets** A. Ishimaru, R.J. Marks II, L. Tsang, C.M. Lam, D.C. Park and S. Kitamaru "Particle size distribution using optical sensing and neural networks," Optics Letters, vol.15, pp. 1221-1223 (1990).

(a) wirniak, Grzegorz, and Janusz Mroczka. "Forward and inverse analysis for particle size distribution measurements of disperse samples: a review." Measurement (2021): 110256.

> "One of the earliest works devoted to the inversion of optical data for characterization of particles performed by Ishimaru et al. points out, that by increasing the number of iterations in the training process, the solutions tend to converge to the exact values."

32. **Cone Shaped Kernels: Zamograms.** Y. Zhao, L.E. Atlas and R.J. Marks II, "The use of cone-shaped kernels for generalized time-frequency representations of nonstationary signals," IEEE Transactions on Acoustics, Speech and Signal Processing, vol. 38, pp.1084-1091 (1990).[38]

(a) The cone-shaped distribution' introduced in this paper was first commercially distributed by National Instruments' Joint Time-Frequency Analysis software toolkit in 1995. It is also in the MATLAB toolbox.

(b) Zeng, Deze, Xuan Zeng, G. Lu, and B. Tang. "Automatic modulation classification of radar signals using the generalised time-frequency representation of Zhao, Atlas and Marks." IET radar, sonar & navigation 5, no. 4 (2011): 507-516.

[38] Referenced as the *Zhao, Atlas and Marks (ZAM) GTFR* and *cone shaped kernel*

> "We have studied mechanisms of the generalised timefrequency representation of Zhao, Atlas and Marks (ZAMGTFR) [14, 15]. The ZAM-GTFR simultaneously preserves the property of finite time support, strengthens spectral peaks and smoothes cross-terms. It is shown that ZAMGTFR has advantage over most of the other TFRs under conditions of low SNR and some characteristic features are easy to be extracted from the 2-D time-frequency plane, such as the negative peaks with respect to the phase changes of PSK. We analyse the ZAM-GTFRs of five types of radar signals and obtain four characteristic features.
> The remainder of this paper is organised as follows. Section 2 gives the ZAM-GTFRs of the referred signals. In Section 3, we obtain the characteristic features from the frequency ridges of the ZAM-GTFRs and the negative peaks. In Section 4, we detail the signal recognition flow. Section 5 shows the PSRs and Section 6 provides conclusions."

(c) B. Boashash, "Estimation and interpreting the instantaneous frequency of a signal - Part 2: Algorithms and Applications," Proceedings of the IEEE, vol.80, no.4, pp.540-568, 1992

> "The Zhao-Atlas-Marks Distribution, for example, seems to have good time-frequency localization and good noise performance [72], making it a useful prospect for IF estimation."

(d) R.G. Baraniuk and D.L. Jones, "A signal-dependent time-frequency representation: optimal kernel design," IEEE Transactions on Signal Processing, vol. 41, no.4, pp.1603-1617, (1993)

> "The generating kernel for the cone-kernel distribution is shown in Fig.4(a). The time-frequency representation of the cone-kernel is excellent for pulse-like signals whose AF autocomponents lie near the θ axis ..."

(e) Leon Cohen, "Introduction: a primer on time-frequency analysis," in *Time-Frequency Signal Analysis, B. Boashash, Editor*

> "5.3. Zhao-Atlas-Marks distribution. A new time-frequency distribution with many attractive features has been developed by Zhao, Atlas and Marks [18]. Their distribution significantly enhances the time and frequency resolution and suppresses the cross terms. Furthermore, they have examined the basic conditions which a distribution must satisfy to have good time and frequency resolution. For the ZAM distribution $r(t;)$ as defined by ... There are two dramatic differences between the spectrogram and the ZAM. First note how sharp and discernable the time of transition at the frequency jumps in the ZAM distributions. Secondly note how much sharper the frequency resolution is in the ZAM... The ZAM distribution has been applied to speech with very impressive results."

(f) R.N. Czerwinski and D.L. Jones, "An adaptive time-frequency representation using a cone-shaped kernel," Proceedings of the International Conference on Acoustics, Speech and Signal Processing, Minneapolis (April 27-30, 1993), IEEE, pp.IV404-IV407;

> "The CKD is characterized by a kernel used by Zhao et.al. [3] ... In creating an adaptive CKD, we seek to select the parameter T, which is the cone length."

(g) M.G. Amin, "Time-Frequency Distributions in Statistical Signal and Array Processing," IEEE Signal Processing Magazine, (September 1998), pp.32-34

> "Choi and Williams [62] and Zhao, Atlas and Marks [465] have proposed t-f kernels which make identification (of cross-terms introduced from the bilinear nature of TDF's) much more feasible than attainable using the WD. The distributions using these two kernels have come to be known as the Choi-Williams (CW) and the ZAM TFD's. In both distributions, the kernel is characterized by one parameter whose value can be adjusted to achieve a tradeoff between resolution and cross-term suppression."

(h) Zeng, D., X. Zeng, G. Lu, and B. Tang. "Automatic modulation classification of radar signals using the generalised time-frequency representation of Zhao, Atlas and Marks." IET radar, sonar & navigation 5, no. 4 (2011): 507-516.

> "We have studied mechanisms of the generalised time- frequency representation of Zhao, Atlas and Marks (ZAM- GTFR) [14, 15]. The ZAM-GTFR simultaneously preserves the property of finite time support, strengthens spectral peaks and smoothes cross-terms. It is shown that ZAM- GTFR has advantage over most of the other TFRs under conditions of low SNR and some characteristic features are easy to be extracted from the 2-D time-frequency plane, such as the negative peaks with respect to the phase changes of PSK."

(i) Vaidya, Vinay G., and Robert M. Haralick. "The use of GTFR with cone shaped kernel for motion estimation." In Time-Frequency and Time-Scale Analysis, 1992., Proceedings of the IEEE-SP International Symposium, pp. 535-538. IEEE, 1992.

> "In this paper we have shown a successful application of the GTFR with cone kernel. The results presented clearly show that this new method can detect object location even under extreme noise conditions."

(j) Dongmei, Jiang, and Zhao Rongchun. "Speaker normalization based on the generalized time-frequency representation and Mellin transform." In Signal Processing Proceedings, 2000. WCCC-ICSP 2000. 5th International Conference on, vol. 2, pp. 782-785. IEEE, 2000.

> "For vocal tract length normalization in speaker-independent speech recognition, a novel feature extraction method is carried out on the generalized time-frequency representation with cone-shaped kernel (CK-GTFR) and Mellin transform. The GTFR is superior to other representations in suppressing cross terms and producing good time and frequency resolution simultaneously."

(k) Tran, Q. T., and P. M. Moore. "Application of the generalized time-frequency representation cone-shaped kernel to structural acoustics data." The Journal of the Acoustical Society of America 90, no. 4 (1991): 2341-2341.

> "Here, the cone-shaped kernel is compared to the spectrogram and Wigner distribution, and shown to provide and improved tool for understanding the backscattering phenomena."

(l) Rosser, Daniel Mark. "Time frequency analysis of a noisy carrier signal." PhD diss., Monterey, California. Naval Postgraduate School, 1995.

> "...the signal detection problem is addressed using time frequency processing of a carrier signal embedded in additive white gaussian noise (AWGN). A TFR (time frequency representation) performance measure based on a mean and variance analysis is proposed and used to estimate the center frequency of a carrier. Through computation of the discrete-time TFR, our results show that this measure provides a means to determine the presence of a carrier signal in noise even when the TFR itself becomes quite obscured by the noise.The cone kernel-TFR is seen to yield the highest frequency resolving capability compared with the Wigner-Ville distribution and the Choi-Williams distribution."

(m) CHI, Huanzhao, Cai LIU, Xuanlong SHAN, Dian WANG, and Qi LU. "Application of spectral decomposition technology in shallow gas detection based on Wigner-Ville distribution." Global Geology 17, no. 4 (2014): 243-246.

> "The cone-shaped kernel function used to reduce the cross-term interference is proposed by Zhao et al. (1990). The expression is
>
> $$\varphi_k(\tau) = \frac{\sin\left(\frac{\tau\nu}{2}\right)}{\frac{\tau\nu}{2}} \exp\left(\frac{-\tau^2}{\alpha}\right)$$
>
> Where τ is time delay, ν is deviation and α is a constant used to control the shape of the kernel function.

"Fig 1 shows that the process of spectral decomposition technology based on the Wigner-Ville. Fig 2 shows that cone-shaped kernel function can suppress the ambiguity of the signals in the time delay axis and outside the coordinate axis."

(n) ZENG, Xiaodong, Bin TANG, and Ying XIONG. "Interception Algorithm of S-cubed Signal Model in Stealth Radar Equipment." Chinese Journal of Aeronautics 25, no. 3 (2012): 416-422.

"First, the generalized time-frequency representation of Zhao, Atlas, and Marks (ZAM-GTFR) and Hough transforms (HT) are applied to detecting the signal, and then the initial frequency and modulation slope of LFM are estimated from the ZAM-GTFR. On the basis of LFM information, the reconstructing signal is generated. Finally, the code rate of discrete phase code is extracted from the negative peaks of the ZAM-GTFR. Simulation results show that the proposed algorithm has higher estimation accuracy when the signal to noise ratio (SNR) is above 3 dB."

(o) G.X. Chena and Z.R. Zhou, "Timefrequency analysis of friction-induced vibration under reciprocating sliding conditions," Wear, Volume 262, Issues 12, 4 January 2007, Pages 110

" ZhaoAtlasMarks distribution produces a good resolution in time and frequency domains. The ZAMD method reduces the interference resulting from the cross-terms present in multi-component signals. It is useful in resolving close spectral peaks and capturing non-stationary and multi-component signals."

(p) Lokenath Debnath, *Wavelet transforms and their applications,* Birkhäuser Boston, (2001) p.355

"[T]he Zhao-Atlas-Marks time-frequency distribution ... significantly enhances the time and frequency resolution and eliminates all undesirable cross terms. // The ZAM distribution has been applied to speech with remarkable results."

(q) P. A. Karthick and Shankar Ramakrishnan. "Analysis of surface Electromyography signals using ZAM based quadratic time frequency distribution." 2014 40th Annual Northeast Bioengineering Conference (NEBEC), pp. 1-2. IEEE, 2014.

In this work, the variation of IMDF and IMNF of sEMG signals are studied during dynamic muscle contraction. sEMG signals are recorded from biceps brachii muscles of 50 healthy volunteers. ZAM based QTFD is used to analysis the signal. IMDF and IMNF are extracted from the time-frequency spectrum of recorded signal. It is found that IMDF and IMNF are higher in non-fatigue conditions. The result shows a negative slope for linear regression fit for all subjects.

(r) Rajagopalan, Satish, José Restrepo, José M. Aller, Thomas G. Habetler, and Ronald G. Harley. "Nonstationary motor fault detection using recent quadratic timefrequency representations." IEEE Transactions on Industry Applications, 44, no. 3 (2008): 735-744.

"While the emphasis on development of distributions such as the CWD was to meet marginal conditions and other properties [10], the development of ZAM "cone-kernel' was intended to introduce finite time support and reduce cross-terms [5]. The kernel to be used in (1) to obtain a ZAM distribution is

$$\varphi(\xi,\tau) = \varphi_1(\tau)\frac{\sin(\xi|\tau|/a)}{\xi/2}$$

where $\varphi_1(\tau)$ is a function to be specified (usual-ly taken to be equal to one) and a is greater than or equalto two. The cone-shaped kernel function suppresses the cross terms away from the vertical axis and the origin of the ambiguity function plane. The BJ distribution is similar to the ZAM distribution.

(s) Satish Rajagopalan, José Restrepo, José M. Aller, Thomas G. Habetler, and Ronald G. Harley. "Selecting time-frequency representations for detecting rotor faults in BLDC motors operating under rapidly varying operating conditions." In Industrial Electronics Society, 2005. IECON 2005. 31st Annual Conference of IEEE, pp. 6-pp. IEEE, 2005.

"The ZAM ... is a newer distribution that significantly enhances the time and frequency resolution while suppressing the cross-terms [12]."
"The ZAM distribution ... shows good energy concentration (low frequency smear), excellent cross-term suppression and much better frequency resolution than the STFT."

(t) M. Alemu, Dinesh Kant Kumar, and Alan Bradley. "Time-frequency analysis of SEMG with special consideration to the interelectrode spacing." Neural Systems and Rehabilitation Engineering, IEEE Transactions on 11, no. 4 (2003): 341-345.

"Linear JTFR techniques such as STFT do not satisfy time or frequency marginal property. TF techniques such as WVD offer a higher resolution compared to STFT and the drawback of WVD of cross terms is overcome by techniques such as CWD and ZAM."

(u) Sean A. Fulop and Sandra F. Disner. "Advanced time-frequency displays applied to forensic speaker identification." In Proceedings of Meetings on Acoustics, vol. 6, no. 1, p. 060008. Acoustical Society of America, 2009.

"Other time-frequency representations besides the spectrogram have been promoted occasionally. These are generally members of the quadratic distribution family based on the Wigner-Ville distribution, which technically includes the spectrogram, but many other candidates have been found which have better time-frequency uncertainty relations than the spectrogram. One of the best overall performers in this family is the Zhao-Atlas-Marks (ZAM) distribution.

(v) Rosero, Javier, Luis Romeral, Juan Ortega, and Esteban Rosero. "Short-circuit detection by means of empirical mode decomposition and WignerVille distribution for PMSM running under dynamic condition." IEEE Transactions on Industrial Electronics, 56, no. 11 (2009): 4534-4547.

"Another TF distribution for fault detection in motor drives that improves TF resolution while providing cross-term suppression is the ZhaoAtlasMarks (ZAM) distribution [21]. ZAM has been recently proposed [22] for rotor fault detection in BLDC motors under rapid changes in motor operation. The authors of the proposals use an adaptive filter driven by a PLL to filter the fundamental frequency, because the fault frequency components are small and could be masked by it. Also, this filtering reduces the occurrence of cross-terms when using quadratic TF distributions."
"ZAM distribution achieves a very good tradeoff between suppression of cross-terms and loss in TF resolution. For this reason, ZAM is a very promising technique to monitor fault condition in nonstationary working conditions, even if it has higher computational burden than simple WVD."

(w) Antsiperov, Viacheslav. "Analytic spectrum as a tool for time-frequency signal analysis." In Image and Signal Processing and Analysis (ISPA), 2017 10th International Symposium on, pp. 59-64. IEEE, 2017.

"Coneshape kernel representations (CKR)[10], known also as Zhao–Atlas-Marks type TFRs [11] are free from the Page / Levin distribution defects associated with their asymmetry. This class of distributions has a lot of useful properties, which conditioned their high popularity for numerous applications. In particular, they satisfy the majority of intuitive requirements for nonstationary signals representations - conservation of support, covariance under time and frequency translations, symmetry, etc."
"In addition to the above listed general properties, that instantaneous ASP representations have as CKRs, here we should mention the important special property inherent from representations of [sic] Zhao-Atlas-Marx [sic] (ZAM) type [11]. It means the ability of ZAM representations to achieve a good timefrequency concentration and good attenuation of interference terms unavoidable in the case of multiple sinusoid al bursts. These characteristics are very useful, for example, in the speech processing."

(x) Viacheslav Antsiperov, "Analytic Spectrum as a Tool for TimeFrequency Signal Analysis." In Image and Signal Processing and Analysis (ISPA), 2017 10th International Symposium on, pp. 59-64. IEEE, 2017.

> "Relation of the instantaneous ASP with cone-shape distributions The asymmetry-related disadvantages mentioned above are absent in coneshape kernel representations (CKR)[10], known as ZhaoAtlasMarks representations [11 Zhao et al.]. This class of distributions has a whole number of useful properties, which conditioned their high popularity for a whole number of applications. In particular, they satisfy the majority of intuitive requirements for representation of nonstationary signals - they preserve zeros, are covariant compared to frequency and time bias of the signals, are symmetric, etc."

(y) Fulya Akdeniz and Temel Kayikçioğlu. "Detection of ECG arrhythmia using Zhao-Atlas Mark time-frequency distribution." 2018 26th Signal Processing and Communications Applications Conference (SIU). IEEE, 2018.

> "In the study, it was purposed to determine ECG arrhythmias. In this context; the data was obtained from the MIT-BIH Arrhythmia database. A total of 214,714 heartbeats were used in the study in order to study a fairly large database. The Zhao-Atlas Mark method is used as the time-frequency distribution method to extract the feature from the ECG signals. In classification, many classifiers were used and it was seen that the best result was taken at the Weighted K-EYK method from K-Nearest Neighbor (K-EYK) classifier. The performance of the system is given as accuracy, sensitivity, specificity, positive predictive value respectively 94.10 , 93.19 , 95.02 , 94.93 ."

(z) D. Wu, B. -L. Lu, B. Hu and Z. Zeng, "Affective BrainComputer Interfaces (aBCIs): A Tutorial," in Proceedings of the IEEE, May 2023.

> "Hadjidimitriou and Hadjileontiadis [89] compared STFT, ZAM, and HHS features in music like/dislike classification and found that, generally, ZAM features performed the best due to their high resolution in both time and frequency domains."

33. **Neural Networks Versus CART.** L.E. Atlas, R. Cole, Y. Muthusamy, A. Lippman, G. Connor, D.C. Park, M. El-Sharkawi & R.J. Marks II, "A performance comparison of trained multi-layer perceptrons and classification trees," Proceedings of the IEEE, vol.78, pp.1614-1619 (1990).

    (a) Reprinted in Neural Networks, Theoretical Foundations and Analysis, C. Lau, editor, IEEE Press (1992).

    (b) D. Park, O. Mohammed, R.Merchant, T.Dinh, C.Tong and A.Azeem, "Forecasting abnormal load conditions with neural networks," Proceedings of the Second International Forum on Applications of Neural Networks to Power Systems, April, 1993, Japan, (IEEE Press, pp.73-78)

    > "The ANN also performs non-linear regression among load and weather patterns. When compared with classification methods such as the Classification and Autoregression Trees, which is one of the best accepted techniques in Statistics, the ANN shows a superior performance in terms of accuracy [12]."

