

Robert J. Marks II

Curriculum Vitae

Abbreviated

(Amplified CV also available: check for hyperlinks)

May 28, 2025

Contents

1	Education	3
2	Contact Information	3
3	Employment History	3
4	Recognition	4
4.1	Honors & Awards	4
4.2	Listings	5
4.3	Honorary Conference Positions	8
5	Professional Societies	9
5.1	Publication Administration	9
5.2	Administrative	10
5.3	Conferences	12
6	Publications	17
6.1	Books	17
6.2	Book Chapters	18
6.3	Journal Articles	23
6.3.1	1970-1979	23
6.3.2	1980-1989	25
6.3.3	1990-1999	28
6.3.4	2000-2009	33
6.3.5	2010-2019	36

6.3.6	2020-2029	40
6.4	Proceedings & Edited Publications	42
6.4.1	1970-1979	42
6.4.2	1980-1989	43
6.4.3	1990-1999	47
6.4.4	2000-2009	53
6.4.5	2010-2019	59
6.4.6	2020-2029	66
6.5	Patents	73
6.6	Endorsements	73
6.7	Abstracts	74
6.7.1	1970-1979	74
6.7.2	1980-1989	74
6.7.3	1990-1999	75
6.7.4	2000-2009	76
6.7.5	2010-2019	77
6.7.6	2020-2029	82
6.8	Web Publications	88
6.8.1	2000-2009	88
6.8.2	2010-2019	88
6.8.3	2020-2029	92
6.9	Selected Talks	106
6.9.1	1980-1989	106
6.9.2	1990-1999	106
6.9.3	2000-2009	108
6.9.4	2010-2019	111
6.9.5	2020-2029	116
7	Research Grants & Contracts	128
8	Professional Activities	134
8.1	Organizations	134
8.2	Expert Witness	134
8.3	Consulting	134

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)
- ◇ DARPA³
- ◇ 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 word they 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 day all 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, tradition which 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.

⋮

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 companies a 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 Lab which 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 endeavour 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 affected and sometimes entirely reshaped by 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 interesting colorful 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 1991/92, 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)]
- ◇ Other¹⁰
 - <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).

¹⁰I 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 30-April 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 & Challenges 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, Otago 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 Structures , 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 Group 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](https://www.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]
6. Marimuthu Palaniswami, Yianni Attikiouzel, Robert J. Marks II, David Fogel and Toshio Fukuda; Editors, Computational Intelligence: A Dynamic System Perspective, IEEE Press, 1995, ISBN 0-7803-1183-5).
7. Russell D. Reed and R.J. Marks II, Neural Smithing: Supervised Learning in Feedforward Artificial Neural Networks, (MIT Press, Cambridge, MA, 1999.)
8. R.J. Marks II, Handbook of Fourier Analysis and Its Applications, Oxford University Press, (2009).
9. 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]
DOI: 10.1142/9789814508728, ISBN-10: 9814508713, ISBN-13: 978-9814508711
10. R.J. Marks II, W.A. Dembski, W. Ewert, *Introduction to Evolutionary Informatics*, (World Scientific, Singapore, 2017).
11. 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]
12. 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).
13. Robert J. Marks II, *Non-Computable You: What You Do Artificial Intelligence Never Will*, Discovery Press (July 2022) .¹¹

¹¹ #1 best seller on Amazon.com in the topical area of *Artificial Intelligence & Semantics*.

14. 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.]

6.2 Book Chapters

1977

1. R.J. Marks II, J.F. Walkup and M.O. Hagler “Volume hologram representation of space-variant systems,” in *Applications of Holography and Optical Data Processing* edited by E. Marom, A.A. Friesem and E. Wiener-Aunear, Oxford: Pergamon Press, pp.105-113 (1977).

1979

2. R. J. Marks II, M. W. Hall, “Ambiguity function display using a single 1-D input,” in *SPIE Milestone Series: Phase Space Optics*, Markus Testorf, Jorge Ojeda-Castañeda, and Adolf Lohmann, Editors, (The Society of Photo-Optical Instrumentation Engineers, Bellingham, WA, 2006) reprinted from *Applied Optics* Vol. 18 (15), pp. 2539-2540 (1979).

1984

3. R.J. Marks II and D.K. Smith “Gerchberg - type linear deconvolution and extrapolation algorithms,” in *Transformations in Optical Signal Processing*, edited by W.T. Rhodes, J.R. Fienup and B.E.A. Saleh, SPIE vol. 373, pp.161-178 (1984)

1988

4. S. Oh, D.C. Park, R.J. Marks II and L.E. Atlas “Error detection and correction in multilevel algebraic optical processors,” in *SPIE Milestone Series: Selected Papers in Optical Computing* edited by H. John Caulfield and G. Gheen, SPIE vol.1142, pp.59-64, 1989 (The Society of Photo-Optical Instrumentation Engineers, Bellingham, WA), reprinted from *Optical Engineering*, vol. 27, #4, pp.289-294 (1988).
5. T. Homma, L.E. Atlas and R.J. Marks II, “A neural network model for vowel classification,” *Proceedings of the 1988 Connectionist Models Summer School*, (Morgan Kaufman Publishers, San Mateo, CA. 1988) pp.380-387. Reprinted from *Proceedings of the International Conference on Acoustics, Speech and Signal Processing*, 1987.

1991

6. M.A. El-Sharkawi, R.J. Marks II and S. Weerasooriya, “Neural networks and their application to power engineering,” in *Advances in Control and Dynamic Systems*, Volume 41, edited by C.T. Leondes, (Academic Press, 1991).

7. D.C. Park, M.A. El-Sharkawi, R.J. Marks II, L.E. Atlas and M.J. Damborg “Electric load forecasting using an artificial neural network,” in Artificial Neural Networks, E. Snchez-Sinencio and C. Lau, editors, pp.516-522, IEEE Press (1992), reprinted from IEEE Transactions on Power Engineering, vol.6, pp.442-449 (1991).
8. D.C. Park, M.A. El-Sharkawi, R.J. Marks II, L.E. Atlas and M.J. Damborg “Electric load forecasting using an artificial neural network,” in Artificial Neural Networks: Forecasting Time Series, V. Rao Vemuri and Robert D. Rogers, editors, pp. 43-59, IEEE Computer Society Press (1994), reprinted from IEEE Transactions on Power Engineering, vol.6, pp.442-449 (1991).