34. **Load Forecasting,** D.C. Park, M.A. El-Sharkawi, R.J. Marks II, L.E. Atlas & M.J. Damborg, "Electric load forecasting using an artificial neural network," IEEE Transactions on Power Engineering, vol.6, pp.442-449 (1991)

    (a) Reprinted in Artificial Neural Networks, E. Snchez-Sinencio & C. Lau, editors, pp.516-522, IEEE Press (1992).

    (b) C.N. Lu, H.T. Wu and S. Vemuri, "Neural Network Based Short Term Load Forecasting," IEEE Transactions on Power Systems, vol. 8, no.1, pp.336-342 (1993)

> "Park et.al. [11] proposed a neural network with three layers and a delta rule for training the network. The network provided accurate forecasts for hourly, peak and daily total loads. Tests were conducted over one winter season and the average errors were lower than 2 for all forecasts."

(c) Azzam-ul-Asar and J.R. McDonald, "A Specification of Neural Network in the Load Forecasting Problem," IEEE Transactions on Control Systems Technology, vol.2, no.2, June 1994, pp.135-141

> "Park *et al.* [10] investigated the ANN methodology for STLF using three main forecasting targets, namely peak load, daily load and hourly load. The ANN was used to learn the relationship between past, current and future temperatures and loads. The focus was on normal weekday prediction."

35. **Amputee Prosthetics.** J.E. Sanders, C.H. Daly, W.R. Cummings, R.D. Reed and R.J. Marks II "A measurement device to assist amputee prosthetic fitting," Journal of Clinical Engineering, volume 19, no.1 (January-February 1994), pp. 63-71.

(a) Brown, Nathan, Meredith K. Owen, Anthony Garland, John D. DesJardins, and Georges M. Fadel. "Design of a Single Layer Metamaterial for Pressure Offloading of Transtibial Amputees." Journal of Biomechanical Engineering 143, no. 5 (2021)

> "Prosthetic liner materials have been a common focus of research. Sanders et al. [16] altered the mechanical properties of foam liners by weakening the cell structures during the vacuum-forming manufacturing of foam liners. By controlling the degree by which these cell structures are weakened, Sanders proposed that the foam liners could be altered to fit the performance needs of specific patients [16]."

36. **Neural Smithing.** Russell D. Reed and Robert J. Marks. *Neural smithing: supervised learning in feedforward artificial neural networks.* Mit Press, 1998.

(a) Cerrada, Mariela, René Vinicio Sáchez, Diego Cabrera, Grover Zurita, and Chuan Li. "Multi-Stage Feature Selection by Using Genetic Algorithms for Fault Diagnosis in Gearboxes Based on Vibration Signal." Sensors 15, no. 9 (2015): 23903-23926.

> Given the dataset with m samples (x_i, y_i), the algorithm for training an NN for classification purposes is widely known, and it is summarized [by Reed and Marks] as follows, [34]:
>
> (1) Randomly initialize the weights of each layer $W^l, l = 1, ...L,...$
>
> (2) Compute the feedforward propagation to obtain $h_W(x^i)_k$.
>
> (3) Compute the cost function $J(W)$.
>
> (4) Run the backpropagation algorithm to compute $\frac{\partial}{\partial w^l_{ji}} J(W)$.
>
> (5) Use the gradient descent method for adjusting the weights wlij according to the equation $w^l_{ij} := w^l_{ij} - \alpha \frac{\partial}{\partial w^l_{ji}} J(W)$.

37. **Kernel Synthesis.** S.Oh, R.J. Marks II, L.E. Atlas and J.W. Pitton, "Kernel synthesis for generalized time-frequency distributions using the method of projection onto convex sets," SPIE Proceedings 1348, Advanced Signal Processing Algorithms, Architectures, and Implementation, F.T. Luk, Editor, pp.197-207, San Diego, July 10-12, 1990.50

(a) Leon Cohen, "Introduction: a primer on time-frequency analysis," in *Time-Frequency Signal Analysis*, B. Boashash, Editor

> "A very important contribution to this problem has recently been made by Oh, Marks, Atlas and Pitton [20]. They observed that functions satisfying a particular constraint form a convex set... Perhaps most significantly the development of Oh *et al.* will help clarify the fundamental issue of whether there is one 'absolute best' distribution to

be used as is for all applications or whether different distributions should be used for different circumstances. The perspective of Oh et.al. clarifies this issue considerably because we can now ask what is the best distribution for a given set of constraints ... a very often stated argument why we should always use only one distribution is that there is no procedure for finding a context independent distribution; the work of Oh et.al. does precisely that."

(b) Leon Cohen, *Time-Frequency Analysis*, Prentice Hall (1995), p.166;

"11.4. Projection Onto Convex Sets. Finding a kernel with all the properties we have enumerated may not be straightforward The method called "projection onto convex sets" automatically picks out the functions, if they exist, that satisfy all of the conditions. Furthermore, if such a function does not exist then the method picks out the best function in the mean square sense. This method was devised by Oh, Marks II, Atlas and Pitton [408]."

38. **Regularzation.** Russell Reed, R.J. Marks II and Seho Oh "Similarities of error regularization, sigmoid gain scaling, target smoothing and training with jitter," IEEE Transactions on Neural Networks, vol. 6, no.3, May 1995, pp. 529-538.

(a) Kosko, Bart, Kartik Audhkhasi, and Osonde Osoba. "Noise can speed backpropagation learning and deep bidirectional pretraining." Neural Networks (2020).

"[Reed, Marks & Oh] used a Taylor-series expansion to argue that these slight boosts from adding small-amplitude blind noise resemble Tikhonov regularization (Reed et al., 1995, Reed et al., 1992). Bishop published a similar result (Bishop, 1995)."

(b) Ferreira, Vitor Hugo, and AP Alves da Silva. "Complexity control of neural models for load forecasting." In Proceedings of the 13th International Conference on, Intelligent Systems Application to Power Systems, pp. 100-104. IEEE, 2005.

"As already mentioned, there are other techniques for estimating neural models with good generalization capacity, in which complexity control is not attained by adding $\lambda E_q(w)$ in the objective function to be minimized. Among these techniques the early stopping procedure and the activation function gain scaling method [14-Reed, Marks & Oh] deserve more investigation."
"The activation function gain scaling method is a post-training method equivalent to inserting noise in the training patterns (without doing that explicitly). The idea of including corrupted versions of the original input patterns in the training set is to smooth the mapping, avoiding divergent outputs for similar inputs [14-Reed, Marks & Oh]."

39. **Shorted Winding Detection.** S. Guttormsson, R.J. Marks II, M.A. El-Sharkawi and I. Kerszenbaum, "Elliptical novelty grouping for on-line short-turn detection of excited running rotors," IEEE Transactions on Energy Conversion, IEEE Transactions on Volume: 14 1 , March 1999 , pp. 1622

(a) M.E. El-Hawary, *Fuzzy System Theory in Electrical Power Engineering,* (IEEE Press, 1998), p.xxiv

"[Their diagnostic test performs] detection and localization of shorted turns in the DC field winding of turbine-generator rotors using novelty detection and fuzzified neural networks. Use of neural networks with fuzzy logic outputs and traveling wave techniques ... is an accurate locator of shorted turns in turbo-generator rotors"

40. **Sub-Nyquist Sampling.** K.F. Cheung and R.J. Marks II, "Image sampling below the Nyquist density without aliasing," Journal of the Optical Society of America A, vol.7, pp. 92105 (1990)

(a) Cormac Herley and Ping Wah Wong, "Minimum Rate Sampling and Reconstruction of Signals with Arbitrary Frequency Support," IEEE Transactions on Information Theory, Vol 45, No. 5, July 1999, pp. 15551564.

> "[Their] very interesting multidimensional construction ... exploit[s] the [required] spectral gaps that occur when sampling multidimensional signals. Their approach is to slice the spectrum into narrow bands, and handle separately those bands which contain signal energy and those which do not."

(b) T.R. Gardos and R.M. Mersereau, "FIR filtering of images on a lattice with periodically deleted samples," Proceedings of the International Conference on Acoustics, Speech and Signal Processing, Toronto, 1991

> "Cheung and Marks [1] have shown that for circularly band-limited images, the Nyquist density is not the minimum density which allows perfect reconstruction. In [1] is given an elegant proof indicating this sub-optimality based on the fact that there are still band gaps when circular spectrums are maximally packed. Cheung and Marks then presented a method for deleting samples and subsequently reconstructing them." "In this section, we present a theorem that permits us to periodically delete samples from an image with no loss of information and the procedure by which we reconstruct the deleted samples [1]. First, $\cdots$ " "We now state the PSD (periodic sample deletion) theorem based on [1]. Theorem 4: Let $x_c(t)$ be a bandlimited continuous signal and $s(t)$ be $x_c(t)$ sampled on an arbitrary sampling lattice where there is no spectral overlap. If the Fourier transform of $s(t)$ is such that there are band gaps in the spectrum, then there exists at least one of the signal cosets may be deleted and reconstructed from the remaining units."

(c) Berman, Lihu, and Arie Feuer. "Robust patterns in recurrent sampling of multiband signals." Signal Processing, IEEE Transactions on 56, no. 6 (2008): 2326-2333.

> "Utilizing the generalized sampling formulation, it was shown in [3] that recurrent nonuniform sampling can be used to lower the sampling density required for perfect reconstruction of 2-D bandlimited signals below the Nyquist rate. Whereas the Nyquist rate corresponds to the highest frequencies in the signal spectral support, the aforementioned sub-Nyquist rate can asymptotically achieve the Landau rate [4] [also known as the minimum-rate sampling (MRS)] corresponding to the Lebesgue measure of the signal spectral support."

(d) Prelee, Matthew A., and David L. Neuhoff. "Multidimensional Manhattan Sampling and Reconstruction." IEEE Transactions on Information Theory 62, no. 5 (2016): 2772-2787.

> "One substantial line of past work applies to sampling sets that consist of a sublattice of some specified base lattice, together with some of its cosets, each of which is a shift of the sublattice by some base lattice point. In this case, the subsampling corresponding to each coset (including the sublattice itself) can be viewed as a channel in a Papoulis multichannel, generalized sampling scheme. Consequently, the method of [28] can be applied. This is the approach taken by Marks and Cheung [17][19]. Since a Manhattan set can be viewed as the union of what we earlier called the coarse (rectangular) lattice and some number of its cosets with respect to the *dense (rectangular) lattice*, which contains all points t such that for each i, its ith coordinate is an integer multiple of λ_i, the Papoulis-Marks-Cheung (PMC) approach can be applied to Manhattan sets.
> "In particular, Marks and Cheung focused on images with a given spectral support region and an initial base sampling lattice such that the induced spectral replicas of this support region do not overlap. They then showed that cosets of some sublattice could be removed from the base lattice until the sampling density was minimal (in the Landau sense) or approached minimal. Their method involved (a) partitioning the Nyquist region of the initial base lattice into atoms the size and shape of the Nyquist region of the sublattice, (b) counting the number of atoms of this partition that are not overlapped by any spectral replica of the designated support region induced by the initial base sampling lattice, and (c) showing that this number of sublattice cosets can be removed from the initial base lattice due to their samples being linearly dependent on other samples. If the atoms of the partition are too coarse to closely match the set

of frequencies not contained in any spectral support replica, then choosing a sparser sublattice will enable a finer partitioning, resulting in a higher fraction of the base samples being removed, which allows the sampling rate to be reduced until it equals or approaches the Landau minimum.
"With hindsight, one can apply their approach to a Manhattan sampling set."

(e) Haldar, Justin P., and Kawin Setsompop. "Linear predictability in magnetic resonance imaging reconstruction: Leveraging shift-invariant Fourier structure for faster and better imaging." IEEE Signal Processing Magazine 37, no. 1 (2020): 69-82.

"The relationship in (5) implies that $P+L+1$ consecutive samples are approximately linearly dependent, such that any one missing sample can be predicted as the weighted sum of the others [22]. This relationship is also shift invariant and takes the form of a convolution."

(f) Dokuchaev, Nikolai. "On recovering missing values for discrete time signals with finite sets of spectrum degeneracy." Digital Signal Processing 111 (2021)

"There is also a so-called Papoulis approach [Papoulis] allowing to reduce the sampling rate with additional measurements at sampling points; this approach was extended on band-limited processes defined on a multidimensional grid [Cheung & Marks].

(g) Bresler, Yoram, and Ping Feng. "Spectrum-blind minimum-rate sampling and reconstruction of 2-D multiband signals." Proceedings of 3rd IEEE International Conference on Image Processing, vol. 1, pp. 701-704. IEEE, 1996.

"Remarkably, the gap between these two rates has been closed by Cheung and Marks[2], and Cheung [3]. Using the Papoulis multichannel sampling theorem, they devised a union of cosets sampling scheme for 2-D signals asymptotically approaching the minimal sampling rate."

41. **Shannon Sampling Book.** R.J. Marks II, Introduction to Shannon Sampling and Interpolation Theory, (Springer-Verlag, 1991, ISBN 0-387-7391-5 and 3-540-97391-5).

(a) Listed as suggested reading' in IEEE Signal Processing Magazine, special issue on education, October 1992, p. 50.

(b) Seidner, Daniel, and Meir Feder. "Noise amplification of periodic nonuniform sampling." IEEE transactions on signal processing 48, no. 1 (2000): 275-277.

"We define the noise amplification factor A_ϵ as

$$A_\epsilon \frac{\overline{E\{|v^r(t)|^2\}}}{\sigma_v^2}$$

where $\overline{E\{|v^r(t)|^2\}}$ is the time average of $E\{|v^r(t)|^2\}$ and A_ϵ is equal to Marks' normalized interpolation noise variance (NINV) [2]"

(c) Seidner, Daniel, and Meir Feder. "Vector sampling expansion." Signal Processing, IEEE Transactions on 48, no. 5 (2000): 1401-1416

The VSE Interpolation Formula. In this section, we provide the explicit interpolation formula for the case where is an integer, and reconstruction is possible. This derivation resembles the technique used in [4] and [6]."

(d) Bissantz, Nicolai, Hajo Holzmann, and Axel Munk. "Testing parametric assumptions on band- or time-limited signals under noise." Information Theory, IEEE Transactions on 51, no. 11 (2005): 3796-3805.

"In this situation, we can use the estimator (4) with $\tau = 1/n$. Notice that except for the normalization, this estimator corresponds to a kernel regression estimator with kernel $K(x) = \sin(x)/(\pi x)$ and inverse bandwidth Ω. This kernel is sometimes

> referred to as the sinc-kernel. Note that, in contrast to the setting in Sec- tion III, the signal cannot be band-limited, except if $f = 0$ (see [24], [38])."

42. **Radiotherapy.** P.S. Cho and R.J. Marks II, "Hardware-sensitive optimization for intensity modulated radiotherapy," Phys. Med. Biol, 2000 (pp. 429-440)

    (a) Inokuchi, Haruo, Takashi Mizowaki, Yoshiki Norihisa, Kenji Takayama, Itaru Ikeda, Kiyonao Nakamura, Mitsuhiro Nakamura, and Masahiro Hiraoka. "Clinical effect of multileaf collimator width on the incidence of late rectal bleeding after high-dose intensity-modulated radiotherapy for localized prostate carcinoma." International journal of clinical oncology (2015): 1-6.

    > "The multileaf collimator (MLC) is an important component of IMRT delivery, because it facilitates delivery of irregularly shaped or intensity-modulated treatment fields. The development of treatment-planning software coupled with integration of MLC, a type of mechanized radiation beam-shaping device, has enabled the introduction of a more conformal intensity distribution [5, 6]."

43. **ZAM Distribution Properties.** S. Oh and R.J. Marks II, "Some properties of the generalized time frequency representation with cone shaped kernels," IEEE Transactions on Signal Processing, vol.40, No.7, pp.1735-1745, 1992.

    (a) Deze Zeng, Xuan Zeng, G. Lu, and B. Tang. "Automatic modulation classification of radar signals using the generalised time-frequency representation of Zhao, Atlas and Marks." IET Radar, Sonar & Navigation 5, no. 4 (2011): 507-516.

    > "We have studied mechanisms of the generalised timefrequency representation of Zhao, Atlas and Marks (ZAMGTFR) [14, 15]. The ZAM-GTFR simultaneously preserves the property of finite time support, strengthens spectral peaks and smoothes cross-terms. It is shown that ZAM-GTFR has advantage over most of the other TFRs under conditions of low SNR and some characteristic features are easy to be extracted from the 2-D time-frequency plane, such as the negative peaks with respect to the phase changes of PSK."

    (b) James R. Bulgrin, Bernard J. Rubal, Theodore E. Posch, and Joe M. Moody. "Comparison of binomial, ZAM and minimum cross-entropy time-frequency distributions of intracardiac heart sounds." Conference Record of the Twenty-Eighth Asilomar Conference on Signals, Systems and Computers, 1994. vol. 1, pp. 383-387. IEEE, 1994.

    > "The ZAM-TFD has been shown to be effective in tracking frequency-hopping signals and representing signals in the presence of white noise [14]."

    (c) Christos Skeberis, Zaharias D. Zaharis, Thomas D. Xenos, and Dimitrios Stratakis. "ZAM distribution analysis of radiowave ionospheric propagation interference measurements." International Conference on Telecommunications and Multimedia (TEMU), 2014 , pp. 155-161. IEEE, 2014.

    > "The cone-shaped kernel ... provides cross-term suppression and higher resolution in the derived spectrum. Compared to the standard signal processing methods, such as the Fourier transform or the fast Fourier transform, as well as more contemporary ones, such as the wavelet analysis and the Hilbert-Huang Transform (HHT), ZAMD exhibits significant advantages. First, it is highly applicable to nonlinear and non-stationary signal processing producing spectra with an emhpasis on frequency resolution. Although it lacks the filtering capabilities of HHT it provides strong cross-term suppression."
    >
    > "By processing the signals with the ZAMD method and producing the relevant spectra, an accentuation of the disturbances can be provided and attributed to seismic precursor phenomena."

    (d) A. Trochidis, L. Hadjileontiadis, and K. Zacharias. "Analysis of Vibroacoustic Modulations for Crack Detection: A Time-Frequency Approach Based on Zhao-Atlas-Marks Distribution." Shock and Vibration 2014 (2014).

"...the following expression can be obtained that defines the ZAM distribution:

$$\mathrm{ZAM}_X(t,f) = \int_{-\infty}^{\infty} \left[h(\tau) \int_{t-|\tau|/2}^{t+|\tau|/2} X\left(s+\frac{t}{2}\right) \times X^*\left(s-\frac{t}{2}\right)\right] \times e^{-j2\pi f\tau} d\tau.$$

ZAM distributionwas selected among RIDs due to its advantage of significantly reducing cross-terms between signal components, through its cone-shaped kernel function (4)."

(e) Hadjidimitriou, Stelios, and Leontios Hadjileontiadis. "EEG-based discrimination of music appraisal judgments using ZAM time-frequency distribution." Proceedings of the 12th International Conference on Music Perception and Cognition and the 8th Triennial Conference of the European Society for the Cognitive Sciences of Music, July 23-28, 2012, Thessaloniki, Greece. Cambouropoulos E, Tsougms C, Mavromatis P,Pastiadis K. (Editors)

Subsequent feature extraction was based on the Zhao-Atlas-Marks (ZAM) time-frequency distribution (TFD). The latter distribution belongs to the quadratic TF representations and adopts a cone-shaped kernel function in order to significantly reduce interferences between signal components (Zhao, Atlas, & Marks, 1990)."

(f) Z Xiaodong, T Bin, Y XIONG "Interception Algorithm of S-cubed Signal Model in Stealth Radar Equipment." Chinese Journal of Aeronautics 25, no. 3 (2012): 416-422.

"In this paper, a novel detection and parameter estimation approach for the reconnaissance S-cubed radar signal is presented. First, the generalized time-frequency representation of Zhao, Atlas, and Marks (ZAM-GTFR) and Hough transforms (HT) are applied to detecting the signal, and then the initial frequency and modulation slope of LFM are estimated from the ZAM-GTFR. On the basis of LFM information, the reconstructing signal is generated. Finally, the code rate of discrete phase code is extracted from the negative peaks of the ZAM-GTFR. Simulation results show that the proposed algorithm has higher estimation accuracy when the signal to noise ratio (SNR) is above 3 dB."

(g) Martinez-de-Juan, J. L., F. J. Saiz, J. L. Ponce, and M. Meseguer. "Retrieval of the small intestinal pressure from time-frequency analysis of the electroenterogram." Proceedings of the 20th Annual Engineering in Medicine and Biology Society, 1998. vol. 3, pp. 1505-1508. IEEE, 1998.

"The reduced interference distributions (RID) are obtained for removing cross-terms [9,10]. A large number of distributions are in the RID, but at the present study only CWD and ZAM have been calculated (see figure 2, traces (b) y (c)). Both are suitable for displaying and explaining the electroenterogram in time and in frequency. For example, slow wave is below 2 Hz, clarifying controversy on it [4,5,8]."

(h) Climente-Alarcon, Vicente, José A. Antonino-Daviu, Francisco Vedreno-Santos, and Rubén Puche-Panadero. "Vibration transient detection of broken rotor bars by PSH sidebands." Industry Applications, IEEE Transactions on 49, no. 6 (2013): 2576-2582.

"The ZhaoAtlasMarks distribution (ZAM) is proposed as the TFD tool. The reason is that it shows an adequate reduction of interferences called cross-terms between parallel evolving harmonics."

(i) Stelios K. Hadjidimitriou and Leontios J. Hadjileontiadis. "Toward an EEG-based recognition of music liking using time-frequency analysis." IEEE Transactions on Biomedical Engineering,59, no. 12 (2012): 3498-3510.

"ZAM distribution was selected among RIDs due to its advantage of significantly reducing cross terms between signal components, through its cone-shaped kernel function."

44. **Radar Synthesis.** Pedro Rodriguez-Garcia, Gordon Ledford, Charles Baylis & Robert J. Marks, "Real-Time Synthesis Approach for Simultaneous Radar and Spatially Secure Communications from a Common Phased Array," 2019 IEEE Radio and Wireless Symposium (RWS) [html]..

    (a) Riznyk, Oleg, Yulia Miyushkovych, Roman Martsyshyn, Natalya Kustra, and Bohdan Balych. "Non-Equidistant Location of Objects in Space." 2021 IEEE 16th International Conference on Computer Sciences and Information Technologies (CSIT), vol. 2, pp. 262-265. IEEE, 2021.

    > "Properties of a perfect partitioning of multidimensional space can be demonstrated in the form of a polynomial proportion of homogeneous components with cyclic structure. Such a proportion is formed on an ordered set of some integer vectors (such that all possible ordered bipartite proportions on such a partition exhaust the harmonic series of relations of parts of the whole with a step equal to the unit vector of this partition) [10]."

45. **Fuzzy control of backpropagation.** P. Arabshahi, J.J. Choi, R.J. Marks II and T.P. Caudell, "Fuzzy control of backpropagation," Proceedings of the First IEEE International Conference on Fuzzy Systems (FUZZ-IEEE '92), San Diego, pp. 967-972, March 1992.

    (a) Dragojlovic, Zoran, Deborah A. Kaminski, and Juntaek Ryoo. "Tuning of a fuzzy rule set for controlling convergence of a CFD solver in turbulent flow." International journal of heat and mass transfer 44, no. 20 (2001): 3811-3822.

    > "Algorithms for controlling algorithms have been recently introduced as a new discipline in soft computing [8] and [9].

    (b) Pham, D. T., and A. A. Fahmy. "Neuro-fuzzy modelling and control of robot manipulators for trajectory tracking." In 16th IFAC WORLD CONGRESS, pp. 4-8. 2005.

    > "In (Arabshahi et al., 1992), fuzzy control of the learning rate *eta* is suggested. The idea behind fuzzy control of the learning rate is the implementation of the heuristics used for faster convergence in terms of fuzzy IF-THEN rules."

    (c) Fahmy, Ashraf Ahmed, and AM Abdel Ghany. "Adaptive functional-based neuro-fuzzy PID incremental controller structure." Neural Computing and Applications (2015): 1-16.

    > "In [Arabshahi et. al., 1992], fuzzy control of the learning rate η is suggested. The central idea behind fuzzy control of the BP algorithm is the implementation of the heuristics used for faster convergence in terms of fuzzy 'If-Then' rules. In this study, the fuzzy PID-like feed-back controller along with a fixed learning rate provides the general non-linear policy of the controller and learning signal as well. It can be seen that the proposed neuro-fuzzy PID controller is designed in a way that makes the controller tuning achievable using any algorithm due to the contentious differentiable membership functions selected and the differentiable fuzzification and defuzzification methods applied in the network."

46. **Fuzzy Fusion & Annihilation.** B.G. Song, R.J. Marks II, S. Oh, P. Arabshahi, T.P. Caudell and J.J. Choi, "Adaptive membership function fusion and annihilation in fuzzy if-then rules," Proceedings of the Second IEEE International Conference on Fuzzy Systems (FUZZ-IEEE '93), San Francisco, March 1993, vol II. pp.961-967.

    (a) DERUGO, Piotr, Jarosław KACERKA, Marcin JASTRZĘBSKI, and Krzysztof SZABAT. "Sterowanie silnikiem liniowym z wykorzystaniem adaptacyjnej struktury sterowania z regulatorem rozmytym typu PID." PRZEGLĄD ELEKTROTECHNICZNY, ISSN 0033-2097, R. 91 NR July 2015, pp.93-96

    > "Jedną z możliwości ograniczania kosztów implementacji jest zmniejszenie bazy reguł przez zastosowanie różnych metod redukcji jej rozmiaru [11], [12]. Klasycznie przeprowadza sice to przez łczenie poszczególnych obszarów. Prowadzi to jednakże do pogorszenia

> jakości regulacji. Innym rozwiazaniem, rozpatrywanym w niniejszej pracy, jest zastosowanie warstwy tranzycji Petriego. Jej implementacja powoduje znaczace obniżenie liczby operacji matematycznych koniecznych do wyznaczenia wartości wyjściowej, a tym samym skutkuje skróceniem czasu wykonania sie pojedynczej iteracji algorytmu (nawet o 30) szczególnie dla przypadków regulatora rozmytego o dużej liczbie reguł."

47. **Intelligence: Computational Versus Artificial.** R.J. Marks, II, "Intelligence: Computational Versus Artificial." IEEE Transactions on Neural Networks 4: 737-739 (1993).

    (a) Cinar, Ali. "Control of nonlinear and hybrid process systems, Panagiotis D. Christofides and Nael H. El-Farra, Springer, New York, NY, 2005." International Journal of Robust and Nonlinear Control 17, no. 4 (2007): 349-351.

    > "However, the most decisive step in formulating the term Computational Intelligence was made during the 1994 IEEE World Congress on Computational Intelligence (WCCI) [2]. At that time, R. J. Marks, in his Editorial Note to the IEEE Transactions on Neural Networks [3], pointed out that, although seeking similar goals, computational intelligence has emerged as a sovereign field distinct from artificial intelligence. Since that time the WCCI has become a regular event."

    (b) Slany, Wolfgang. "Fuzzy scheduling. Christian Doppler Laboratory for Expert Systems," Dissertation, 1994.

    > "In both cases, artificial intelligence as well as fuzzy logic, one tries in some sense to imitate life in its problem-solving capability. The ways how to achieve this goal are different in many respects, but there are also many common points where the two fields overlap: Robert Marks [268] counted 4811 entries on fuzzy logic in the INSPEC data base from 1989 to 1993, containing citations from over 4000 selected journals, books, conference proceedings and technical reports - "22 of them [were] cross categorized in the expert system category, and 12 with neural networks." Based on various 'bean countings', Marks concludes that the overlapping areas cover, depending on the way to count, from 14 to 33 ."

    (c) *Introduction to Computational Intelligence.* John Wiley, (2013).

    > " Marks (1993) clearly outlined the distinction between CI and AI, although both CI and AI seek similar goals."

    (d) A. Joshi, N. Ramakrishman, E.N. Houstis, J.R. Rice, " On Neurobiological, Neuro-Fuzzy, Machine Learning and Statistical Pattern Recognition Techniques," Neural Networks, IEEE Transactions on, v.8 , #1, 1997, pp.18 - 31

    > "WE begin this paper, to paraphrase the popular song, at the very beginning in consideration of the interdisciplinary audience that is the target of this issue. Neural N etvvorks (NN) represent a computational [1] approach to intelligence, as contrasted with the traditional, more symbolic approaches."

    (e) Zadeh, L. A., D. Tufis, F. G. Filip, and I. Dzitac. "Soft Computing for Intelligent Systems." in *From Natural Language to Soft Computing: New Paradigms in Artificial Intelligence.* Lotfi Zadeh, *et al.*, Editors, Editing House of Romanian Academy (May, 2008)

    > "In [14], one of the pioneering publications on computational intelligence, Marks defined CI by listing the building blocks being neural nets, genetic algorithms, fuzzy systems, evolutionary programming, and artificial life. Note that in more recent terminology genetic algorithms and evolutionary programming are called by the common name evolutionary computing."

    (f) Adham Atyabi and Samia Nefti-Meziani. "Applications of computational intelligence to robotics and autonomous systems." In HANDBOOK ON COMPUTATIONAL INTELLIGENCE: Volume 2: Evolutionary Computation, Hybrid Systems, and Applications, pp. 821-863. 2016.

> "There are several opinions regarding to the relationship between CI and AI and in here three of these opinions raised by some of the pioneers in the field are presented in order to better reflect the existing viewpoints. Marks considered CI as an alternative to AI: 'Although seeking similar goals, CI has emerged as a sovereign field whose research community is virtually distinct from AI'."

(g) Bezdek, James C. "(Computational) Intelligence: What's in a Name?." IEEE Systems, Man, and Cybernetics Magazine 2, no. 2 (2016): 4-14.

> "Here is the e-mail that I sent to Roy Nutter, Russ Eberhart, Pat Simpson, Bob Marks, and Toshio Fukuda on 9 April 1992 that broached the term CI with the IEEE Neural Networks Council for the first time: Thu Apr 9 12: 33: 11 1992
> To: rsn@ece.wvu.wvnet.edu, rce@rti.rti.org, xm8@sdcc12. UCSD.EDU, d43131a@nucc. nagoya-u.ac.jp, marks@b lake.u.washington.edu,
> From: jbezdek@trivia. coginst.uwf.edu
> Subject: NEW name of council
> Status: R
> I suggest the COMPUTATIONAL INTELLIGENCE COUNCIL, later to become the COMPUTATIONAL INTELLIGENCE SOCIETY"

48. **Fuzzy Control of Genetic Algorithms.** R.J. Streifel, R.J. Marks II, R. Reed. J.J. Choi and M. Healy "Dynamic Fuzzy Control of Genetic Algorithm Parameter Coding," IEEE Transactions on Systems, Man and Cybernetics, Part B: Cybernetics (Vol. 29, No. 3, June 1999, pp.426-32).

(a) Yao, L. and Huang, J.K., 2018. On-Line Learning of Write Strategy for Ultra-Speed CD-RW Optical Recorder. Sensors, 18(7), p.2070.

> "This convergence difficulty at the final stage of GA-based learning process also exists in other applications. A scheme called dynamic parameter (DPE) extension was proposed in [22] that adaptively controls the mapping from fixed-length binary genes to real values. DPE can further improve GA's convergence by tracking the convergence of a population and using it to direct subsequent searches."

49. **r-shrink Wireless Communication.** A.K. Das, R.J. Marks II, M.A. El-Sharkawi, Payman Arabshahi and Andrew Gray, "r -shrink: A Heuristic for Improving Minimum Power Broadcast Trees in Wireless Networks," IEEE Global Telecommunications Conference 2003. GLOBECOM '03. ,Volume: 1, 1-5 Dec. 2003, pp.523 - 527.

(a) Bhukya, Wilson Naik, and Alok Singh. "An effective heuristic for construction of all-to-all minimum power broadcast trees in wireless networks." In Advances in Computing, Communications and Informatics (ICACCI, 2014 International Conference on, pp. 74-79. IEEE, 2014.

> "Das et al. [4] have proposed the r-shrink procedure, which is a simple heuristic that performs local search to improve the broadcast trees in wireless networks."

50. **Stochastic Resonance.** R. J. Marks II, Benjamin B. Thompson, Mohamed A. El-Sharkawi, Warren L.J. Fox and Robert T. Miyamoto "Stochastic Resonance of a Threshold Detector: Image Visualization and Explanantion," IEEE International Symposium on Circuits and Systems, Scottsdale, Arizona, May 26-29, 2002, pp. IV 521 - IV 523.

(a) Yangyang Kou, Xuefeng Liu, "HSI Shadow Enhancement Based on D-DSR and Classification with Parameter Optimization," IAENG International Journal of Applied Mathematics, 53:3, IJAM-53-3-31, 2023.

> "Marks et al. [18] found that the appropriate intensity of noise added to the image could make it more consistent with human visual features"

51. **Audencoder Implicit Learning.** Thompson, Benjamin Berry, Robert J. Marks, Jai J. Choi, Mohamed A. El-Sharkawi, Ming-Yuh Huang, and Carl Bunje. "Implicit learning in autoencoder novelty assessment." In Proceedings of the 2002 International Joint Conference on Neural Networks. IJCNN'02 (Cat. No. 02CH37290), vol. 3, pp. 2878-2883. IEEE, 2002.

(a) Moon, Chun Yong, Jiwon Kim, and Mark Hickman. "A Machine Learning Approach for Detecting Long-Term Changes in the Weekly Trip Patterns of Public Transport Passengers." Conference on Advanced Systems in Public Transport and Transit Data 2018 23-25 July 2018, Brisbane Convention and Exhibition Centre, Brisbane, Australia

> "The key function of Module 2-1 in our model is to extract key features and patterns from various passenger movements. To implement this function, we apply an unsupervised learning method called 'Autoencoder'. An autoencoder is a deep neural network model that performs well in extracting features from data in an unsupervised manner. Through its hidden layer called the 'bottleneck', which has fewer neurons than the input or output layers [11 - Thompson et al.]"

(b) Miranda, Vladimiro, Adriana R. Garcez Castro, and Shigeaki Lima. "Diagnosing faults in power transformers with autoassociative neural networks and mean shift." IEEE Transactions on Power Delivery 27, no. 3 (2012): 1350-1357.

> "... the property that a point over the data manifold will be correctly projected back and forth by a trained autoencoder; and a point not lying on the data manifold will not be correctly reprojected back, producing a large input-output error ϵ, has been used in pattern recognition and classification, as well as in novelty detection [17-Thompson et al.]."

(c) Karpov, Pavel V., Dmitry I. Osolodkin, Igor I. Baskin, Vladimir A. Palyulin, and Nikolay S. Zefirov. "One-class classification as a novel method of ligand-based virtual screening: The case of glycogen synthase kinase 3β inhibitors." Bioorganic & medicinal chemistry letters 21, no. 22 (2011): 6728-6731.

> "The reconstruction methods of the OCC approach include the auto-encoder neural networks, self-organizing maps (SOM) and principal component analysis (PCA). Auto-encoder (replicator, bottleneck or sand-glass) networks [Thompson et al.] are feed forward neural networks which have at least one hidden layer with the number of neurons many times smaller than in the other layers (Fig. 1). This layer Figure 1. Typical scheme of an auto-encoder neural network. acting as a compressing element attempts to reconstruct the input data to the output layer. The number of neurons in this layer can be roughly correlated with the number of features that are responsible for the biological activity."

52. **Integer Programming.** A.K. Das, R.J. Marks II, M.A. El-Sharkawi, Payman Arabshahi and Andrew Gray, "Minimum Power Broadcast Trees for Wireless Networks: Integer Programming Formulations," Proceedings of IEEE INFOCOM (The Conference of Computer Communications), March 30-April 3, 2003 , San Francisco , CA .

(a) Yakine, Fadoua, and Abdellah Idrissi. "Energy-aware topology control and QoS routing in ad-hoc networks." Procedia Computer Science 56 (2015): 309-316.