1992

9. L.E. Atlas, R. Cole, Y. Muthusamy, A. Lippman, G. Connor, D.C. Park, M. El-Sharkawi and R.J. Marks II, “A performance comparison of trained multi-layer perceptrons and classification trees,” in Neural Networks, Theoretical Foundations and Analysis, C. Lau, editor, pp.284-288, IEEE Press (1992), reprinted from Proceedings of the IEEE, vol.78, pp.1614-1619 (1990).
10. K.F. Cheung, L.E. Atlas and R.J. Marks II “Synchronous versus asynchronous behavior of Hopfield’s content addressable memory” in Artificial Neural Networks: Concepts and Control Applications, V.R. Vemuri, editor, IEEE Computer Society Press, pp. 142-147, 1992, reprinted from Applied Optics, vol. 26, pp.4808-4813 (1987).

1993

11. R.J. Marks II “The Sampling Theorem,” in The Electrical Engineering Handbook, Richard C. Dorf, Editor, pp.1510-1517, CRC Press, 1993.
12. R.J. Marks II “Acknowledgments,” in Advanced Topics in Shannon Sampling and Interpolation Theory, (Springer-Verlag, 1993).

1994

13. K.F. Cheung, L.E. Atlas and R.J. Marks II “Synchronous versus asynchronous behavior of Hopfield’s content addressable memory” in Selected Papers on Optical Neural Networks edited by Suganda Jutamulia (The Society of Photo-Optical Instrumentation Engineers, Bellingham, WA, 1994), pp.188-193; reprinted from Applied Optics, vol. 26, pp.4808-4813 (1987).
14. R.J. Marks II “A class of continuous level associative memory neural nets,” SPIE Milestone Series: Selected Papers in Optical Neural Networks edited by Suganda Jutamulia (The Society of Photo-Optical Instrumentation Engineers, Bellingham, WA, 1994), pp.331-336; reprinted from Applied Optics, vol.26, pp.2005-2010, (1987).

15. 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,” in SPIE Selected Papers in Holographic Research, Glenn T. Sincerbox, Editor (SPIE Optical Engineering Press, 1994), reprinted from Applied Optics, vol. 16, pp.3131-3135 (1977).
16. Jacek Zurada, R.J. Marks II and C.J. Robinson “Introduction,” Computational Intelligence: Imitating Life, (IEEE Press, 1994), p.v-xi
17. Jacek Zurada, R.J. Marks II and C.J. Robinson “Preface,” Computational Intelligence: Imitating Life, (IEEE Press, 1994), p.iii

1995

18. Russell Reed and Robert J. Marks II “Neurosmithing: Techniques to improve network learning,” in *The Handbook of Neural Networks*, M. Arbib, Editor, (MIT Press, 1995).
19. R.J. Streifel, R.J. Marks II, M.A. El-Sharkawi and I. Kerszenbaum “Twin Signal Sensing: Application to Shorted Winding Monitoring, Detection and Localization,” Applications of Neural Networks in Environment, Energy and Health, P.E. Keller, S.Hashem, L.J. Kangas and R.T. Kouzes, Editors, (World Scientific, Singapore, 1995), pp. 133-134.

1996

20. R.J. Marks II “Artificial Neural Networks: Supervised Learning,” in Artificial Neural Networks with Applications to Power Systems, M.A. El-Sharkawi and Dagmar Niebur, Editors, IEEE, PES Tutorial, 1996.
21. M.A. El-Sharkawi, R.J. Marks II, S.Oh, C.M. Brace, “Data partitioning for training a layered perceptron to forecast electric load,” in Neural Networks Applications, Patrick K. Simpson, Editor, IEEE Technical Activities Board, (IEEE, New York, NY), 1996, pp.265-267; reprinted from Proceedings of the Second International Forum on Applications of Neural Networks to Power Systems), Nagoya, Japan, 1993.

1997

22. R.J. Marks II “The Sampling Theorem,” in The Electrical Engineering Handbook, Second Edition, Richard C. Dorf, Editor, CRC Press, 1997.
23. R.J. Marks II “Alternating Projections onto Convex Sets,” in *Deconvolution of Images and Spectra*, edited by Peter A. Jansson, (Academic Press, San Diego, 1997), pp.476-501.

1998

24. M.A. El-Sharkawi, R.J. Marks II, Robert J. Streifel and I. Kerszenbaum “Detection and Localization of Shorted-Turns in the DC-Field Winding of Turbine-Generator Rotors Using Novelty Filters and Fuzzified Neural Networks,” in *Fuzzy System Theory in Electrical Power Engineering*, M.E. El-Hawary, editor (IEEE Press, 1998), pp.85-111.

2000

25. H.V. Poor, C.G. Looney, R.J. Marks II, S Verdu, J.A. Thomas, T.M. Cover “Information Theory,” in *The Electrical Engineering Handbook*, Boca Raton: CRC Press, 2000.

2002

26. Russell Reed and Robert J. Marks II “Neurosmithing: Techniques to improve network learning,” in *The Handbook of Neural Networks, Second Edition*, M. Arbib, Editor, (MIT Press, 2002)

2007

27. Mingoo Kim, M. A. El-Sharkawi, R. J. Marks, and Ioannis N. Kassabalidis “Application of Evolutionary Technique to Power System Vulnerability Assessment,” in *Modern Heuristic Optimization Techniques: Theory and Applications to Power Systems*, K.Y. Lee and M.A. El-Sharkawi, Eds., IEEE Press 2007.
28. William A. Dembski and R.J. Marks II, “The Jesus Tomb Math,” a Chapter in *Buried Hopes or Risen Saviour* (BandH Publishing Group), 2007.

2010

29. R.J. Marks II, “Evolutionary Computation: A Perpetual Motion Machine for Design Information?” in **Evidence for God: 50 Arguments for Faith from the Bible, History, Philosophy, and Science**, edited by William A. Dembski and Michael R. Licona, Baker Books (2010), pp. 91-96.