> "Our paper provides a technique for Topology Control based on an optimization formulation, where the objective is to minimize the overall energy consumed by all the nodes in the wireless ad hoc network with the respect of quality of service requirements. Inspired by the formulations related to the minimum power broadcast trees for Wireless Networks [by Das et al.][4], we adapt them to provide QoS connected topologies."

(b) Herrera, F., & Lozano, M. (2009). Fuzzy evolutionary algorithms and genetic fuzzy systems: A positive collaboration between evolutionary algorithms and fuzzy systems. In Computational Intelligence (pp. 83-130). Springer, Berlin, Heidelberg.

> Finally, in [174], an algorithm for adaptively controlling GA parameter coding using fuzzy rules is presented, which was called fuzzy GAP. This uses an intermediate

mapping between the genetic strings and the search space parameters. In particular, each search parameter is specified by the following equation:

$$p_s = \left(\frac{p_g}{2^l - 1} \right) \cdot R + O,$$

where p_s is the search parameter, p_g is the genetic parameter, l is the number of bits in the genetic parameter, R is a specified parameter range, and O is a specified offset. By controlling the offset and range, more accurate solutions are obtained using the same number of binary bits.
"Fuzzy GAP performs a standard genetic search until the population of strings has converged. Convergence was measured by evaluating the average number of bits which differ between all the genetic strings. Each string is compared to every other string and the number of different bits is counted. If the average number of differing bits per string pair is less than a threshold, the GA has converged. After the genetic strings have converged, a new range and offset for the search parameters are determined by means of an FLC with an input that measures the distance between the centre of the current range and the best solution found in the search. After applying the FLC, the GA is executed again with the new values for the range and offset. The performance of fuzzy GAP on a hydraulic brake emulator parameter identification problem was investigated. It was shown to be more reliable than other dynamic coding algorithms (such as the dynamic parameter encoding algorithm), providing more accurate solutions in fewer generations."

53. **Prostate Brachytherapy.** Lam, S.T., Cho, P.S., Marks II, R.J. and Narayanan, S., 2005. Detection and correction of patient movement in prostate brachytherapy seed reconstruction. Physics in Medicine & Biology, 50(9), p.2071.

    (a) Kumar, Vinod, Deepti Ahuja, Nishkarsh Gupta, Sachidanand J. Bharati, Rakesh Garg, Seema Mishra, K. P. Haresh, Subhash Gupta, and Sushma Bhatnagar. "Anesthesia concerns in prostate brachytherapy: An institutional experience." Indian Journal of Cancer, March 9, 2020.

        "... saddle block may also cause patient discomfort during positioning and hinder the procedure.[16] The block does not provide the option of extending the dermatomal level if required and providing postoperative analgesia."

54. **Vulnerability Indices.** Mingoo Kim, M. El-Sharkawi, M., R.J. Marks II, "Vulnerability Indices of Power Systems, Intelligent Systems Application to Power Systems," 2005. Proceedings of the 13th International Conference on Nov. 6-10, 2005, pp. 335 - 341.

    (a) Haidar, Ahmed, Azah Mohamed, Majid Al-Dabbagh, and Aini Hussain. 11Vulnerability assessment and control of large scale interconnected power systems using neural networks and neuro-fuzzy techniques." In Power Engineering Conference, 2008. AUPEC'08. Australasian Universities, pp. 1-6. IEEE, 2008.

        "The growth of power systems and the increase in their complexity requires careful assessment of their vulnerability under different conditions. The purpose of vulnerability assessment is to determine the ability of a power system to continue providing service under any unforeseen catastrophic contingency such as equipment failures, natural calamity, failures in protection operation, faults, human errors, heavy loading conditions and intrusion by external agents [1]."

    (b) Haidar, Ahmed MA, Azah Mohamed, Aini Hussain, and Norazila Jaalam. "Artificial Intelligence application to Malaysian electrical powersystem." Expert Systems with Applications 37, no. 7 (2010): 5023-5031.

        "Security of electricity supply networks has always been a key point in the development of the power industry. Several cascading failures and large area blackouts

> occurring in the USA, some European and Asian countries highlighted the need for vulnerability assessment of power systems. Nowadays, power systems have evolved through continuing growth in interconnection, use of new technologies and controls. Due to the increased operations which may cause power system to be in highly stressed conditions, the need for vulnerability assessment of power systems is important so as to determine its ability to continue proving service in case of any unforeseen catastrophic contingency such as power system component failures, communication system failures, human operator error and natural calamity (Kim, El-Sharkawi, & Marks, 2005)."

(c) Haidar, Ahmed, Zulkeflee Khalidin, and Ibrahim Abdulrab Ahmed. "Probabilistic neural network for vulnerability prediction on a practical power system." In Electronics and Information Engineering (ICEIE), 2010 International Conference On, vol. 1, pp. V1-146. IEEE, 2010.

> "The rapid development of economy and the deregulation of power industry increase the demand of power supply and grow the complexity of power grid. Since September 11, 2001 the security of major national infrastructures has become a critical concern to government and industry of any country. Power system is responsible for the continuous power supply but when some unpredicted disasters happen, especially earthquake, flood or terrorism attacks, operators have to guarantee the safety of the main part of the system and the power supply of some important infrastructures, such as transportation, communication etc. So vulnerability prediction is made by assessing system conditions for credible contingencies, and how they are affected by the changes in a critical system parameter [1]."

(d) Haidar, Ahmed M., Azah Mohamed, and Aini Hussain. "New method vulnerability assessment of power system." Journal of Applied Sciences 7 (6): pp.841-847 (2007).

> "Vulnerability assessment method based on anticipated loss of load: The Anticipated Loss of Load (ALL) index is the ammmt of loads shed due to a contingency in order to avoid a cascading outage. Since the purpose of vulnerability assessment is to avoid a catastrophic power outage, the vulnerability index should reflect the loads that may be lost at such times (Kim et al.. 2005)."

> "The system frequency is governed by this equilibrium and consequently any rmbalance in loads can result in frequency excursions that may lead to loss of synchronism. Excess of load results in a drop of system frequency and load shedding has to be employed in order to rapidly balance the demand and generation. To avoid system rmbalance, load shedding has to be implemented in which the amormt of load shed is considered as a vulnerability index (Kim et al 2005)."

55. **Time Scale Nonregressivity.** Robert J. Marks II, Ian A. Gravagne, John M. Davis, and Jeffrey J. DaCunha. "Nonregressivity in switched linear circuits and mechanical systems." Mathematical and Computer Modelling 43, no. 11 (2006): 1383-1392 R.J. Marks II, Ian Gravagne, John M. Davis, Jeffrey J. DaCunha "Nonregressivity in Switched Linear Circuits and Mechanical Systems," Mathematical and Computer Modelling, vol. 43, pp.1383-1392, (2006).

(a) Bartosiewicz, Zbigniew, Ewa Piotrowska, and Magorzata Wyrwas. "Stability, stabilization and observers of linear control systems on time scales." In Decision and Control, 2007 46th IEEE Conference on, pp. 2803-2808. IEEE, 2007.

> "[The] Baylor Time Scales Research Group is working on both theoretical and practical aspects of time-scales models. In particular, they use time-scales language for description of hybrid systems (see e.g. [6], [7])"

(b) Choi, Sung Kyu, Yoon Hoe Goo, and Namjip Koo. "-Stability of Dynamic Equations on Time Scales with Nonregressivity." In Abstract and Applied Analysis, vol. 2008. Hindawi Publishing Corporation, 2008.

"nonregressivity is always a possibility in discrete dynamical systems (e.g., difference equations), where the underlying domain consists of a mixture of discrete and continuous parts. In fact, if there is even one point in T with nonzero graininess, then nonregressivity is possible [8]."
"System (3.2) is said to be regressive if

$$\det[I + \mu A(t)] \neq 0 \qquad (3.3)$$

for all $A \in T^k$ where I denotes the $n \times n$ identity matrix. It turns out that condition (3,3) is equivalent to having all of the eigenvalues of $Q(t)$ regressive in the sense of (1.2) [8]"

(c) Ahrendt, Chris, Claudia De Valk, Matthew Lehnen, and Caleb Nunn. "Properties of Solutions to a Discrete Analog of the Bernoulli Equation in the Case of Nonregressivity Using Time Scale Calculus." International Journal of Difference Equations 15, no. 1 (2020): 31-58.

"The dynamics that result in the nonregressivecase, as we study here, are rarely discussed. However, as noted above, an applicationdealing with switched linear circuits that focuses specifically on the nonregressive case is given [by Marks et al.]"

56. **Protector, Refugee and Aggressor Swarms.** I.A. Gravagne and R.J. Marks II, "Emergent Behaviors of Protector, Refugee and Aggressor Swarm," IEEE Transactions on Systems, Man and Cybernetics, Part B: Cybernetics, Volume 37, Issue 2, April 2007, pp. 471 - 476.

(a) Purta, Rachael, Saurabh Nagrecha, and Gregory Madey. "Multi-hop Communications in a Swarm of UAVs." In Proceedings of the Agent-Directed Simulation Symposium, p. 5. Society for Computer Simulation International, 2013.

"A description and evaluation of some of this model's properties can be found in [5], which analyzes the proper ties of clustering, drifting, and explosion that emerge from the model."

(b) Purta, Rachael, Mikolaj Dobski, Artur Jaworski, and G. Madey. "A testbed for investigating the UAV swarm command and control problem using DDDAS." Procedia Computer Science 18 (2013): 2018-2027.

"The swarm model we have chosen to use is based on the Icosystem swarm game, partially described on their website, http://www.icosystem.com/labsdemos/the-game/, and investigated for predictability in [24]."

57. **Active Information.** William A. Dembski and Robert J. Marks II, "Conservation of Information in Search: Measuring the Cost of Success," IEEE Transactions on Systems, Man and Cybernetics A, Systems and Humans, vol.39, #5, September 2009, pp.1051-1061

(a) Bartlett, Jonathan. "Generalized Information." Communications of the Blyth Institute 1, no. 2 (2019): 13-22.

"Active Information is a simple and straightforward way to measure the amount of information that a model models (Dembski and Marks II, 2009)."

(b) Garca-Martnez, Carlos, Francisco J. Rodriguez, and Manuel Lozano. "Arbitrary function optimisation with metaheuristics." Soft Computing 16, no. 12 (2012): 2115-2133.

"In fact, most general-purpose solvers usually make the previous assumption, i.e., they assume that similar solutions (similar codings in practise, at least under a direct encoding (Garca-Martnez et al. 2011a,) are often expected to lead to similar objective values. In particular, in Dembski and Marks II (2009) it is pointed out that '...problem-specific information is almost always embedded in search algorithms. Yet, because this information can be so familiar, we can fail to notice its presence'. As some typical examples, we may annotate that knowledge may come from the encoding of solutions or the preference for exploring the neighbourhood of previous good solutions."

> "General-purpose search algorithms really apply common problem knowledge This is a fact that other authors had pointed out previously (Dembski and Marks II 2009). However, it was still unproven if that problem knowledge was effective on large sets of common problem classes. According to our experience, there are two sources of knowledge, not to be underestimated, that general-purpose algorithms may effectively apply (at least on the set of interesting binary problems):"

(c) Mishra, Mohit, Utkarsh Chaturvedi, and K. K. Shukla. "Heuristic algorithm based on molecules optimizing their geometry in a crystal to solve the problem of integer factorization." Soft Computing (2015): 1-9.

> "To quantify the quality of an objective function, we analyze our objective functions based on conservation of information in search theory (Dembski and Marks 2009). "

(d) Meyer, Stephen C. *Signature in the Cell.* The Blackwell Companion to Science and Christianity (2012): 270-282.

> "As Robert Marks has shown, scientists can now even measure the effect that intelligence produce in these experiments. Recall that Marks himself quantified the amount of active information that a computer program imparts into a system with each iteration as the result of the knowledge provided to it *by the programmer*. Clearly, ribozyme engineering and prebiotic simulations were also making use of informational input (Marks's "active information") as the experimenters made choices about which molecules to preserve and discard based upon their own knowledge of the desired outcomes."

(e) Qu, Xinghua, Ran Zhang, Bo Liu, and Huifeng Li. "An improved TLBO based memetic algorithm for aerodynamic shape optimization." Engineering Applications of Artificial Intelligence 57 (2017): 1-15.

> "4.2. Conservation of information inspired operator
> "Conservation of information (COI) inspired theorem (Dembski and Marks, 2009) indicates that any search algorithm performs, on average, as well as random search without replacement unless it takes advantage of problem-specific information about the search target or the search-space structure. In other words, according to COI theorem, if we could take good advantage of the problem-specific information accumulated during the search, the augmented optimization algorithm could perform superior to the random search or at least the same as the random search on the whole domain of optimization problems. From this aspect, we could consider COI theorem as a guidance to design optimization algorithms not a concrete formula. To well utilize COI theorem, we may embody it into specific operators or formula. Driven by this COI belief, we enhance the original learning phase by introducing COI operator (conservation of information inspired operator), noticing that if both the current and historical information could be well utilized, an efficient learning could be achieved. In particular, in our COI, the current information utilized mainly refers to the interactions among the learners in current generation. The historical information utilized covers not only the personal best experience, but also the whole class's best experience. To enhance the exploitation ability, conservation of information inspired operators are incorporated to enrich the students' learning behaviors by augmenting the simple differential variation between target individual and randomly selected one with more advanced information."

(f) DazPachn, Daniel Andrs, Juan Pablo Senz, and J. Sunil Rao. "Hypothesis testing with active information." Statistics & Probability Letters 161 (2020) p.108742.

> "Wolpert and Macready attributed it to the incorporation of "problem-specific knowledge into the behavior of the [optimization or search] algorithm." Active information (actinfo) was thus introduced by Dembski and Marks in order to measure this amount of knowledge infused by the programmer to reach a given target (Dembski and Marks,

2009a,b). Actinfo is obtained by measuring how much information is infused in an algorithm in order to reach a given target and then subtracting from it the information of reaching that same target by a uniformly-at-random search."

(g) Lazzari, Florencia, Gerard Mor, Jordi Cipriano, Francesc Solsona, Daniel Chemisana, and Daniela Guericke. "Optimizing planning and operation of renewable energy communities with genetic algorithms." Applied Energy 338 (2023): 120906.

According to the Law of Conservation of Information [20], it is pointless to attempt to design a GA that is better than random search, unless you can incorporate problem-specific information in the algorithm. This translates in the fact that, if the GA is not correctly implemented, it will end taking large computational time or premature convergence to a local minimum (this applies especially in problems with large cardinality).

58. **Bernoulli's Insufficient Reason.** William A. Dembski and R.J. Marks II "Bernoulli's Principle of Insufficient Reason and Conservation of Information in Computer Search," Proceedings of the 2009 IEEE International Conference on Systems, Man, and Cybernetics. San Antonio, TX, USA - October 2009, pp. 2647-2652.

(a) Olatujoye, Oluwaseyi Ayorinde. "Uncertainty in power system planning." PhD Dissertation, Iowa State (2015).

"The Laplace criterion assumes that if the probabilities of different scenarios are not known, they should be assumed to be equal. This idea makes the Laplace approach similar to decision making under risk. The Laplace criterion applies the principle of insufficient reason by Jakob Bernoulli [4], which implies that if we are ignorant about the likelihood of events occurring in the future we have no reason to assume that one has a higher chance of occurring than the other. One who makes decision based on this criterion is considered a realist."

59. **Handbook of Fourier Analysis.** R.J. Marks II, *Handbook of Fourier Analysis and Its Applications*, Oxford University Press, (2009).

(a) Rowe, Barnaby, Christopher Hirata, and Jason Rhodes. "Optimal linear image combination." The Astrophysical Journal 741, no. 1 (2011): 46.

"In the analysis of astronomical images, ensuring the adequate spatial sampling of data by pixels of finite size and spacing is a key concern. Ideally, images should be sampled at or above the NyquistShannon sampling rate for the band limit set by the optical response of the system (see, e.g., Marks 2009), so that the full continuous image can be determined from the discrete pixel samples."

"The MTF is defined as the Fourier transform of the telescope PSF. The function $G_i(u)$ therefore represents the MTF conjugate $G_i(r)$, and themagnitude of this complex object can be seen in Figure 2 for the two corresponding PSFs of Figure 1. As can be seen from Figure 2, the system is bandlimited at the fundamental frequency corresponding to .... Therefore, a sampling interval of $\lambda/2D = 0.079333$ arcsec in the output image H_α is the requirement of critical sampling according to the sampling theorem (Marks 2009)."

(b) Holighaus, Nicki, Monika Dorfler, Gino Angelo Velasco, and Thomas Grill. "A framework for invertible, real-time constant-Q transforms." Audio, Speech, and Language Processing, IEEE Transactions on 21, no. 4 (2013): 775-785.

"In the present contribution, we are interested in inversion in the sense of perfect reconstruction; to this end, we investigate a new approach to constant-Q signal processing. The presented framework has the following core properties:
1 Relying on concepts from frame theory, [Marks 15], we suggest the implementation of a constant-Q transform using the nonstationary Gabor transform (NSGT),

> which guarantees perfect invertibility. This perfectly invertible constant-Q transform is subsequently called constant-Q nonstationary Gabor transform (CQ-NSGT).
> 2 We introduce a preprocessing step by slicing the signal to pieces of (usually uniform) finite length. Together with FFT-based methods, this allows for bounded delay and results in linear processing time. Thus, our algorithm lends itself to real-time processing and the resulting transform is referred to as sliced constant-Q transform (sliCQ).

(c) Zuntz, Joe, Tomasz Kacprzak, Lisa Voigt, Michael Hirsch, Barnaby Rowe, and Sarah Bridle. "im3shape: a maximum likelihood galaxy shear measurement code for cosmic gravitational lensing." Monthly Notices of the Royal Astronomical Society 434, no. 2 (2013): 1604-1618.

> "However, representing the convolution of telescope PSFs with analytic, continuous, non-band-limited functions such as the Sérsic profile requires careful numerical approximation, as can (if the PSF is also not band limited) the subsequent rendering of convolved profiles into pixellated images (see e.g. Marks 2009). Decisions must be made about how and where to make approximations in the representation of these profiles, balancing precision against computational cost."

(d) Rowe, Barnaby, David Bacon, Richard Massey, Catherine Heymans, Boris Huler, Andy Taylor, Jason Rhodes, and Yannick Mellier. "Flexion measurement in simulations of Hubble Space Telescope data." Monthly Notices of the Royal Astronomical Society 435, no. 1 (2013): 822-844.

> "Since shapelet models are no longer being used to describe galaxies after shear or flexion is applied, the convolution must be performed numerically using a pixelized image of this PSF. As a shapelet model PSF such as that in Fig. 3 is not formally band-limited (see e.g. Marks 2009), this therefore requires another empirical investigation into the effects of finite sampling."

(e) Gö, Andreas, Helmut Seibert, and Dietmar Hildenbrand. "Registration of Multichannel Images using Geometric Algebra." In Workshop Proceedings: Computer Graphics, Computer Vision and Mathematics, pp. 07-10. 2010.

> "**3.2 Fourier-Mellin Transform**
> "In this Section we briefly introduce the application of the Fourier-Mellin Transform for registration of grayscaled images. All theorems and proofs according to the Fourier-Transform can be found in [10]. As in [10], we use the following definition of the Fourier-Transform of a function $f : \mathbb{R}^2 \to \mathbb{C}^2$"

(f) Seshadri, Suresh, Charles Shapiro, Timothy Goodsall, Jason Fucik, C. Hirata, J. D. Rhodes, B. T. P. Rowe, and R. M. Smith. "Initial results from a laboratory emulation of weak gravitational lensing measurements." Publications of the Astronomical Society of the Pacific 125, no. 931 (2013): 1065-1086.

> "These distortions arise due to the fact that both Swarp and Drizzle combine images via interpolation (with optional additional smoothing) across the input data: if these data are undersampled, the interpolated output will necessarily contain errors due to aliasing (Marks 2009). "

(g) Wu, Li-Chung, Chia Chuen Kao, Tai-Wen Hsu, Yi-Fung Wang, and Jong-Hao Wang. "Spatial and temporal features of regional variations in mean sea level around Taiwan." Open Journal of Marine Science 2, no. 02 (2012): 58.

> "For the low frequency information from the wavelet scalogram, the time resolu- tion is poor but frequency resolution is high. When it is shifted toward high frequencies, the time resolution in- creases but the frequency resolution decreases. This is very similar to the Heisenberg Uncertainty Principle [16]"

(h) Gallardo, Daniele, Riccardo Bevilacqua, and Onkar Sahni. "Data-based hybrid reduced order modeling for vortex-induced nonlinear fluidstructure interaction at low Reynolds numbers." Journal of Fluids and Structures 44 (2014): 115-128.

"For the frequency model,an understanding of the time evolution of the dominant frequency in the force signal is needed. Identifying the dominant frequency at anytime point requires data from a local time window,i.e.,some steps before and after the time of interest,containing $S+1$ samples.In this time window, the energy spectral density (ESD) is obtained through fast Fourier transformation (Marks, 2009) and performed with the purpose of determining the dominant force frequency ...."

(i) Gallardo, Daniele, Riccardo Bevilacqua, and Onkar Sahni. "Data-based hybrid reduced order modeling for vortex-induced nonlinear fluidstructure interaction at low Reynolds numbers." Journal of Fluids and Structures 44 (2014): 115-128.

"For minimizing the truncation error the kernel $s(t)$ must decrease rapidly when $t \to \infty$. The sinc function does not belong even to L_1. Therefore using the kernels in form $s(t) = \theta(t)\,\mathrm{sinc}\,t$ where $\theta(t)$ is some window function (see [11]), is well-known."

(j) Le Zuo, Jin Pan, and Boyuan Ma. "Fast DOA estimation in the spectral domain and its applications." Progress In Electromagnetics Research 66 (2018): 73-85.

"Since $\psi_i^*(n)$ is a complete set of orthonormal basis functions, Parseval's theorem for a complete set of orthonormal basis functions relates the signal's energy to its expansion coefficients [36 (Marks)], i.e.,

$$\sum_{n=1}^{K} |\Delta\Psi(n)|^2 = \frac{1}{K}\sum_{i=1}^{K} \varepsilon_i^2$$

Therefore, the energy of the phase noises is evenly projected onto each spectrum..."

60. **Transmitters for spectral conformity.** Baylis, Charles, Lingfeng Wang, Matthew Moldovan, J. Martin, H. Miller, Lawrence Cohen, and Jean De Graaf. "Designing transmitters for spectral conformity: power amplifier design issues and strategies." IET radar, sonar & navigation 5, no. 6 (2011): 681-685.

(a) Griffiths, Hugh, Shannon Blunt, Lawrence Cohen, and Laurent Savy. "Challenge problems in spectrum engineering and waveform diversity." In Radar Conference (RADAR), 2013 IEEE, pp. 1-5. IEEE, 2013.

E. Co-Design of Transmitter and Waveforms
"As follow-on to addressing transmitter effects there arises the possibility to jointly design the transmitter hardware and associated waveforms [13]. Such a strategy is a departure from traditional design methodology in which either the transmit hardware is fixed with the waveforms modified to suit or a class of waveforms is defined and the system specifications determined to meet the requirements."

61. **Search for the Search.** William A. Dembski. and Robert J. Marks II, "The Search for a Search: Measuring the Information Cost of Higher Level Search," Journal of Advanced Computational Intelligence and Intelligent Informatics, Vol.14, No.5, 2010, pp. 475-486.

(a) Garca-Martnez, Carlos, Francisco J. Rodriguez, and Manuel Lozano. "Arbitrary function optimisation with metaheuristics." Soft Computing 16, no. 12 (2012): 2115-2133.Garca-Martnez, Carlos, Francisco J. Rodriguez, and Manuel Lozano. "Arbitrary function optimisation with metaheuristics." Soft Computing 16, no. 12 (2012): 2115-2133.

"Interestingly, some publications argue the combination as a medium for escaping from the NFL's claws (and in some cases, the combination is not even analysed with regard to the sole application of one of the approaches). Recently, Dembski and Marks II (2010) showed that NFL theorems apply to the concept of higher-level searchers, and thus, to combinations of algorithms as well. As for the multiobjective case, designing new algorithms as the combination of previous ones that perform more effectively and efficiently is still a possibility when regarding just the set of problems with practical interest."

(b) Thomas, George. "Biogeography-Based Optimization of a Variable Camshaft Timing System." PhD Dissertation, Cleveland State University, 2014.

> "The Vertical No Free Lunch Theorem given [by Dembski & Marks] in [35] states that the difficulty of a search increases exponentially as more and more nested levels of search are added, unless some information about the higher level search spaces is known. This means that a search for optimal EA parameters is only useful if some information is already known about the search space for these parameters. As EA researchers, we know what ranges of EA parameters work well for problems in general, and so we can incorporate this information into a meta search that may yield a better EA for a given problem."

(c) Sheldon, Robert B. "The cometary biosphere and the origin of life." In SPIE Optical Engineering+ Applications, pp. 815213-815213. International Society for Optics and Photonics, 2011.

> "Even worse, the space of search algorithms is even larger than the space of genome solutions, so it is not even possible to evolve a better search algorithm. Consider a 3×3 checkerboard with one checker somewhere on it. We can classify efficient search algorithms as those that search every cell once. There are $9! = 362{,}000$ possible efficient search algorithms, whereas there are 9 possible configurations for the information. The search for a search is far worse than the search for just the information.[22] So this calculation of 10^{120} is a firm upper limit on the capabilities of uninformed searches in our universe. Random chance just does not have the probabilistic resources to find a living sequence."

(d) Ergezer, M., and D. Simon. "Probabilistic Properties of Fitness-based Quasi-reflection in Evolutionary Algorithms." Computers & Operations Research (2015).

> "The presented results assume that the problem space is one-dimensional; however, they can be extended for higher dimensions. We assumed that the solution and the estimate have uniform distributions as in [32] and that the problem domain is symmetric such that $b = a$ to simplify the resulting mathematical expressions. As the algorithm converges, the distribution of the solution space may change. Thus, the next step should include studying the distribution of the search space and the corresponding opposition-based probabilities. As discussed in Algorithm 1, $\hat{x}_{Kr}$ applies opposition to the whole population. Future work should be made analyzing the effects of opposition on selected individuals. Finally, we limited the reflection weight to $K \in (0, 1)$ in this paper. Varying the range of K will create different opposition algorithms and can be a topic of further research."

62. **EV Vivisection.** George Montañez, Winston Ewert, William A. Dembski, and Robert J. Marks II, "Vivisection of the ev Computer Organism: Identifying Sources of Active Information," Biocomplexity, Vol. 2010, Issue 3, pp.1-6 (December 2010).

(a) Meyer, Stephen C. *Signature in the Cell.* The Blackwell Companion to Science and Christianity (2012): 270-282.

> **Informational Accounting**
> Recently, the senior engineering professor Robert Marks, formerly of the University of Washington, Seattle and now at Baylor University in Texas, analyzed evolutionary algorithms such as EV. Marks shows that despite claims to the contrary by their overly enthusiastic creators, algorithms such as EV do not produce large amounts of functionally specified information "from scratch." Marks shows that, instead, such algorithms succeed in generating the information they seek either by providing information about the desired outcome (the target) from the outset, or by adding information incrementally during the computer program's search for the target. To demonstrate this, Marks distinguishes and defines three distinct kinds of information: exogenous information, endogenous information, and active information.

> "Endogenous information" represents the inforn1arion present in the target. Tt al o provide a measure ofth.e difficulty of the search for that target - that is, the improbability of finding the specific sequence or target, among the exponentially large space of alternative possibilities. Recall that the amount of information present in a sequence or system is inversely proportional to the probability of the sequence or system arising by chance. If the probability of finding the largest is small the information required to find the target is correspondingly large. By calculating the size of the pace of alternative possibilities in which the target resides, the computer scientist can determine both the probability of finding d1e target in a random search and the information content of the target in question. Marks's analysis of evolutionary algorithm show that, in order to produce or find the (endogenous) information present in the target, a programmer must design a search algorithm that reduces the in formation requirement of the search to a manageable level. The information added is the "active information." The "exogenous information" is what is left after the active information is subtracted fron1 the endogenous information. It measures the difficulty of the residual search problem.
>
> In his critique of EV as well as other evolutionary algorithms, Marks. how that each of the e putatively successful simulations of undirected mutation and selection actually depends upon several sources of active information. The EV program, for example, uses active inforn1ation by applying a filter to favor sequences with the general profile of a nucleotide binding site. And it uses active information in each iteration of its evaluation algorithm or fitness function. The fitness function in EV uses information about the target sequence to assess degrees of difference between a prespecified target and the mutated sequence produced by the program. Those sequences that have the lowest error values - generate proximity to the prespecified functional sequence- are elected to replicate and mutate. Marks shows that each time the program uses knowledge of the target sequence to exclude some sequences and preserve others, it imparts a quantifiable amount of information in its selection. Marks quantifies these sources of active information and shows that they reduce the difficulty well below the 131 bits Schneider claims that EV can produce "from scratch." He also how that the endogenous information in even modestly difficult search problems usually cannot be generated (or the search problem solved) without added or "active" information to assist the search.

63. **Going Nonlinear.** Charles Baylis, Robert J. Marks II, Josh Martin, Hunter Miller, and Matthew Moldovan. "Going Nonlinear," IEEE Microwave Magazine, April 2011, pp.55-64

    (a) Yuanxiao Gou *et al.* "Analytical Reflection Coefficient Expressions Utilizing Load-Dependent X-Parameters." IEEE Transactions on Microwave Theory and Techniques, Year: 2015, Pages: 1 - 11, DOI: 10.1109/TMTT.2015.2470239

    > "The matrix description of the X-parameter model is first applied in [Baylis *et al.*] [2]. It was originally employed to predict the performance of the amplifier under a well-defined multi-harmonic load condition. Specifically, the $X^(F)$ matrix gives the output spectrum phasor values at all combinations of the output port and harmonic. The $X^(S)$ and $X^(T)$ matrices represent the coupling or "cross-coupling" effects between the harmonic components of different ports. Moreover, because all the elements are correlated to the large-signal input A_{11} , the matrix representation will not damage the nonlinear features of the X-parameter model and the spectrum mapping relationships are still preserved."

    (b) Pelaez-Perez, A. M., S. Woodington, M. Fernandez-Barciela, Paul J. Tasker, and J. I. Alonso. "Large-signal oscillator design procedure utilizing analytical-parameters closed-form expressions." Microwave Theory and Techniques, IEEE Transactions on 60, no. 10 (2012): 3126-3136.

    > "The main drawbacks of using computer-aided design (CAD) simulators are the time-consuming optimization steps, usually required in a fully numerical simulation-based

> circuit design. In order to speed up this design procedure, the availability of closed-form expressions would be convenient [3]. These allow for the direct computation of the nonlinear network performance, hence quickly providing an initial valid design solution. An example in this concept is the popular negative-resistance method for RF oscillator design, based mainly on -parameters. Although this approach gives acceptable insight, it cannot accurately predict oscillator behavior since it is only based on linear parameters."

(c) Pelaez-Perez, A. M., S. Woodington, José Alonso, M. Fernandez-Barciela, and Paul J. Tasker. "X-parameters-based closed-form expressions for evaluating power-dependent fundamental negative and positive real impedance boundaries in oscillator design." Microwaves, Antennas & Propagation, IET 6, no. 8 (2012): 835-840.

> "The basic assumption is that, load-independent X-parameter coefficients can be used over a useable, extended, impedance region about the defined reference impedance to robustly predict large-signal response. The validity of this assumption is an obvious concern [8], hence will also be addressed in this paper."

(d) Lee, Chie-In, Wei-Cheng Lin, and Yan-Ting Lin. "A 2.4 GHz high output power and high efficiency power amplifier operating at inductive breakdown in CMOS technology." Microelectronics Journal 45, no. 4 (2014): 449-453.

> "The X-parameter measurement can save time required to develop the nonlinear model [20], providing an alternative nonlinear circuit design approach. "

(e) Kheirdoost, A., G. Moradi, and A. Abdipour. "An Analytical Formulation for Black Box Conversion Matrix Extraction." Microwave Theory and Techniques, IEEE Transactions on 60, no. 6 (2012): 1493-1499.

> "Here a simple methodology for extraction of the conversion matrix in nonlinear elements could be a valuable tool in microwave circuit design and analysis. The advent of Nonlinear Vector Network Analyzer (NVNA) and X Parameters concept [14] have made significant advances in design and modeling of nonlinear devices."

(f) Urbina-Martinez, J. L., U. Malagon-Reyes, J. R. Loo-Yao, Pablo Moreno, and J. A. Reynoso-Hernandez. "X-parameters: The new tendency in the characterization of nonlinear RF devices."In Central America and Panama Convention (CONCAPAN XXXIV), 2014 IEEE, pp. 1-7. IEEE, 2014.

> "Los parámetros X se definen como un súper conjunto de parámetros S, los cuales simultáneamente están en función de la potencia, la frecuencia de la señal de entrada y el voltaje de operación en corriente directa (DC). El propósito principal de emplear los parómetros X, es el de obtener una caja negra que represente con exactitud al DBP, tanto en su región lineal como en la no lineal, evitando de esta manera el largo y complejo trabajo de desarrollar un modelo matemático no lineal que se ajuste al comportamiento del DBP, lo cual puede consumir varios meses [8]."

64. **Radar chirp waveform selection.** Josh Martin, Matthew Moldovan, Charles Baylis, Robert J.Marks II, Lawrence Cohen, Jean de Graaf, "Radar chirp waveform selection and circuit optimization using ACPR load-pull measurement," 2012 IEEE 13th Annual Wireless and Microwave Technology Conference (WAMICON), Florida, pp.1-4, 15-17 April 2012.
doi: 10.1109/WAMICON.2012.6208465

(a) Zenteno, Efrain, Magnus Isaksson, and Peter Handel. "Output Impedance Mismatch Effects on the Linearity Performance of Digitally Predistorted Power Amplifiers." Microwave Theory and Techniques, IEEE Transactions on 63, no. 2 (2015): 754-765.

> "..., under load impedance mismatch conditions, the linearized AB amplifier exhibits large variations of the in-band error (NMSE). However, due to its design, the same amplifier is robust to impedance mismatch conditions for the out-of-band error (ACPR).

> Therefore, AB amplifier architecture may be considered when out-of-band emissions and load impedance mismatches may occur. The minimization of the out-of-band error or any other metric can be done using load pull techniques [27]. These techniques can also provide, in the form of contours, the sensitivity to load impedance variations. For theDPD-linearized Doherty amplifier, both the NMSE and ACPR are vastly affected by load impedance mismatches, which is expected from the dynamic load modulation principle under which Doherty operates."

65. **Meta-Biology** Winston Ewert, William A. Dembski & Robert J. Marks II "Active Information in Metabiology," Bio-Complexity, 2013, vol 4, pp.110.

    (a) Lethen, Tim. "How much Time Does a Logical Inference Take?." In *On Gödel and the Nonexistence of TimeGödel und die Nichtexistenz der Zeit: Kurt Gödel essay competition 2021Kurt-Gödel-Preis 2021*, pp. 117-138. Berlin, Heidelberg: Springer Berlin Heidelberg, 2023.

    > "Turning to the question of the programming language, it is worth mentioning that the literature is largely silent about this decision. One of the exceptions, if not the only one, is the paper Ewert, Dembski, and Marks (2013), which uses the language $\mathcal{P}$" introduced and analysed in Böhm (1964) and Böhm and Jacopini (1966)."

66. **Chirp Waveform Selection** Josh Martin, Matthew Moldovan, Charles Baylis, Robert J.Marks II, Lawrence Cohen, Jean de Graaf, "Radar chirp waveform selection and circuit optimization using ACPR load-pull measurement," 2012 IEEE 13th Annual Wireless and Microwave Technology Conference (WAMICON), Florida, pp.1-4, 15-17 April 2012.

    (a) Zenteno, Efrain, Magnus Isaksson, and Peter Handel. "Output Impedance Mismatch Effects on the Linearity Performance of Digitally Predistorted Power Amplifiers." Microwave Theory and Techniques, IEEE Transactions on 63, no. 2 (2015): 754-765.