2011

30. William A. Dembski and Robert J. Marks II, “Life’s Conservation Law: Why Darwinian Evolution Cannot Create Biological Information” in Bruce Gordon and William Dembski, editors, **The Nature of Nature** (Wilmington, Del.: ISI Books, 2011) pp.360-399

2012

31. R.J. Marks II “The Sampling Theorem,” in *Broadcasting and Optical Communication Technology*, Richard C.Dorf, editor, CRC Press, 2012.
32. R.J. Marks II, “Alternating Projections onto Convex Sets,” in *Deconvolution of Images and Spectra, 2nd edition*, edited by Peter A. Jansson, Dover Publications, pp. 476-501 (2012).

2013

33. Robert J. Marks II, “Information Theory & Biology: Introductory Comments,” in *Biological Information - New Perspectives* Cornell University, edited by R.J. Marks II, M.J. Behe, W.A. Dembski, B.L. Gordon, J.C. Sanford, (World Scientific, Singapore, 2013) pp.1-10
DOI: 10.1142/9789814508728_others01
34. William A. Dembski, Winston Ewert, Robert J. Marks II, “A General Theory of Information Cost Incurred by Successful Search,” in *Biological Information - New Perspectives* Cornell University, edited by R.J. Marks II, M.J. Behe, W.A. Dembski, B.L. Gordon, J.C. Sanford, (World Scientific, Singapore, 2013) pp.26-63
DOI: 10.1142/9789814508728_0002
35. Winston Ewert, William A. Dembski, Robert J. Marks II, “Tierra: The Character of Adaptation,” in *Biological Information - New Perspectives* Cornell University, edited by R.J. Marks II, M.J. Behe, W.A. Dembski, B.L. Gordon, J.C. Sanford, (World Scientific, Singapore, 2013) pp.105-138
DOI: 10.1142/9789814508728_0005
36. George Montañez, Robert J. Marks II, Jorge Fernandez, John C. Sanford, “Multiple Overlapping Genetic Codes Profoundly Reduce the Probability of Beneficial Mutation,” in *Biological Information - New Perspectives* Cornell University, edited by R.J. Marks II, M.J. Behe, W.A. Dembski, B.L. Gordon, J.C. Sanford, (World Scientific, Singapore, 2013) pp.139-167
DOI: 10.1142/9789814508728_0006

2014

37. Winston Ewert, William A. Dembski and Robert J. Marks II, “Algorithmic Specified Complexity,” in *Engineering and the Ultimate: An Interdisciplinary Investigation of Order and Design in Nature and Craft*, edited by Jonathan Bartlett, Dominic Halsmer and Mark Hall (Blyth Institute Press, 2014), pp.131-149.

2018

38. Eric Holloway and Robert J Marks “Observation of Unbounded Novelty in Evolutionary Algorithms is Unknowable.” *Artificial Intelligence and Soft Computing*, pp. 395-404. Springer, Cham, 2018.

2020

39. Robert J. Marks. “Foreword to *Cities and the Digital Revolution Aligning technology and humanity*” by Zaheer Allam. Macmillan, 2020, pp. vii-xii.
40. Robert J. Marks and John West, Foreword to *The Mystery of Life’s Origin: The Continuing Controversy* by Charles R. Thaxton, Walter L. Bradley, Roger L. Olsen, James Tour, Stephen Myer, Jonathan Wells, Guillermo Gonzalez, Brian Miller and David Klinghoffer, Discovery Institute Press, 2020.

2021

41. Robert J. Marks “Will Intelligent Machines Rise Up and Overtake Humanity” in II Casey Luskin, William Dembski and Joe Holden, **The Comprehensive Guide to Science and Faith: Exploring the Ultimate Questions about Life and the Cosmos**, Harvest House, 2021 .

2023

42. Angus Menuge, Brian R. Krouse, Robert J. Marks, “Introduction,” pp. 11-22, in 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.]
43. Eric Holloway and Robert J. Marks II, “Human Creativity Based on Naturalism Does Not Compute,” pp. 383-408, in Angus Menuge, Brian Krouse, Robert J. Marks (Editors), *Minding the Brain: Models of the Mind, Information, and Empirical Science*, Discovery Press, 2023. [MindingTheBrain.org | Cache.]

6.3 Journal Articles**6.3.1 1970-1979****1976**

1. 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).

2. R.J. Marks II, J.F. Walkup and M.O. Hagler "A sampling theorem for space-variant systems," *Journal of the Optical Society of America*, vol. 66, pp.918-921 (1976).
3. R.J. Marks II, J.F. Walkup, and M.O. Hagler "Line spread function notation," *Applied Optics*, vol. 15, pp.2289-2290 (1976).

1977

4. 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).
5. 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).
6. 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).

1978

7. R.J. Marks II and S.V. Bell "Astigmatic processor analysis," *Optical Engineering*, vol. 17, pp.157-169 (1978).
8. 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).
9. 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).

1979

10. R.J. Marks II, J.F. Walkup and M.O. Hagler "Methods of linear system characterization through response cataloging," *Applied Optics*, vol. 18, pp. 655-659 (1979).
11. R.J. Marks II, M.I. Jones, E.L. Kral and J.F. Walkup "One-dimensional linear coherent processing using a single optical element," *Applied Optics*, vol. 18, pp.2783-2786 (1979).
12. R.J. Marks II and J.N. Larson "One-dimensional Mellin transformation using a single optical element," *Applied Optics*, vol. 18, pp.754-755 (1979).
13. 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).
14. R.J. Marks II "Two-dimensional coherent space-variant processing using temporal holography," *Applied Optics*, vol. 18, pp.3670-3674 (1979).

6.3.2 1980-1989**1980**

15. R.J. Marks II "Coherent optical extrapolation of two-dimensional signals: processor theory," *Applied Optics*, vol. 19, pp.1670-1672 (1980).
16. M.O. Hagler, R.J. Marks II, E.L. Kral, J.F. Walkup and T.F. Krile "Scanning technique for coherent processors," *Applied Optics*, vol. 19, pp.1670-1672 (1980).
17. R.J. Marks II "Sampling theory for linear integral transforms," *Optics Letters*, vol. 6, pp.7-9 (1981).

1981

18. R.J. Marks II "Gerchberg's extrapolation algorithm in two dimensions," *Applied Optics*, vol. 20, pp.1815-1820 (1981).
19. D.K. Smith and R.J. Marks II "Closed form bandlimited image extrapolation," *Applied Optics*, vol. 20, pp.2476-2483 (1981).
20. 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).
21. R.J. Marks II and M.J. Smith "Closed form object restoration from limited spatial and spectral information," *Optics Letters*, vol. 6, pp.522-524 (1981).