    > "Therefore, AB amplifier architecturemay be considered when out-of-band emissions and load impedance mismatches may occur. The minimization of the out-of-band error or any other metric can be done using load pull techniques [27]. These techniques can also provide, in the form of contours, the sensitivity to load impedance variations. For theDPD-linearized Doherty amplifier, both the NMSE and ACPR are vastly affected by load impedance mismatches, which is expected from the dynamic load modulation principle under which Doherty operates."

67. **Spectrally Defined Reconfiguration.** Charles Baylis, Josh Martin, Matthew Fellows, David Moon, Matt Moldovan, Lawrence Cohen, Robert J. Marks II, "Radar power amplifier circuit and waveform optimization for spectrally confined, reconfigurable radar systems," 2013 IEEE Radar Conference (RADAR), Ottawa, ON, Canada, April 29-May 3 2013, pp. 1-4.

    (a) Yuan-fang, Cao Si-yang Zheng. "Recent Developments in Radar Waveforms" Journal of Radars, Vol. 3, No. 5, Oct. 2014

    > "[Baylis et al.] [79] study designing spectral disjoint radar waveforms (also known as sparse frequency or thinned spectrum radar waveform) for avoiding detection of the transmitted signal by the enemy or collision with other wireless communication mechanisms."

68. **Biological Info.** R.J. Marks II, M.J. Behe, W.A. Dembski, B.L. Gordon, J.C. Sanford, Editors Biological Information - New Perspectives, Cornell University (World Scientific, Singapore, 2013). [Cache]

    (a) Lau, Leon L., and Wang Lau. "Vital phenomena: life, information, and consciousness." All Life 13, no. 1 (2020): 151-163.

    > "Information is still in its infancy as a topic of study; however, it has been proposed that information is key to understanding life, even though information is neither matter nor energy (Marks et al. 2013)."

69. **Unexpected Swarms Behavior.** Jon Roach, Winston Ewert, Robert J. Marks II and Benjamin B. Thompson, "Unexpected Emergent Behaviors From Elementary Swarms," Proceedings of the 2013 IEEE 45th Southeastern Symposium on Systems Theory (SSST), Baylor University, March 11, 2013, pp. 41 - 50.

    (a) Wilkenfeld, Daniel A., and Jennifer K. Hellmann. "Understanding beyond grasping propositions: A discussion of chess and fish." Studies in History and Philosophy of Science Part A 48 (2014): 46-51.

    > "One area where modeling is required for understanding is in the appreciation of swarm behavior. Typically, swarms involve autonomous agents following simple rules that together produce an emergent behavior. (Roach, Ewert, Marks,& Thompson, 2013) Termites, for example, are governed by the following simple rules (Roach et al., 2013, p. 42):
    > 1) Walk randomly until you encounter a grain.
    > 2) If you have a grain, drop it.
    > 3) If you do not have a grain, pick one up.
    > 4) Repeat.
    > "The result is a remarkable ability to clear an area of wood chips and form mounds. The location and formation of such mounds is not something one understands simply in virtue of knowing the four rules in question, or the state of the system at any particular time (including the start). What is striking about the example is that other than the four rules in question and the facts about the states of the system, there is nothing else about the system to know. Understanding the emergent behavior then cannot consist merely in some bit of knowledge. Some degree of simulation and practice is required."
    >
    > "The termite case is the simplest, but there is an array of swarm like behavior wherein simulations reveal complex emergent behavior arising from relatively simple rules governing individuals. For example, Roach et al. (2013) explore how trapping, cooperation, and confusion tactics can arise from very simple autonomous systems. None of these behaviors can be understood except by actually working through the models. Working through the model involves, at a minimum, grasping how the system evolved between any particular steps, but also being able to simultaneously simulate how the cumulative impact of such steps produced the end result."

    (b) Wilkenfeld, Daniel A. "MUDdy understanding." Synthese 194, no. 4 (2017): 1273-1293.

    > "Wilkenfeld and Hellmann (2014)... cite the example of complex behaviors that emerge from the interaction of relatively simple rules, as when fish swim in a school or termites clear a landscape of wood chips. Their point is that there are no propositions in the area knowledge of which lets one"see" how the wood chips get cleared (the example is from Roach et al. 2013, p. 42)."
    > "For those who are curious, the rules (as stated in Roach et al. 2013, p. 42) are: (1) Walk randomly until you encounter a grain.
    > (2) If you have a grain, drop it.
    > (3) If you do not have a grain, pick one up.
    > (4) Repeat."

70. **Cognitive Radio Networks Using Game Theory.** Liang Dong, Yanqing Liu and R.J. Marks II "Common Control Channel Assignment in Cognitive Radio Networks Using Potential Game Theory," IEEE Wireless Communications and Networking Conference (WCNC), Shanghai, China, 7-10 April 2013, pp. 315 - 320

    (a) Omar, Ankur. "Cache node determination, allocation and distribution in cognitive networks using game theory." In Telecommunication Networks and Applications Conference (ATNAC), 2014 Australasian, pp. 152-157. IEEE, 2014.

"The normalization factor η is to ensure that the two utility criteria are approximately equally weighted when $\rho = 0.5$ [20]. We have:

$$\eta = \frac{H\left[\sum_{j=1,j\neq i}^{N} I(f_i = f_j)\right]}{H\left[\theta_i(f_i)\right]} \quad (8)$$

"Each SU sequentially updates its strategy to maximize its utility, and the potential function will reach a local maximum, and in finite steps will terminate to an NE [19], [20]."

71. **Radar Power Amplifier Circuit and Waveform Optimization.** Charles Baylis, Josh Martin, Matthew Fellows, David Moon, Matt Moldovan, Lawrence Cohen, Robert J. Marks II, "Radar power amplifier circuit and waveform optimization for spectrally confined, reconfigurable radar systems," 2013 IEEE Radar Conference (RADAR), Ottawa, ON, Canada, April 29-May 3 2013, pp. 1-4.

    (a) Gomez-Garcia, Roberto, Miguel-Angel Sanchez-Soriano, Kam-Weng Tam, and Quan Xue. "Flexible Filters: Reconfigurable-Bandwidth Bandpass Planar Filters with Ultralarge Tuning Ratio." Microwave Magazine, IEEE 15, no. 5 (2014): 43-54.

    "It is unquestionable that a great effort is currently being directed toward the implementation of fully reconfigurable and multipurpose radio- frequency (RF) systems, aimed at developing quasiuniversal high-frequency transceiver modules. Examples of modern applications demanding such vast RF frequency agility are manifold; they encompass emerging cognitive/software-defined radios and multifunction radars with dynamic spectrum access capabilities to optimize their operation [1][3]."

72. **Solving the Spectrum Crisis.** Baylis, Charles, Matthew Fellows, Lawrence Cohen, and Robert J. Marks. "Solving the Spectrum Crisis: Intelligent, Reconfigurable Microwave Transmitter Amplifiers for Cognitive Radar." Microwave Magazine, IEEE 15, no. 5 (2014): 94-107.

    (a) Feger, Reinhard, and Andreas Stelzer. "Millimeter-wave radar systems on-chip and in package: Current status and future challenges." In Wireless Sensors and Sensor Networks (WiSNet), 2015 IEEE Topical Conference on, pp. 32-34. IEEE, 2015.

    "Being able to reconfigure the radar system on the fly would allow to realize the vision of cognitive radars [5], [6 - Baylis et al.]. Such systems adapt their behavior, like, e.g., its beampattern and probing signal to the environment. This allows to optimize the achievable measurement performance for diverse scenarios, to identify and suppress interfering signals from other radars and to minimize disturbance of other radars."

    (b) Stark, Alexander, Nati Aharon, Thomas Unden, Daniel Louzon, Alexander Huck, Alex Retzker, Ulrik Lund Andersen, and Fedor Jelezko. "Narrow-bandwidth sensing of high-frequency fields with continuous dynamical decoupling." arXiv preprint arXiv:1706.04779 (2017).

    "The application of this method for wireless communication [49-Baylis et al.] could have a transformative effect due to the high resolution of the protocol."

    (c) Pérez-Nicoli, Pablo, Fernando Silveira, Xun Zhang, and Amara Amara. "Uplink wireless transmission overview in bi-directional VLC systems." In Electronics, Circuits and Systems (ICECS), 2016 IEEE International Conference on, pp. 588-591. IEEE, 2016.

    "In the last decade we have witnessed a dramatically increase in the number of mobile devices (MDs) used in the daily life. The same trend has occurred in the industry, where the fourth industrial revolution (Industry 4.0) is taking place [1-Baylis et al.]. It means there are more MDs wirelessly connected that are also able to take decentralized decisions. This revolution not only increases the automatization process but also introduces the possibility of self-optimization, self-configuration and self-diagnosis. This leads to high-end quality services or products with a more transparent commodity chain, increasing profit and reputation of the factories."

(d) Greco, Maria S., Fulvio Gini, and Pietro Stinco. "Cognitive radars: Some applications." In Signal and Information Processing (GlobalSIP), 2016 IEEE Global Conference on, pp. 1077-1082. IEEE, 2016.

> "In active radars, cognition requests waveforms and circuits to be reconfigurable and optimizable in real time. Initial progress has been made in the two separate field [Bay12]"

(e) Zai, Andrew, Mauricio Pinto, Mike Coffey, and Zoya Popović. "Supply-modulated radar transmitters with amplitude-modulated pulses." IEEE Transactions on Microwave Theory and Techniques 63, no. 9 (2015): 2953-2964.

> "The need for more bandwidth of wireless systems is beginning to impose more stringent requirements on radar emissions [3], [4-Baylis et al.]. Radars that operate in an increasingly congested spectral environment need to start behaving more like communications transmitters. Recently, there has been increased activity in improving the spectral properties of radars while maintaining the efficiency, e.g., optimizing the load of the PA for maximum efficiency compliant with a given adjacent channel power ratio (ACPR) [4-Baylis et al.]"

73. **Evolutionary Informatics.** R.J. Marks II, W.A. Dembski, W. Ewert, *Introduction to Evolutionary Informatics*, (World Scientific, Singapore, 2017)

(a) Hssjer, Ola, Gnter Bechly, and Ann Gauger. "On the waiting time until coordinated mutations get fixed in regulatory sequences." Journal of Theoretical Biology 524 (2021): 110657.

> "On the other hand, $E(T_m)$ increases exponentially with m when back mutations are allowed, regardless of whether the binding site targets appear in a fixed or arbitrary order. We believe these are important findings. Indeed, it seems that back mutations are difficult to avoid in a model, without incorporating external information (Marks et al., 2017)"

(b) Thorvaldsen, Steinar, and Ola Hssjer. "Using statistical methods to model the fine-tuning of molecular machines and systems." Journal of Theoretical Biology 501 (2020).

> "ACS incorporates both Shannon and Kolmogorov complexity measures, and it quantifies the degree to which an event is improbable and follows a pattern. Kolmogorov complexity is related to compression of data (and hence patterns), but suffers from the property of being unknowable as there is no general method to compute it. However, it is possible to give upper bounds for the Kolmogorov complexity, and consequently ASC can be bounded without being computed exactly. ASC is based on context and is measured in bits. The same authors have applied this method to natural language, random noise, folding of proteins, images etc (Marks et al., 2017)."

14 Personal

14.1 Columns by Robert J. Marks

These are all of the columns written by Robert J. Marks is two big beautiful files.

1. Web Publications (LINK)
2. Micro Softies: (LINK) $\cdots$ A series of puzzles presented weekly.

14.2 Certificates

1. 1968 April 14. Connie Jewett Baptismal Certificate, Church of Christ.
2. 1965 May 28. Robert Marks Junior High School Merit Roll
3. 1967 March 22. *Order of DeMoley*
4. 1972 February 21. Connie L. Jewett, *Hoosier Scholar Award* from the State of Indiana.
5. 1973 May 22. Rejection letter from Purdue University for graduate work in Electrical Engineering
6. 1974 July 27. Marriage Certificate between Robert Jackson Marks II and Connie Lynn Jewett
7. 1988 Nov. 19. Family Day Care Home License, State of Washington
8. 1992 November 9. Robert J. Marks II, 15 Year Service, University of Washington, Seattle
9. 1994 April 16. Marilee Marks Ninth Kubb Class belt in taekwondo
10. 1994, April 16. Joshua Marks Ninth Kubb Class belt in taekwondo
11. 2994 December 17. Marilee Marks Green Belt in taekwondo
12. 1994 December 17. Jeremiah Marks Green Belt in taekwondo
13. 1995 January 27. Taekwondo Survival Certificate for Jeremiah Marks
14. 1995 January 28. Joshua Marks Half Blue Belt in taekwondo
15. 1995 January 28. Jeremiah Marks Half Blue Belt in taekwondo
16. 1995 April 29. Marilee Marks Half Blue Belt in taekwondo
17. 1996 Joshua Marks Alderwood Little League
18. 1997 June 5. Jonathan Award to Jeremiah Marks from Snohomish County Christian School
19. 1996 February 21. Outstanding Behavior Award to Jeremiah Marks from Snohomish County Christian School
20. 1996 February 21, Academic Growth Award to Jeremiah Marks from Snohomish County Christian School
21. 1996 June 12. Outstanding Behavior Award to Jeremiah Marks from Snohomish County Christian School

22. 1997 March 13-14. Jeremiah Marks Certificate of Achievement, 1997 High School Choral Festival

23. 1997 April 4. Jeremiah Marks, Academic Honor Role, Snohomish County Christian School

24. 1997 June 12. Daniel Award to Jeremiah Marks from Snohomish County Christian School

25. 1997 Summer. Marilee Marks Hoops Camp

26. 1997 Summer. Joshua Marks Hoops Camp

27. 1998 December 2. Jeremiah Marks *Exemplary Christian Service* from Snohomish County Christian School

28. 1998. ASCI High School Choral festival certificate to Jeremiah Marks

29. 1998 Jeremiah Marks sings at Carnegie Hall

30. 1999 May 8. Jeremiah Marks J.F.C.A. Music Competition NW Regional, Sr. High Vocal Duel - Division 1

31. 1999 May 18. Marilee Marks' Taekwondo Black Belt Certificate

32. 1999 May 18. Joshua Marks' Taekwondo Black Belt Certificate

33. 2000 June 5. Daniel Award to Jeremiah Marks from Snohomish County Christian School

34. 2000 Jeremiah Marks in *The Ambassadors* ensemble

35. 2002 August. Jeremiah Jackson Jewett Marks: Associate in Arts and Science Diploma

36. 2006 April 12. Connie L. Marks, Texas Dept of State Health Services, Licensed Massage Therapist

37. 2015 Oct 20. Bridges: Building a Supportive Community (Course)

38. 2017 February 2. Intersections: Preventing Harassment & Sexual Violence (EDU-US) (Course)

39. 2004 Spring. Jeremiah Marks: *New Venture Challenge*, First Place. Hankamer School of Business, Baylor University

40. 2024-2025 Waco High Teaching Award for Joshua Marks.

    For "ensuring the success of our Advanced Academic Students."

14.3 Music on Video

1. "2011 Marks Chronicles: T.R. Marks," Jan 5, 2012.
   [Link: https://youtu.be/x-sgfU93G58].

2. "Blackburn, West Virginia," May 3, 2012.
   [Link: https://youtu.be/d6Cbq4WD8KQ].

   "Mountaineers Are Always Free." Slides by Joshua. Music by Bob.

3. "Moore Run Drone," (Varied Background Music) Aug 5, 2014.
   [Link: https://youtu.be/pIH9xYkyn8A]

4. Robert J. Marks "Dance of the Bipolar Darwinist (Punctuated Equilibrium)," Jun 14, 2018.
   [Link: https://youtu.be/XouSded-cDg]

5. Robert J. Marks II, "The Fall," Jun 14, 2018.
   [Link: https://youtu.be/Rn0vAklAxTo]

6. Robert J. Marks II, "Tristan by the Pound,"Oct 30, 2014.
   [Link: https://youtu.be/xcqLC7EUxlE].

7. "'The Bipolar Darwinist in Therapy (Punctuated Equilibrium)' R.J. Marks," Jun 14, 2018.
   [Link: https://youtu.be/XouSded-cDg].

8. " 'The Fall' R.Jackson Marks II," Jun 14, 2018.
   [Link: https://youtu.be/Rn0vAklAxTo].

9. "Read Your Bible [Who Heals Eyes With Spit?]," Sep 30, 2016.
   [Link: https://youtu.be/pKnPEDBRxCc].

10. "Farmersburg News," May 13, 2016.
    [Link: https://youtu.be/AjycHSGYhlM].

    Written to Bob's fiance when her family ran the newspaper The Farmersburg News.

11. "Trolling for a Parking Place at Baylor," Mar 2, 2016.
    [Link: https://youtu.be/RkVbV3JN-Qg].

    To the tune "Who heals eyes with spit" [Read your Bible]. 38 minutes of trolling for a Prof to park

12. "Grandad Is Great," Jun 15, 2015.
    [Link: https://youtu.be/uMKz0wd4Frs].

    Written by Tristan when he was three years old. Original vocals were done acapella perfectly in the key of C.

13. "Grandad Plays with Tristan in Washington DC," May 13, 2015.
[Link: https://youtu.be/H-AKyRhz30I].

    The music is "You Can't Milk a Chicken."

iii "Freaky Bob's Line Dance in 7/4," Apr 4, 2015.
[Link: https://youtu.be/0lbRMwbAor4].

    Music is "Round Brown Plurble."

14. "Regalia Hat Trick," Jan 8, 2015.
[Link: https://youtu.be/QlWSCSdT0co].

    Ray, Bob and Josh perform a ceremonial hat exchange after graduation. Kris on camera. Music is "Dementia Waltz."

15. "Exploding Cones on a Hex Grid. Smooth!," Dec 26, 2014.
[Link: https://youtu.be/sT3ccZgLmnY].

    Music is "The Fall"

16. "Boring Expanding Rectangular Rectangles," Dec 7, 2014.
[Link: https://youtu.be/zojd8hC6d8E].

    Music is "The Fall"

17. "2,866 Expanding Psychedelic Diamond Hexes," Dec 2, 2014.
[Link: https://youtu.be/VO-pWA1BSmg].