1982

22. R.J. Marks II "Posedness of a bandlimited image extension problem in tomography," *Optics Letters*, vol. 7, pp.376-377 (1982).
23. D. Kaplan and R.J. Marks II "Noise sensitivity of interpolation and extrapolation matrices," *Applied Optics*, vol. 21, pp.4489-4492 (1982).
24. R.J. Marks II "Restoration of continuously sampled bandlimited signals from aliased data," *IEEE Transactions on Acoustics, Speech and Signal Processing*, vol. ASSP-30, pp.937-942 (1982).

1983

25. 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).

26. 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).
27. R.J. Marks II and D. Kaplan "Stability of an algorithm to restore continuously sampled bandlimited images from aliased data," Journal of the Optical Society of America, vol. 73, pp.1518-1522 (1983).
28. R.J. Marks II "Optical Information Processing by Francis T.S. Yu," Applied Optics, vol. 22, p.3465 (1983)

1984

29. R.J. Marks II and D. Radbel "Error of linear estimation of lost samples in an oversampled bandlimited signal," IEEE Transactions on Acoustics, Speech and Signal Processing, vol. ASSP-32, pp.648-654 (1984).
30. R.J. Marks II "Linear coherent optical removal of multiplicative periodic degradations: processor theory," Optical Engineering, vol. 23, pp.745-747 (1984)

1985

31. R.J. Marks II and S.M. Tseng "Effect of sampling on closed form bandlimited signal interval interpolation," Applied Optics, vol. 24, pp.763-765 (1985); Erratum, vol. 24, p.2490 (1985).
32. F. Salamat and R.J. Marks II "Acousto-optic digital filter," Applied Optics, vol. 24, pp.829-835 (1985).
33. 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).
34. D. Radbel and R.J. Marks II "An FIR estimation filter based on the sampling theorem," IEEE Transactions on Acoustics, Speech and Signal Processing, vol. ASSP-33, pp.455-460 (1985).
35. M.H. Goldberg 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).
36. R.J. Marks II and R. Reightley "On iterative evaluation of extrema of integrals of trigonometric polynomials," IEEE Transactions on Acoustics, Speech and Signal Processing, vol. ASSP-33, pp.1039-1040 (1985).

1986

37. R.J. Marks II "Multidimensional signal sample dependency at Nyquist densities," Journal of the Optical Society of America A, vol. 3, pp.268-273 (1986).

1987

38. R.J. Marks II and L.E. Atlas "Composite matched filtering with error correction," Optics Letters, vol. 12, pp.135-137 (1987).
39. R.J. Marks II "A class of continuous level associative memory neural nets," Applied Optics, vol.26, pp.2005-2010, (1987).
40. R.J. Marks II, J.A. Ritcey, L.E. Atlas and K.F. Cheung "Composite matched filter output partitioning," Applied Optics, vol. 26, pp.2274-2278 (1987).
41. K.F. Cheung, L.E. Atlas, J.A. Ritcey, C.A. Green and R.J. Marks II "Conventional and composite matched filters with error correction: a comparison," Applied Optics, vol. 26, pp.4235-4239 (1987).
42. 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).
43. 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).

1988

44. R.J. Marks II, L.E. Atlas, J.J. Choi, S. Oh, K.F. Cheung and D.C. Park "Performance analysis of associative memories with nonlinearities in the correlation domain," Applied Optics, vol. 27, pp.2900-2904 (1988).
45. 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).
46. W.S. Wu, K.F. Cheung and R.J. Marks II "Multidimensional projection windows," IEEE Transactions on Circuits and Systems, vol. 35, pp.1168-1172 (1988).
47. L.E. Atlas, R.J. Marks II and J.W. Taylor "Network learning modifications for multimodal classification problems: applications to EKG patterns," Neural Networks, vol.1, sup. 1, p.4 (1988).
48. K.F. Cheung, R.J. Marks II and L.E. Atlas "Convergence of Howard's minimum negativity constraint extrapolation algorithm," Journal of the Optical Society of America A, vol.5, pp.2008-2009 (1988).

49. 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).

1989

50. R.J. Marks II “Committee On Neural Systems And Applications CAS Technical,” *IEEE Circuits and Devices Magazine*, Volume 5, #2, pp.11-12, March 1989.
51. S. Oh, D.C. Park , R.J. Marks II and L.E. Atlas “Nondispersive propagation skew in iterative neural networks and optical feedback processors,” *Optical Engineering*, vol.28, pp.526-532 (1989).
52. 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).
53. R.J. Marks II “Optical computing at the University of Washington,” *Laser Focus*, pp.137-138, October 1989.

6.3.3 1990-1999**1990**

54. 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.92-105 (1990).
55. 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).
56. L.E. Atlas, R. Cole, Y. Muthusamy, A. Lippman, G. Connor, D.C. Park, M. El-Sharkawi and 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).
57. 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).
58. R.J. Marks II “The IEEE Neural Networks Council,” *IEEE Transactions on Neural Networks*, vol. 1, p.249 (1990).
59. R.J. Marks II “Welcome,” 1990 International Joint Conference on Neural Networks Conference Guide

1991

- 60. J.N. Hwang, J.J. Choi, S. Oh and R.J. Marks II "Query based learning applied to partially trained multilayer perceptrons," IEEE Transactions on Neural Networks, Vol. 2, pp.131-136, (1991).
- 61. R.J. Marks II "The Focus Of The Council," Connections: Newsletter of the IEEE Neural Networks Council, Vol. 1, No. 1, May 1991, pp. 1. [Newsletter Cache]
- 62. S. Oh and R.J. Marks II "Dispersive propagation skew effects in iterative neural networks," IEEE Transactions on Neural Networks, vol.2, pp.160-162, (1991).
- 63. M.E. Aggoune, M.A. El-Sharkawi, D.C. Park, M.J. Damborg and R.J. Marks II "Preliminary results on using artificial neural networks for security assessment," IEEE Transactions on Power Engineering, vol.6, pp.890-896 (1991) and vol.6, pp.1324-1325 (1991). Addendum
- 64. D.C. Park, M. El-Sharkawi and R.J. Marks II "An adaptively trained neural network," IEEE Transactions on Neural Networks, vol.2, pp.334-345, (1991).
- 65. S. Oh, R.J. Marks II and D. Sarr "Homogeneous alternating projection neural networks," Neurocomputing, volume 3, pp. 69-95 (1991).
- 66. R.J. Marks II "The IEEE Neural Networks Council and IEEE Transnationalism," Connections: Newsletter of the IEEE Neural Networks Council, Vol. 1, No. 2, October 1991, pp. 1-2.
- 67. R.J. Marks II "IEEE-NNC welcomes IEEE Computer Society and IEEE Power Engineering Society," Connections: Newsletter of the IEEE Neural Networks Council, Vol. 1, No. 2, October 1991, pp. 6.

1992

- 68. S.Weerasooriya, M.A. El-Sharkawi, M. Damborg and R.J. Marks II "Towards static-security assessment of a large-scale power system using neural networks," IEE Proceedings-C, Vol.139, No. 1, pp. 64-79, (January 1992).
- 69. D.C. Park, M.A. El-Sharkawi, R.J. Marks II, L.E. Atlas and M.J. Damborg "Electric load forecasting using an artificial neural network," IEEE Transactions on Power Engineering, vol.6, pp.442-449 (1991).
- 70. D.C. Park, O. Mohammed, Seho Oh, S.Y. Chung, R.J. Marks II "A correlation based associative memory," IEEE Proceedings of Southeastcon, vol. 2, pp 901-904, 1991
- 71. R.J. Marks II "Council Activities," IEEE Transactions on Neural Networks, vol. 2, pp.481-482 (September, 1991).

72. S. Oh, Chung, H.J. Youn, R.J. Marks II and D.C. Park "Correlation based associative memory and its MOS implementation," Analog Integrated Circuits and Signal Processing, vol. 2, pp.223-229, 1992 (Kluwer Academic Publishers).
73. 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.
74. L. Tsang, Z. Chen, S. Oh, R.J. Marks II and A.T.C. Chang "Inversion of snow parameters from passive microwave remote sensing measurements by a neural network trained with a multiple scattering model," IEEE Transactions on Geoscience and Remote Sensing, vol. 30, no.5, pp. 1015-1024 (1992).
75. 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).

1993

76. R.J. Marks II "Transactions Update," IEEE Transactions on Neural Networks, vol. 4, p 1 (January, 1993).
77. R.J. Marks II and Mani Soma, "ISCAS 1995 Update," IEEE Circuits and Systems Magazine, Vol.4, No.2, p.5 (1993).
78. S. Oh. C.Ramon, M.G. Meyer and R.J. Marks II "Resolution enhancement of bi-magnetic images using the method of alternating projections," IEEE Transactions on Biomedical Engineering, vol. 40, no. 4, pp.323-328 (1993).
79. 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).
80. E. Sánchez-Sinencio and R.J. Marks II "Editorial: Computationally Intelligent Video Reviews," IEEE Transactions on Neural Networks, vol. 4, p 2 (March, 1993).
81. R.J. Marks II "Intelligence: Computational Versus Artificial," IEEE Transactions on Neural Networks, vol. 4, p 737 (September, 1993).

1994

82. 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.
83. M.A. El-Sharkawi and R.J. Marks II, "What role can neural networks play in power system engineering," IEEE Power Engineering Review, February 1994, pp. 14-16.

84. C. Ramon, P. Czapski, R.J. Marks II, H.C. Lai and S. Lee "Noninvasive Biomagnetic Sensing of Biological Currents," National Academies of Science and Engineering National Research Council of the United States, Radio Science Meeting, June 19-24, 1994, Seattle, p. 272.
85. S.Oh, R.J. Marks II and L.E. Atlas "Kernel synthesis for generalized time-frequency distributions using the method of alternating projections onto convex sets," IEEE Transactions on Signal Processing, vol. 42, No.7, July 1994, pp.1653-1661.

1995

86. R.J. Marks II "The Transactions Gains Weight," IEEE Transactions on Neural Networks, vol. 6, p 1 (January, 1995).
87. 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.
88. M.A. El-Sharkawi, R.J. Marks II, S.Oh, S.J. Huang, I. Kerszenbaum and A. Rodriguez "Localization of Winding Shorts Using Fuzzified Neural Networks," IEEE Transactions on Energy Conversion, vol. 10, no.1, March 1995, pp.147-155.

1996

89. P. Arabshahi, J.J. Choi, R.J. Marks II and T.P. Caudell "Fuzzy Parameter Adaptation in Optimization: Some Neural Net Training Examples," Computational Science and Engineering, (IEEE Computer Society), vol 3, No 1, Spring 1996, pp.57-65.
90. R.J. Streifel, R.J. Marks II, M.A. El-Sharkawi and I. Kerszenbaum "Detection of Shorted-Turns in the Field Winding of Turbine-Generator Rotors Using Novelty Detectors: Development and Field Test," IEEE Transactions on Energy Conversion, vol.11, no.2, June 1996, pp.312-317.
91. R..J. Marks II "Web Abstracts," IEEE Transactions on Neural Networks, vol.7, p 265 (March, 1996).
92. R.J. Marks II "The Journal Citation Report: Testifying for Neural Networks," IEEE Transactions on Neural Networks, vol.7, no.4, July 1996, p.801.

1997

93. S. Lee, P.S. Cho, R.J. Marks II and S. Oh "Conformal Radiotherapy Computation by the Method of Alternating Projection onto Convex Sets," Phys. Med. Biol., vol.42, July 1997, pp.1065-1086.

94. T. Dillon, P. Arabshahi and R.J. Marks II "Everyday Applications of Neural Networks," IEEE Transactions of Neural Networks, vol. 8, no.4, July 1987, pp.825-826
95. P. Arabshahi, R.J. Marks II, S. Oh, T.P. Caudell, J.J. Choi, and B.G. Song "Pointer Adaptation and Pruning of Min-Max Fuzzy Estimation," IEEE Transactions on Circuits and Systems II: Analog and Digital Signal Processing, vol.44, no.9, September 1997, pp.696-709.
96. R.J. Marks II "The TNN On Line," IEEE Transactions on Neural Networks, vol. 8, (March, 1997).
97. R.J. Marks II "Old Neural Network Editors Don't Die, They Just Prune Their Hidden Nodes," IEEE Transactions on Neural Networks, vol. 8, no 6 (November, 1997), p.1221.