    Music is "The Fall"

18. "Ten Thousand Expanding Psychedelic Circle Hexes," Nov 8, 2014.
[Link: https://youtu.be/bXoP5F0s33c].

    Music is "The Fall"

19. "Alternating Projections onto Convex Sets Examples," Oct 15, 2014.
[Link: https://youtu.be/_-T4Y0aof3s].

    Various music background

20. "Sketch Marks: Itchy Dawgs," Aug 12, 2014.
[Link: https://youtu.be/bqAmkuKjkdA].

    Revel & Rorschach (a.k.a. Ink Sneeze), father & son, seek relief. Marilee is the cinematographer. Music is "Jelly Beans".

21. "Moore Run Drone," Aug 5, 2014.
[Link: https://youtu.be/pIH9xYkyn8A].

Aerial Shots down Moore Run Road.
Music:
0:00 "As Much as I Love You (The Farmersburg News)"
2:29 "Yellow Yolks"
5:38 "You Ain't Gonna Die (You're Gonna Ugly Away)"
8:45 "Murky in the Delta Mississippi Swamp Gas Blues"
10:55 "If I Had My Druthers"

22. "Travelin' Man" with Ray Marks, Jul 4, 2014.
[Link: https://youtu.be/CeWnLRg-FTY].

    Episode 32: "How to get from the farm to the Weston Walmart" Music: "Dumb Kids"

23. "WMCS 2014 Picnic," May 10, 2014.
[Link: https://youtu.be/GswjcXTV0nI].

    Video of "The Banana Game" with highlight reel.

24. " 'Boiled Asparagus' by Marilee," May 9, 2013.
[Link: https://youtu.be/TUIOy1gvs_g].

25. "Ringo's Itch," Oct 20, 2012.
[Link: https://youtu.be/KLauCDVq5DA].

    The Amazing Ringo scratches unless he is distracted by food or play. (He's allergic to grass.) Rorschack watches and mimics. Rorschack's not allergic to grass. Music: "Dance of the Bipolar Darwinist".

26. "2017 Imbed This: Senior Projects in Texas"
[You Tube Link: https://youtu.be/tCkwu6nPBSo]

    "Baylor University ECE students design an app to display the number of rounds remaining in your rifle. (They got an A.) Here's the music: "

    - 0:00 Do we Darwin, Ya!
    - 1:48 Athiests Always Seem Angry
    - 6:37 Lazarus Waltz & Fanfare
    - 10:18 The Lord Is my Shepard
    - 13:05 Tenured

14.4 Marks Chronicle Videos

14.4.1 1960-1979

1960

27. "1960 Marks Chronicles (1960's 70's 8mmMarks 1)," Sep 10, 2012.
[Link: https://youtu.be/G4SJlQOmssg].

1964

28. "Rare Early Beatles Interview with Bob Marks," Dec 13, 2014.
[Link: https://youtu.be/1aPMTtFkbmY].

29. "FRANKENBEANS!," Dec 26, 2012.
[Link: https://youtu.be/_gX1Yf9nx7U].

    Rare vintage 1964 8mm RAW HORROR! with 14 year old Bob and good friend David Smith.

1971

30. "5. Theater Of The Ears: Psycho Delicacies," Mar 22, 2015.
[Link: https://youtu.be/mcXgvKPCqdI].

    Contents archived from the original 1971 recording.
    0:00 John and Mary (music by the Garfield Heights Senior High School orchestra 1967),
    0:57 Suite Death,
    2:35 Linear System Analysis,
    4:00 The Dearing Young Man on the Flying Trapeze,
    4:52 Peter Paper,
    4:55 Hungarian Lazonia (music at http://SabertoothDuck.com/),
    4:58 Strange Chortles,
    7:30 Dance of the Cuckoo,
    7:50 Flower Power Tones,
    9:36 Baby (music at http://SabertoothDuck.com/),
    10:45 Bad Peter Lori Imitation,
    10:59 Psycho Cheers,
    11:22 Virgin Cancer (music at http://SabertoothDuck.com/) Recorded 1969 by the Fourth Floor Sharpenburg Lacerated Elbow Novelty Band at Rose-Hulman Institute of Technology (Doug Haldeman, organ: Ted Ford, Bass; Darell Hewitt, Drums: Bob Marks, guitar),
    15:34 Snorting Anarchists and that Kazoo Babies,
    19:51 Time After Time After Time After Time,

21:13 Child of Darkness,
24:14 Blabber yell,
24:39 I Love You Big Dummy,
25:22 John and Mary Part two,
26:04 Bulletin,
26:25 Taps,
27:15 Charles Ives Blues,
28:03 Free (music at http://SabertoothDuck.com/),
28:19 Greensleeves,
28:54 Bad Cab Calloway,
29:05 Dixie Doodle Dandy (Yankee doodle and Dixie played at the same time),
29:23 Credits.

14.4.2 1980-1989

1980

31. "Sketch Marks: 8mm Follies from 1980 (with Bob & Ray)," Posted Jul 4, 2016. [Link: https://youtu.be/p0hUgFbk6G8].

    Ray & Bob Marks in 1980) playing around with a 8mm camera. Filmed on Ashworth Ave N. Seattle, WA.

32. "1980 Marks Chronicles (1980s 8mm Marks)," Sep 10, 2012. [Link: https://youtu.be/BCzWk0cbKPw].

1984

33. "Sketch Marks: 1984," . [Link: https://youtu.be/NsrMhb8flcA].

    Jack & Charlotte, Joshua's first food, Bed jumping, WV Follies

34. "1984 Marks Chronicles: Chapters from the Summer of 1984," Jun 13, 2016. [Link: https://youtu.be/KhUDwaAYjfI].

35. "1984 December 12 - Marks Chronicles," Sep 11, 2013. [Link: https://youtu.be/eUV6UZn9B8E].

36. "1984 Dec 27 Sketch Marks," . [Link: https://youtu.be/RnnMrt3oijM].

37. "4. Theater Of The Ears: Gunsmoke 'The Letter' (1984)," Mar 22, 2015. [Link: https://youtu.be/u4UaGmKDFnM].

Matt Dillon is being attacked because of letter he can't read. Can Doc's leaned friend help him translate?

From the original 1984 recording

38. "Sketch Marks: Dec 12, 1984," .
[Link: https://youtu.be/dIB6zpUcXqo].

1985

39. "1985 June - Sketch Marks," .
[Link: https://youtu.be/57yJWDMfq3I].

40. "1986 Aug 3 - Sketch Marks," .
[Link: https://youtu.be/VuHlUz7OQPE].

41. "1985 Marks Chronicles (Jack and Charlotte Interview - Part 2)," Nov 22, 2014.
[Link: https://youtu.be/sVLJJ3PiBFM].

September 19, 1985

42. "1985 Marks Chronicles (Nov 13)," Sep 10, 2013.
[Link: https://youtu.be/IrZBsH7ILpk].

43. "1985 Marks Chronicles (June)," Sep 2, 2013.
[Link: https://youtu.be/gj6Yg7RzbKY].

44. "1985 Marks Chronicles," Oct 9, 2016.
[Link: https://youtu.be/9q4tJCnRFRQ].

45. "1985 Nov13 - Sketch Marks," .
[Link:].

46. "I'll be Bach,"
[Link: https://youtu.be/3F45W6dfPgY].

Video made November 13, 1985. Jeremiah is three & a half years old.

47. "3. Theater Of The Ears: Much Ado About Shakespeare," Mar 22, 2015.
[Link: https://youtu.be/qR6OAYC3NnI].

Literature professor Mark Roberts investigates what a new Shakespeare manuscript has to do with a colleague in the physics department.

Transcribed from the original 1985 recording.

48. "2. Theater Of The Ears: Never Grow Old," Mar 20, 2015.
[Link: https://youtu.be/_vgzwi26Ejs].

In this science fiction audio play, James Winchester, subhole miner and bigot, has an arm severed from a recent fight with a Ganymede slimeman.

Mastered from the original 1985 recording.

1986

49. "1986 Marks Chronicles (Thanksgiving),"
[Link: https://youtu.be/VTCujQKqmoo].

50. "1986 Marks Chronicles (Aug 3)," Sep 10, 2013.
[Link: https://youtu.be/9ZLBLY65u_0].

Lenore's Birthday

51. "1986 Marks Chronicles (June 7)," Sep 10, 2013.
[Link: https://youtu.be/Rfj2q8XaxJk].

52. "1986 Marks Chronicles (Thanksgiving)," Nov 9, 2017.
[Link: https://youtu.be/VTCujQKqmoo].

53. "1986 Marks Chronicles (Feb 18)," Sep 9, 2013.
[Link: https://youtu.be/5AKUnx_5LBg].

54. "Sibling Rivalry," Dec 22, 2012.
[Link: https://youtu.be/LhfoU2U2kIA].

Joshua & Jeremiah display sibling rivalry during their audition for the Boltzmann Machine, including an exchange of gut punches.

1987

55. "1987 Marks Chronicles (May 2)," Sep 9, 2013.
[Link: https://youtu.be/ragvM6eibU4].

56. "1987 Marks Chronicles (Oct 3)," Sep 9, 2013.
[Link: https://youtu.be/8mi2Q3hknQo].

57. "1987 Marks Chronicles (July)," Sep 2, 2013.
[Link: https://youtu.be/dp35hePSfVI].

58. "1987 Marks Chronicles (March 5: Here's Marilee)," Aug 16, 2013.
[Link: https://youtu.be/4tBbVR0bkVg].

1988

59. "1988 Marks Chronicles (March 5)," Aug 13, 2014.
[Link: https://youtu.be/3US15Hwv-Q0].

60. "1988 Marks Chronicles (Nov 11)," Sep 9, 2013.
[Link: https://youtu.be/jUDwEx85WeQ].

61. "1. Theater Of The Ears: Madam I'm Adam," Mar 22, 2015.
[Link: https://youtu.be/c6OFe3ZrzMg].

    Neither English majors, undertakers, Czar Katchakov, the doo-wop acapela glee club, nor naval officers seem to know the location of Dr. Charles Adams.

    Transcribed from the original 1988 recording made in Garfield Hts.

1989

62. "1989 Marks Chronicles (December),"
[Link: https://youtu.be/hPu-_okQTs].

63. "1989 Marks Chronicles (December)," Nov 10, 2017.
[Link: https://youtu.be/hPu-__okQTs].

64. "1989 Marks Chronicles (July)," Aug 13, 2013.
[Link: https://youtu.be/wJtx97ie2OA].

14.4.3 1990-1999

1990

65. '1990 Marks Chronicles (Christmas)', Nov 23, 2014" .
[Link: https://youtu.be/on_6csDNG2U].

1992

66. "1992 Marks Chronicles (Rose-Hulman)," Aug 12, 2013.
[Link: https://youtu.be/YLai8zoETH0].

67. " 'Boiled Asparagus' by Marilee," May 9, 2013.
[Link: https://youtu.be/TUIOy1gvs_g].

1993

68. "1993 Marks Chronicles - Dec," Posted May 13, 2016.
[Link: https://youtu.be/eW2G6EuTRaw].

69. "1993 Marks Chronicles (Dec 18)," Nov 23, 2014.
[Link: https://youtu.be/uQfbDeac0TQ].

70. "1993 Marks Chronciles 1993-94," Jun 16, 2013.
[Link: https://youtu.be/I7STEaM5vMs].

71. "1993 Marks Chronicles (Ormeda's Funeral pt1)," Oct 20, 2012.
[Link: https://youtu.be/kD02QXOuS44].

72. "1993 Marks Chronicles: Ormeda's Funeral pt2," Oct 20, 2012.
[Link: https://youtu.be/ZfdwgzezMMk].

73. "Finding Pa," May 13, 2016.
[Link: https://youtu.be/tBXhoaUqD-I].

    Filmed December 1993.

74. "R. Jackson Marks Unplugged (December 1993) 'Hard to Be Humble'," Aug 15, 2013.
[Link: https://youtu.be/_EFKJHKbfgU].

1994

75. "1994 Marks Chronicles (June WCCI Conference & WV Cabin)," Sep 11, 2013.
[Link: https://youtu.be/X7Qc_UK3VTU].

76. '1994 Marks Chronicles: Universal (Feb 22)'," Jun 28, 2016.
[Link: https://youtu.be/IwZiNa_PH9g].

77. "Sketch Marks - Cabin Fever," Aug 15, 2014.
[Link: https://youtu.be/cMoPmyFLfno].

    Jack, Lenore, Connie, Jeremiah, Marilee, Joshua & Bob. ALSO: Wasps, Dirty Ears, Rook and Dropping Mice June 1994... At the cabin in Blackburn WV

1995

78. "1995 Marks Chronicles (June)," Jun 19, 2013.
[Link: https://youtu.be/KUwd_wsRpSs].

1997

79. "1997 Marks Chronicles (HERSMAN Reunion A)," Feb 12, 2013.
[Link: https://youtu.be/RFlJv-rypYc].

80. "1997 Marks Chronicles (HERSMAN Reunion C)," Feb 17, 2013.
[Link: https://youtu.be/PzbYUlVnnaI].

81. "1997 Marks Chronicles (HERSMAN Reunion B)," Feb 12, 2013.
[Link: https://youtu.be/B2cv4N1yCCo].

14.4.4 2000-2009

2002

82. "2002 Marks Chronicles (Joshua Talk)," Aug 13, 2014.
[Link: https://youtu.be/x8ffntADq60].

2004

83. "2004 Marks Chronicles (Jeremiah Practices - March 11)," Aug 13, 2014.
[Link: https://youtu.be/cloDC690ljc].

2008

84. "2008 Blackburn WV," Sep 10, 2012.
[Link: https://youtu.be/xigmecAsIH0].

14.4.5 2010-2019

2011

85. "2011 Marks Chronicles: T.R. Marks," Jan 5, 2012.
[Link: https://youtu.be/x-sgfU93G58].

2012

86. "2012 Marks Chronicles (WV Music1)," Feb 17, 2013.
[Link: https://youtu.be/vLurVtIWorg].

87. "2012 Marks Chronicles (WV Music2)," Feb 17, 2013.
[Link: https://youtu.be/jVplIrWv2TA].

88. "2012 Marks Chronicles: Marks Kahler Wedding #1," Sep 10, 2012.
[Link: https://youtu.be/befI7pJ9P6o].

89. "2012 Marks Chronicles: Marks Kahler Wedding #2," Sep 10, 2012.
[Link: https://youtu.be/rnx_rVDX2i4].

90. "2012 Marks Chronicles: Marks Kahler Wedding #3," Sep 9, 2012.
[Link: https://youtu.be/kAcCNOrFrbM].

91. "River Ranch Adventures. Episode 1: Chicken Snake," May 3, 2012.
[Link: https://youtu.be/pSjWe-CswT0].

    Filmed on location on May 3, 2012. No animals were harmed in the making of this video.

92. "Ringo's Itch," Oct 20, 2012.
[Link: https://youtu.be/KLauCDVq5DA].

    The Amazing Ringo scratches unless he is distracted by food or play. (He's allergic to grass.) Rorschack watches and mimics. Rorschack's not allergic to grass. Music: "Dance of the Bipolar Darwinist".

93. "Obamaphone," Oct 1, 2012.
[Link: https://youtu.be/AttPvKL3pEM].

94. "Signa's Surprise!," Jul 18, 2012.
[Link: https://youtu.be/ERnceOStE0k].

    Enjoy a rare glimpse and sounds of "FAIRRAYS" in the Heart of Texas during 100 degree heat. Review it before you show to kids or the weak of heart!. It's two minutes worth your time! Best watched full screen.

95. "Obamanations," Jun 21, 2012.
[Link: https://youtu.be/-a0AGn6ocfc].

96. "Shocking Research Expose," Apr 13, 2012.
[Link: https://youtu.be/zinMaMhaedI].

    No graduate students were harmed in the making of this video.

97. "Marilee's Wedding Song," .
[Link: https://youtu.be/mlqpdA5a9ds].

    Bob sings at Marilee's wedding.

2013

98. "2013 Marks Chronicles Moore Run Tour (West Virginia)," Dec 16, 2014.
[Link: https://youtu.be/5DB2oK-GLIA].

99. "2013 Marks Chronicles - Aunt Betty," Dec 13, 2014.
[Link: https://youtu.be/hn1b24m00iU].

A few months before her death.

100. "Gunsmoke: Gone Straight," .
[Link: https://youtu.be/vkD24wHNhNw].

Reading of an adaptation of a Gunsmoke episode that first aired on Television on February 9, 1957. The story also aired on radio's Gunsmoke on August 22, 1953.

101. " Tristan's Best Friend"
[YouTubeLink: https://youtu.be/5WO4dC0dPDQ, [Video Cache]

2014

102. "Moore Run Drone," (Varied Background Music) Aug 5, 2014.
[Link: https://youtu.be/pIH9xYkyn8A]

103. "Sketch Marks: Who's Your Daddy," Jun 17, 2016.
[Link: https://youtu.be/vlc9iLzZ3FM].

104. "2014 Marks Chronicles: Christmas," Apr 5, 2015.
[Link: https://youtu.be/CG71MiYpbGk].

105. "Sketch Marks 2014: Joshua's Tribute to Grandpa Charlie," Jul 20, 2016.
[Link: https://youtu.be/OKo2GJ6rSRM].

106. "Sketch Marks: Do It Duet with Bob & Tristan," Aug 1, 2015.
[Link: https://youtu.be/z7-rMjQktk0].

107. "Sketch Marks: The Comedy of Opal & Merrick," Jul 31, 2015.
[Link: https://youtu.be/xA7IDB-rnY4].

Hilarious improvisation!

108. "Exploding Cones on a Hex Grid. Smooth!," Dec 26, 2014.
[Link: https://youtu.be/sT3ccZgLmnY].

Music is "The Fall"

109. "Boring Expanding Rectangular Rectangles," Dec 7, 2014.
[Link: https://youtu.be/zojd8hC6d8E].

Music is "The Fall"

110. "2,866 Expanding Psychedelic Diamond Hexes," Dec 2, 2014.
[Link: https://youtu.be/VO-pWA1BSmg].

Music is "The Fall"

111. "Ten Thousand Expanding Psychedelic Circle Hexes," Nov 8, 2014.
[Link: https://youtu.be/bXoP5F0s33c].