1998

98. P.S. Cho, S. Lee, R.J. Marks II, S. Oh, S.G. Sutlief, M.H. Phillips "Optimization of Intensity Modulated Beams With Volume Constraints Using Two Methods: Cost Function Minimization and Projections Onto Convex Sets," Medical Physics, (Am. Assoc. Phys. Med.), Vol. 25, No.4, pp.435-443 (April 1998).
99. P.S. Cho, H.G. Kuterdem and R.J. Marks II "A spherical dose model for radiosurgery plan optimization," Phys. Med. Biol, vol.43, pp.3145-3148 (1998).

1999

100. M.A. El-Sharkawi, P. Peng and R.J. Marks II "Short term peak load forecasting using detrended partitioned data training of a neuro-fuzzy regression machine," Engineering Intelligent Systems, vol.7, no.9, pp.197-202 (December 1999).
101. C.A. Jensen, M.A. El-Sharkawi and R.J. Marks II "Power Security Boundary Enhancement Using Evolutionary-Based Query Learning," Engineering Intelligent Systems, vol.7, no.9, pp.215-218 (December 1999).
102. 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. 16 -22.
103. Jensen, C.A.; Reed, R.D.; Marks, R.J., II; El-Sharkawi, M.A.; Jae-Byung Jung; Miyamoto, R.T.; Anderson, G.M.; Eggen, C.J. "Inversion of feedforward neural networks: algorithms and applications," Proceedings of the IEEE, Volume: 87 9, Sept. 1999, Page(s): 1536 -1549
104. 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).

6.3.4 2000-2009**2000**

105. P.S. Cho and R.J. Marks II "Hardware-sensitive optimization for intensity modulated radiotherapy," *Phys. Med. Biol*, 2000 (pp. 429-440).
106. A.S. Kulkarni, M.A. El-Sharkawi, R.J. Marks II, G. Andexler, J. Xing and I. Kerszenbaum "Development of a technique for on-line detection of shorts in field windings of turbine-generator rotors: circuit design and testing, " *IEEE Transactions on Energy Conversion*, vol.15, No.1, March 2000 (pp.8-13)

2001

107. Robert J. Marks II "The Well Tempered Pythagorean: The Remarkable Relation Between Western and Natural Harmonic Music," *Computer Books*, pp. 1-16, July 2001
108. C.A. Jensen, M.A. El-Sharkawi and R.J. Marks II "Power System Security Assessment Using Neural Networks: Feature Selection Using Fisher Discrimination," *IEEE Transactions on Energy Conversion*, vol.16, no.4, pp.757-763 (November, 2001).
109. L.S. Moulin, A.P.A. da Silva, M.A. El-Sharkawi, R.J. Marks II "Neural Network and Support Vector Machines Applied to Power Systems Transient Stability Analysis," *International Journal of Engineering Intelligent Systems for Electrical Engineering and Communication*, Volume 9, number 4, December 2001, (pp.205-212)

2002

110. S. Narayanan, P.S. Cho and R.J. Marks II "Fast Cross-Projection Algorithm for Reconstruction of Seeds in Prostate Brachytherapy," *Med. Phys.* 29 (7), July 2002, pp.1572-1579.
111. Ioannis N Kassabalidis, Mohamed El-Sharkawi, Robert J. Marks II "Dynamic Security Border Identification Using Enhanced Particle Swarm," *IEEE Transactions on Power Systems*, Volume: 17 Issue: 3, Aug. 2002, Page(s): 723 -729.
112. L. S. Moulin, A. P. Alves da Silva, M. A. El-Sharkawi, and R. J. Marks II "Support Vector and Multilayer Perceptron Neural Networks Applied to Power Transient Stability Analysis with Input Dimensionality Reduction," *IEEE Transactions on Power Engineering*, Volume 17, 2002, pp.1308-1313.
113. Ceon Ramon, J. Schreiber, Jens Haueisen, Paul Schimpf, Robert J. Marks, Akira Ishimaru "Reconstruction and Enhancement of Current Distribution on Curved Surfaces from Biomagnetic Fields Using POCS," *Canadian Applied Mathematics Quarterly*, vol. 10, No.2, Summer 2002.

2004

114. G. Chrysanthakopoulos, W. L.J. Fox, R. T. Miyamoto, R. J. Marks II, M. A. El-Sharkawi and M. Healy ‘A Fuzzy-Logic Autonomous Agent, Applied as a Supervisory Controller in a Simulated Environment,” IEEE Transactions on Fuzzy Systems, vol 12, #1, February 2004, pp. 107-122.
115. Steve T Lam, Paul S Cho, Robert J Marks II and Sreeram Narayanan, “Three-dimensional seed reconstruction for prostate brachytherapy using Hough trajectories,” Phys. Med. Biol. 49 (2004) pp 557569.
116. L.S. Moulin, A.P.A. da Silva, M.A. El-Sharkawi, R.J. Marks II “Support vector machines for transient stability analysis of large-scale power systems,” IEEE Transactions on Power Systems, Volume: 19 , Issue: 2 , May 2004, Pages 818 - 825.
117. S. Narayanan, P.S. Cho and R.J. Marks II “Three-dimensional seed reconstruction from an incomplete data set for prostate brachytherapy,” Phys. Med. Biol., vol.49, pp.3483-3494 (2004).
118. Jiho Park, R.J. Marks II, D.C. Park and M.A. El-Sharkawi “Content Based Adaptive Spatio-Temporal Methods for MPEG Repair,” IEEE Transactions on Image Processing, Vol. 13, # 8 , pp 1066-1077 (August 2004).
119. Jaemin Kim, Seongwon Cho, Jinsu Choi and Robert J. Marks II “Iris Recognition Using Wavelet Features,” Journal of VLSI Signal Processing Systems, Volume 38, Issue 2, Pages: 147-156, (September 2004)

2005

120. Jiho Park, D.C. Park, R.J. Marks II and M.A. El-Sharkawi “Recovery of Image Blocks Using the Method of Alternating Projections,” IEEE Transactions on Image Processing, Vol. 14, No. 4, pp. 461-471, (April 2005).
121. S.T. Lam, P.S. Cho, R.J.Marks, S. Narayanan “Detection and correction of patient movement in prostate brachytherapy seed reconstruction,” Phys. Med. Biol., vol.50 (#9), Pages 2071-2087, (May 7, 2005).

2006

122. 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).
123. R.J. Marks II “Awards - 2006 CIS neural networks pioneer award,” IEEE Computational Intelligence Magazine, Volume 1, #2, May 2006, pp.45 - 48.

124. Eric C. Green, B. Randall Jean, R. J. Marks II ‘Artificial Neural Network Analysis of Microwave Spectrometry on Pulp Stock: Determination of Consistency and Conductivity,’ IEEE Transactions on Instrumentation and Measurement, vol 55, #6, December 2006, pp.2132-2135.

2007

125. 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.
126. John M. Davis, Ian A. Gravagne, Billy J. Jackson, Robert J. Marks II and Alice A. Ramos “The Laplace Transform on Time Scales Revisited,” Journal of Mathematical Analysis Applications, vol.332 (2007) 12911307.
127. Russell W. Duren, Robert J. Marks II, Paul D. Reynolds and Matthew L. Trumbo “Real-Time Neural Network Inversion on the SRC-6e Reconfigurable Computer,” IEEE Transactions on Neural Networks, vol. 18, no. 3, May 2007 pp. 889-901.
128. Jeffrey J. Weinschenk, William E. Combs, Robert J. Marks II “On the avoidance of rule explosion in fuzzy inference engines,” International Journal of Information Technology and Intelligent Computing, vol.1, #4 (2007).
129. Robert J. Marks II “IEEE Fellows - Class of 2007,” IEEE Computational Intelligence Magazine, pp. 5-9, August 2007

2008

130. Robert J. Marks II, Ian A. Gravagne and John M. Davis “A Generalized Fourier Transform and Convolution on Time Scales,” Journal of Mathematical Analysis and Applications Volume 340, Issue 2, 15 April 2008, Pages 901-919.

2009

131. Matthew L. Trumbo, B. Randall Jean, Robert J. Marks II “A New Modality for Microwave Tomographic Imaging: Transit Time Tomography,” International Journal of Tomography & Statistics, Volume 11, No. W09, Winter 2009, pp. 4-12.
132. 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.5, #5, September 2009, pp.1051-1061
133. John M. Davis, Ian A. Gravagne, Billy J. Jackson, Robert J. Marks II “Controllability, observability, realizability, and stability of dynamic linear systems,” Electronic Journal of Differential Equations. Vol. 2009 (2009), No. 37, pp. 1-32.
arXiv:0901.3764v1 [math.OC]

134. John M. Davis, Ian A. Gravagne and Robert J. Marks II “Convergence of Unilateral Laplace Transforms on Time Scales,” *Circuits, Systems, and Signal Processing*, Birkhäuser Boston, Friday, vol. 29, no. 5, pp. 971-997 [DOI10.1007/s00034-010-9182-8]

6.3.5 2010-2019

2010

135. John M. Davis, Ian A. Gravagne and Robert J. Marks II “Bilateral Laplace Transforms on Time Scales: Convergence, Convolution, and the Characterization of Stationary Stochastic Time Series,” *Circuits, Systems, and Signal Processing*, Birkhäuser Boston, Volume 29, Issue 6 (2010), Page 1141. [DOI 10.1007/s00034-010-9196-2]
136. 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*, Vol.14 No.5, 2010, pp. 475-486.
137. 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)

2011

138. Charles Baylis, Lawrence Dunleavy, Steven Lardizabal, Robert J. Marks II, and Alberto Rodriguez “Efficient Optimization Using Experimental Queries: A Peak-Search Algorithm for Efficient Load-Pull Measurements,” *Journal of Advanced Computational Intelligence and Intelligent Informatics*, Vol.15, No.1 pp. 13-20, 2011
139. B.J. Jackson, J.M. Davis, I.A. Gravagne, R.J. Marks II “Linear state feedback stabilization on time scales,” *International Journal of Dynamical Systems and Differential Equations* 3 (2011), 163177.
arXiv:0910.3034v1 [math.OC]
140. Charles Baylis, Robert J. Marks II, Josh Martin, Hunter Miller, and Matthew Moldovan “Going Nonlinear,” *IEEE Microwave Magazine*, April 2011, pp.55-64

2012

141. Winston Ewert, William A. Dembski and Robert J. Marks II “Climbing the Steiner Tree Sources of Active Information in a Genetic Algorithm for Solving the Euclidean Steiner Tree Problem,” *Biocomplexity*, Vol. 2012, Issue 1, pp.1-14, (April, 2012).
142. Charles Baylis II and Robert J. Marks II “Small Perturbation Harmonic Coupling In Nonlinear Periodicity Preservation Systems,” *IEEE Transactions on Circuits and Systems I: Regular Papers*, vol.59, no.12, pp.3034-3045, Dec. 2012. doi: 10.1109/TCSI.2012.2206438

143. Charles Baylis II and Robert J. Marks II "Evaluation of Harmonic Coupling Weights in Nonlinear Periodicity Preservation Systems," IEEE Transactions on Circuits and Systems I: Regular Papers, vol.59, no.12, pp.3024-3033, Dec. 2012. doi: 10.1109/TCSI.2012.2206441
144. Winston Ewert, William A. Dembski, Ann K. Gauger, and Robert J. Marks II "Time and Information in Evolution," Biocomplexity, Volume 2012, Issue 4, 7 pages. doi:10.5048/BIO-C.2012.4
145. J. Martin, C. Baylis, R.J. Marks II, L. Cohen, and J. de Graaf "A Peak-Search Algorithm for Combined PAE and ACPR Load-Pull," Power Amplifier Symposium, La Jolla, California, September 2012.