    Music is "The Fall"

112. "Alternating Projections onto Convex Sets Examples," Oct 15, 2014.
[Link: https://youtu.be/_-T4Y0aof3s].

    Various music background

113. "Weasels Listen to Bob Marks's Lecture on the Laplace-Demoivre Theorem," Oct 14, 2014.
[Link: https://youtu.be/0m5o4S9-hik].

114. "WMCS Ice Bucket Challenge," Sep 14, 2014.
[Link: https://youtu.be/Txk7guBF-LA].

115. "Sketch Marks: Itchy Dawgs," Aug 12, 2014.
[Link: https://youtu.be/bqAmkuKjkdA].

    Revel & Rorschach (a.k.a. Ink Sneeze), father & son, seek relief.
    Marilee is the cinematographer. Music is "Jelly Beans".

116. "Sketch Marks: Tristan's Bouncy Wakey Wakey," Aug 11, 2014.
[Link: https://youtu.be/E1GfRd4NGpU].

117. "Moore Run Drone," Aug 5, 2014.
[Link: https://youtu.be/pIH9xYkyn8A].

    Aerial Shots down Moore Run Road.

118. "Travelin' Man" with Ray Marks, Jul 4, 2014.
[Link: https://youtu.be/CeWnLRg-FTY].

    Episode 32: "How to get from the farm to the Weston Walmart" Music: "Dumb Kids"

119. "GOPRO Jan 14 Gene,"
[Link:https://youtu.be/IHrRPpmkPBo].

2015

120. "Descendants of Jim & Ormeda Marks Reunion: 2012," Jan 9, 2015.
[Link: https://youtu.be/g9i7yZRstDk]

121. "2015 Marks Chronicles: WV Property Boundaries - June," Jun 17, 2015.
[Link: https://youtu.be/BuIoMRtHDEQ].

Property lines along more run Road and at the schoolhouse property in Blackburn West Virginia.

122. "2015 Marks Chronicles: Tristan Birthday ATV" Jun 17, 2015.
[Link: https://youtu.be/GJovi4e9FN8].

Tristan gets a miniature ATV for his birthday. June 2015.

123. "2015 Marks Chronicles: Granddad Babysits Tristan & the Little Yellow Pig," Jun 17, 2015.
[Link: https://youtu.be/vUNMeMwawj4].

Granddad babysits Tristan at Bob and Monika's house in Blackburn West Virginia. We are visited by the Little Yellow Paying who has the ability to both spit and suck.

124. "2015 Marks Chronicles: Granddad Babysits Merrick," Jun 17, 2015.
[Link: https://youtu.be/KNbl3VmAK_s].

Granddad babysits Merrick at the WV house. June 2015.

125. "2015 Marks Chronicles: Tristan & Grandad Sing at Gene and Eula's," Jun 17, 2015.
[Link: https://youtu.be/XVEhknJ9aMI].

Granddad wrote a song for Tristan. Tristan wrote a song for Granddad. Here, they kind of sing it to each other. This is at Gene and Eula's on the farm in Blackburn. Chris Marks took the video.

126. "2015 Marks Chronicles: Marilee & Kris' Reveal Party (March)," Apr 12, 2015.
[Link: https://youtu.be/TJV72rx6pcg].

127. "Lightsaber 2015 in NJ," Jan 2, 2016.
[Link: https://youtu.be/4V0E070mLko].

128. "At Brent Hersman's Funeral," Jan 2, 2016.
[Link: https://youtu.be/_RY-L0zISqk].

December 6, 2015. Cheyenne, Wyoming

129. "Vision 2015 in Austin: New Years 2015-2016," Jan 1, 2016.
[Link: https://youtu.be/PkCxpqhnJpk].

130. "Sketch Marks: It Must Be All that fresh WV Air (WV)," Dec 4, 2015.
[Link: https://youtu.be/vW_-fF7OiAo].

131. "Sketch Marks: Family Reunion at the Blackburn Cemetary," Dec 4, 2015.
[Link: https://youtu.be/6_CnYcK6TQ8].

132. "Sketch Marks: Two Owl Stories," Dec 3, 2015.
[Link: https://youtu.be/cj1xQBFj14g].

Ray & Kris Fireside Chat at the Cabin in WV.

133. "Sketch Marks: Josh Gets Gas," Dec 3, 2015.
[Link: https://youtu.be/GFMlSeCjG64].

Josh's Fireside Chat at the Cabin in WV.

134. "Sketch Marks: Dumb Deer & Bad Bikes," Dec 3, 2015.
[Link: https://youtu.be/FJygrMSvokQ].

Chris's Fireside Chat at the Cabin in WV.

135. "Sketch Marks: Airports, Freebees & Deers," Dec 3, 2015.
[Link: https://youtu.be/nYEctlG4JX0].

More Kris Fireside Chat at the Cabin in WV.

136. "2015 IEEE Radar Conference Tutorial: Radar Transmitter Desdign for the Crowded Radio Spectrum," May 26, 2015.
[Link: https://youtu.be/vrmN_2kQ8Cs].

137. "Grandad Plays with Tristan in Washington DC," May 13, 2015.
[Link: https://youtu.be/H-AKyRhz30I].

The music is "You Can't Milk a Chicken."

138. "Seven Things Not To Do With Electricity," Apr 15, 2015.
[Link: https://youtu.be/BzeHgmW5xfI].

Seven Things Not To Do With Electricity involved taboo activities with (1) turtles (2) early tasers (3) cockroaches (4) hotdogs (5) rock and roll bands (6) worms and (7) chewing gum wrappers.

139. "Regalia Hat Trick," Jan 8, 2015.
[Link: https://youtu.be/QlWSCSdT0co].

Ray, Bob and Josh perform a ceremonial hat exchange after graduation. Kris on camera.

2016

140. "Merrick: I'm So Cool, I Can't Stand It," Jun 29, 2016.
[Link: https://youtu.be/bQ5lYwLMr88].

141. "2016 Marks Chronicles: Gas Leak - March 8," May 13, 2016.
[Link: https://youtu.be/UAiFio3iJLg].

Cabin Property. March 8, 2016

142. "2016 Marks Chronicles - Melodie Dedication," May 13, 2016.
[Link: https://youtu.be/O6MfSg8QVrE].

143. "2016 Marks Chronicles: High River (Middle Bosque) at River Ranch," Jun 14, 2016.
[Link: https://youtu.be/Q6a_4nkraF8].

144. "2016 Marks Chronicles: Melodie's First Food," Jul 10, 2016.
[Link: https://youtu.be/346qHGLPRdU].

    Video: January 14, 2016.

145. "2016 Marks Chronicles: In the Creek in WV," Jul 10, 2016.
[Link: https://youtu.be/w3S1YcmsY38].

146. "2016 Marks Chronicles: Melodie Stands (June 13)," Jul 26, 2016.
[Link: https://youtu.be/BAtjiMeIU-s].

147. "2016 Marks Chronicles: Hotel Pool (Summer)," Jul 26, 2016.
[Link: https://youtu.be/cxDYUwlFfk4].

148. "2016 Marks Chronicles: Junior McHenry's 90th Birthday Celebration," Jun 8, 2016.
[Link:https://youtu.be/ZTnYZPqxE2w].

    Video: May 30, 2016. Crosslanes, WV

149. "2016 Marks Chronicles: Melodie's One Year Birthday Party," Aug 1, 2016.
[Link: https://youtu.be/fngd5GzK7Bk].

150. "2016 Marks Chronicles: Carp Everywhere - Stonewall Jackson National Park." Jun 26, 2016.
[Link: https://youtu.be/a4RVcU9PMCw].

151. "2016 Marks Chronicles: Blackburn Oct," Oct 11, 2016.
[Link: https://youtu.be/ggqtFoI4U9g].

152. "Sketch Marks 2016: Jeremiah - Juggler of Hot Coals," Feb 9, 2017.
[Link: https://youtu.be/Kg-V2XPABV8].

153. "Sketch Marks 2016: Tristan-Rex," Nov 27, 2016.
[Link: https://youtu.be/8meFEUtVXeI].

154. "Sketch Marks 2016: WV Dancing Cousins, Oct 2106," Oct 11, 2016.
[Link: https://youtu.be/-JhUCPNy6C0].

155. "Sketch Marks 2016: Abuse of the Common Balloon (WV, Oct 2016)," Oct 11, 2016.
[Link: https://youtu.be/0rgNEQRVt78].

156. "Sketch Marks: Stud Finder Merrick," Oct 1, 2016.
[Link: https://youtu.be/Ml0yd2mJDXQ].

157. "Sketch Marks 2016: Melodie, Grandad & Papa Balloon (2016)," Aug 1, 2016. [Link: https://youtu.be/zg2_f1bAdpQ].

158. "Sketch Marks 2016: WV Pie Face Contest, Oct 7 2016," Oct 11, 2016. [Link: https://youtu.be/6YT2Xomt8O8].

159. "Sketch Marks 2016: Melodie Back Slider," Oct 1, 2016. [Link: https://youtu.be/tKjUYpcdDxk].

160. "Sketch Marks 2016: Melodie Walks," Oct 1, 2016. [Link: https://youtu.be/9X5rVwX96Ng].

161. "Sketch Marks: Merrick in Icy Nerves," Jul 20, 2016. [Link: https://youtu.be/7xCrEV_nZh4].

162. "Sketch Marks 2016: Who's Your Daddy," Jun 17, 2016. [Link: https://youtu.be/vlc9iLzZ3FM].

163. "Muscle Man Merrick," Jun 14, 2016. [Link: https://youtu.be/WnXNZGS-Rpg].

    Filmed in WV.

164. "Worm Grunting," Jun 14, 2016. [Link: https://youtu.be/rLipKmXwlYA].

    How can you get a bunch of worms using two sections of rebar.

165. "Tristan & the Snowblower," Jun 14, 2016. [Link: https://youtu.be/6i4Y6fvLLL0].

166. "Criswell vs. Kursweil," May 29, 2016. [Link: https://youtu.be/4FQvqo-V14E].

    "Prediction is difficult, especially when dealing with the future". Danish Proverb quoted by Niels Bohr

167. "Can We Create Minds From Machines?," May 22, 2016. [Link: https://youtu.be/vw8SVybnOGY].

    Erik J. Larson, PhD. Presented on the campus of Baylor University May 18, 2016

168. "Merrick Slide," May 13, 2016. [Link: https://youtu.be/EEYOyWMDy5I].

    What goes "squeek, giggle, squeek, scream, BUMP"? (2016)

169. "Trump & Kramer: 'I didn't start it! He started it!'," Apr 24, 2016. [Link: https://youtu.be/VsarP4zcx1o].

170. "Trolling for a Parking Place at Baylor," Mar 2, 2016.
[Link: https://youtu.be/RkVbV3JN-Qg].

    38 minutes of trolling for a Prof to park

171. "Melodie & Applesause," Feb 15, 2016.
[Link: https://youtu.be/7V_qdGgwo8c].

172. "Musical Merrick," Jan 16, 2016.
[Link: https://youtu.be/IP7boJaKZaA].

2017

173. "Marks Chronicles: Corpus Christi Beach, March 7, 2017," Mar 8, 2017.
[Link: https://youtu.be/RPcTIuMs6Ig].

174. "Marks Chronicles: Corpus Christi Beach, March 7, 2017," Mar 8, 2017.
[Link: https://youtu.be/RPcTIuMs6Ig].

    Melodie, Marilee, Monika & Kris

175. "2017 Marks Chronicles: River Ranch Burrito, January," Mar 8, 2017.
[Link: https://youtu.be/zsSnmpdECQE].

    Daddy Kris & Melodie

176. "2017 Marks Chronicles: Corpus Christi Beach Birds,," Mar 8, 2017.
[Link: https://youtu.be/h-6SP32tGJg].

    March 6, 2017. Melodie& Grandma

177. "Melodie's Second Birthday," Jul 8, 2017.
[Link: https://youtu.be/n4mgw3o8GsE].

178. "WMCS Signing Day - May 3, 2017," May 8, 2017.
[Link:https://youtu.be/9mg375Phhhs].

179. "2017 Imbed This: Senior Projects in Texas"
[You Tube Link: https://youtu.be/tCkwu6nPBSo]

    "Baylor University ECE students design an app to display the number of rounds remaining in your rifle. (They got an A.) "

2018

180. "Marks Chronicles: July 4, 2018 in West Virginia," .
[Link: https://youtu.be/mF3PCc2ZtpU].

    At Gene & Eula's.

181. "Ditties by Bob," .
[Link:https://youtu.be/ASDRJJAH9QE].

    Some of Bob's tunes.

182. "Eric Holloway: PhD dinner talk," Feb 11, 2018.
[Link: https://youtu.be/SmJKSftmYmo].

    December 15, 2017

183. "Waco Central Texas native [Kris] racks up 200th career wins," Feb 16, 2018.
[Link: https://youtu.be/HCQypOrenEs].

184. "Kahler v3 on Vimeo1080, Mp4," Apr 13, 2018.
[Link: https://youtu.be/nHIFAJM5OsM].

185. "No Country For Bald Men,"
[Link: https://youtu.be/6CoUcMilKcA].

2019

186. "AI & ID Christian Home School Apologetics: Robert J. Marks." May 5, 2019.
[Link: https://youtu.be/3aUAREQz4nk].

187. "Marks Chronicles: Crab Pier Pressure,July 1, 2019."
[Link: https://youtu.be/sAOSfIYxB2M].

    "At our house on the Oso in Corpus Christi. Bob, Jeremiah, Kameron, Kris, Leslie, Marilee, Melodie, Merrick, Tristan & a couple of crabs."

188. "Marks Chronicles 2019: Crab Wrangling at the Oso"
[Link: https://youtu.be/EWyvQeRvWSg].

    Tristan wrangles a crab. July 2, 2019 at the Oso house in Corpus Christi.

189. "Marks Chronicles July 2, 2019: We Drive Tanks & Shoot Stuff " .
[Link: https://youtu.be/RdnYDvVYaAI].

    Bob, Kris, Jeremiah, Josh & Doug

190. "Marks Chronicles July 2019: Coffee Shop Chaos,"
[Link: https://youtu.be/JaD7Ukbg02c].

191. "Marks Chronicles 2019: Bubblicious in the Tub,"
[Link: https://youtu.be/ixXtIXphQEw].

192. "Marks Chronicles: Independence Day Crab Race 2019," in Corpus.
[Link: https://youtu.be/ev1ZoOKCEys].

193. "Marks Chronicles: The Crab Clutch Of Death," July 5, 2019 in Corpus.
[Link: https://youtu.be/6KloF0KfMJU].

194. "EGR5001 eB.E.A.R.S. Homework," .
[Link: https://youtu.be/0CQjERUATV8].

195. "Conversations With Lorna Wine, October 12, 2019."
[YouTubeLink: https://youtu.be/ezrvJetH0lQ, [Video Cache (Download to see video), Audio].

> Some oral family history from the Moore side of the family. Lorna's mother, Vivian Moore Wine, was sister to Ormeda Moore Marks. The videos contain a few historical pictures.

14.4.6 2020-2029

2020

196. "Never Skip a Baylis Meeting."
[You Tube Link: https://youtu.be/mAEiJCnelH8, [Video Cache]

197. "Melodie Kahler & Bob Marks Interview" September 3, 2020
[You Tube Link: https://youtu.be/j-RVJKwRSVI]

198. "Marks Chronicles: Tristan's Dirt Diving"
[You Tube Link: https://youtu.be/voPqCXjUO9A

199. "Marks Chronicles: Merrick's Interview, June 23, 2020"
[You Tube Link: https://youtu.be/u2HQFjdcMqE]

200. "Marks Chronicles: Tristan & Merrick's Interview, June 23, 2020"
[You Tube Link: https://youtu.be/OjtYWI55z6E]

201. "Marks Chronicles: The Kahler Twins: June 23, 2020 "
[You Tube Link: https://youtu.be/8db5cloJuNo]

202. "Marks Chronicles: Marilee Pregnant With Twins (2020)"
[You Tube Link: https://youtu.be/DaV6guim8vM]

203. "Bob, Bob. Bob Bob Bob."
[You Tube Link: https://youtu.be/yDLScvqg_50]

204. "Tighty Whitey Snow Angels" December 2020 in New Jersey with Leslie, Jeremiah Merrick & Tristan.
[You Tube Link: https://youtu.be/0JgYxPdOSiw]

205. "Merry Chris Mix 2020: Bob. Bawb. Boub, Boughb, Bhoughb."
[You Tube Link: https://youtu.be/Qz581oZdUqA]

206. "WV Field 20201125154606"
[You Tube Link: https://youtu.be/toFrl2sVsqE]

207. "WV Field 20201012134639"
[You Tube Link: https://youtu.be/hn-1txCteq8]

208. "Crab Pinches Nipple Game"
[You Tube Link: https://youtu.be/a_VEbOIiKdQ]

    "April 2020 in Corpus Christi with Tristan & Merrick "

2021

209. "Marks Chronicles - 210919 Melodie"
[You Tube Link: https://youtu.be/RcKgBMc4oIY]

210. "Marks Chronicles: Merrick & West Virginia ... Oct 9, 2021"
[You Tube Link: https://youtu.be/stgI9UraVs4]

2022

211. "Marks Chronicles: Auntie Amal!"
[You Tube Link: https://youtube.com/shorts/SFn6goeT7tY]

212. "The saga of Izzy Stout"
[You Tube Link: https://youtu.be/SmIyFdw3HGk]

    "Arnold Moore's brother-in-law Izzy Stout was a male mail man who shot a man. Gene tells his story on July 4, 2022."

213. "Mouth Trap"
[You Tube Link: https://youtu.be/RO7I9EQtCcI]

    "Kris, Chris, Ray, Marilee, Evelyn, Mason & Marilee - at the Cabin in WV."

214. "Some history of Arnold Moore from Gene.2022 (Civil War)"
[You Tube Link: https://youtu.be/329UBHj7KYc]

215. "Rapping in the Barn at River Ranch - March 21, 2022"
[You Tube Link: https://youtu.be/owTspzhYIz4]

2023

216. "Melodie & Grandad ... Feb 18, 2023"
[You Tube Link: https://youtu.be/-dm0OUeQ3Es]