2013

146. Albert R. Yu, Benjamin B. Thompson, and Robert J. Marks II "Swarm Behavioral Inversion for Undirected Underwater Search," International Journal of Swarm Intelligence and Evolutionary Computation, Vol. 2 (2013), 8 pages. doi:10.4303/ijsec/235569.
147. Albert R. Yu, Benjamin B. Thompson and Robert J. Marks II "Competitive evolution of tactical multi-swarm dynamics," IEEE Transactions on Systems, Man & Cybernetics: Systems, vol.43, no.3, pp.563,569, May 2013
doi: 10.1109/TSMCA.2012.2210410
148. Winston Ewert, Robert J. Marks II, Benjamin B. Thompson, Albert Yu "Evolutionary Inversion of Swarm Emergence Using Disjunctive Combs Control," IEEE Transactions on Systems, Man & Cybernetics: Systems, v.43 , #5, September 2013 pp.1063-1076.
doi: 10.1109/TSMCA.2012.2227252
149. Albert R. Yu, Benjamin B. Thompson and Robert J. Marks II "Swarm behavioral inversion for undirected underwater search," The International Journal of Swarm Intelligence and Evolutionary Computation, Vol. 2 (2013). 8 pages.
doi: 10.4303/ijsec/235569.
150. Winston Ewert, William A. Dembski & Robert J. Marks II "Active Information in Metabiology," Bio-Complexity, 2013, vol 4, pp.110.
doi:10.5048/BIO-C.2013.4

2014

151. Winston Ewert, and Robert Marks "A Mono-Theism Theorem: Godelian Consistency in the Hierarchy of Inference," Journal of The American Scientific Affiliation: Perspectives on Science and Christian Faith, Vol 66, Number 2, June 2014, pp.103-112.
152. Charles Baylis, Joshua Martin, Matthew Moldovan, Robert J. Marks II, Lawrence Cohen, Jean de Graaf, Robert Johnk and Frank Sanders "Spectrum Analysis Considerations for Radar Chirp Waveform Spectral Compliance Measurements," IEEE

Transactions on Electromagnetic Compatibility, Volume 56 , #3, June 2014, pp.520–529

DOI: 10.1109/TEMPC.2013.2291540

153. Charles Baylis, Matthew Fellows, Lawrence Cohen, and Robert J. Marks II “Solving the Spectrum Crisis: Intelligent, Reconfigurable Microwave Transmitter Amplifiers for Cognitive Radar,” IEEE Microwave Magazine, Volume: 15, Issue:5, July-Aug. 2014, pp. 94 - 107.

DOI: 10.1109/MMM.2014.2321253

2015

154. Jon H. Roach, Robert J. Marks, II and Benjamin B. Thompson “Recovery from Sensor Failure in an Evolving Multiobjective Swarm,” IEEE Transactions on Systems, Man and Cybernetics: Systems, vol. 45, no. 1, January 2015

DOI: 10.1109/TSMC.2014.2347254

155. Michael Lexa, Iwan Sandjaja, Robert J Marks, V. Bogdan Neculaes, Randall Jean, Aghogho Obi, Kirk Marquard, William Platt, Jack M Webster “Using Microwave Metrology to Count Calories,” Measurement (Journal of the International Measurement Confederation), Elsevier, Volume 65, Pages 11-18, April 2015.

156. Winston Ewert, William A. Dembski and Robert J. Marks II “Algorithmic Specified Complexity in the Game of Life,” IEEE Transactions on Systems, Man and Cybernetics: Systems, Volume 45, Issue 4, April 2015, pp. 584-594.

DOI: 10.1109/TSMC.2014.2331917

157. Matthew Fellows, Charles Baylis, Lawrence Cohen, Robert J. Marks II “Real-time load impedance optimization for radar spectral mask compliance and power efficiency,” IEEE Transactions on Aerospace and Electronic Systems, Volume 51, no. 1 (2015) pp.591-599.

DOI:10.1109/TAES.2014.130825

158. Matthew Fellows, Matthew Flachsbarth, Jennifer Barlow, Joseph Barkate, Charles Baylis, Lawrence Cohen, Robert J. Marks II “Optimization of power-amplifier load impedance and waveform bandwidth for real-time reconfigurable radar,” IEEE Transactions on Aerospace and Electronic Systems, 51, no. 3 (2015): 1961-1971.

DOI: 10.1109/TAES.2015.140381

159. Winston Ewert, William A. Dembski, Robert J. Marks II “Measuring meaningful information in images: algorithmic specified complexity,” IET Computer Vision, 2015, Vol. 9, #6, pp. 884894

DOI: 10.1109/TSMC.2014.2331917

160. Charles Baylis, Robert J. Marks, and Lawrence Cohen “Pareto optimization of radar receiver low-noise amplifier source impedance for low noise and high gain,” (Cambridge

University Press and the European Microwave Association) November 2015
DOI: <http://dx.doi.org/10.1017/S1759078715001610>

2016

161. Joseph Barkate, Matthew Flachsbart, Zachary Hays, Matthew Fellows, Jennifer Barlow, Charles Baylis, Lawrence Cohen, and Robert J. Marks II “Fast, simultaneous optimization of power amplifier input power and load impedance for power-added efficiency and adjacent-channel power ratio using the power smith tube,” *IEEE Transactions on Aerospace and Electronic Systems* 52, no. 2 (2016) pp.928-937.
DOI: 110.1109/TAES.2015.150335
162. Matthew Fellows, Lucilia Lamers, Charles Baylis, Lawrence Cohen, Robert J. Marks “A fast load-pull optimization for power-added efficiency under output power and ACPR constraints,” *IEEE Transactions on Aerospace and Electronic Systems*, 2016, v.52, #6, pp.2906 - 2916
DOI: 10.1109/TAES.2016.150313
163. Charles Baylis, Lawrence Cohen, Dylan Eustice, Robert Marks “Myths concerning Woodward’s ambiguity function: analysis and resolution,” *IEEE Transactions on Aerospace and Electronic Systems*, 2016, v.52, #6, pp. 2886 - 2895
DOI: 10.1109/TAES.2016.150735

2017

164. Dylan S. Eustice, Casey Latham, Charles Baylis, Lawrence Cohen, and Robert J. Marks “Amplifier-in-the-Loop Adaptive Radar Waveform Synthesis,” *IEEE Transactions on Aerospace and Electronic Systems* (2017) Pages: 826 - 836
DOI: 10.1109/TAES.2017.2665158
165. Robert J. Marks II. “Meeting Chaitin’s Challenge,” *Perspectives on Science and Christian Faith*, Volume 69 Number 2 June 2017, pp.104-108
166. Winston Ewert and Robert J. Marks II “Conservation of Information in Coevolutionary Searches,” *Bio-Complexity*, Volume 2017, Issue 1, 7 Pages.
DOI10.5048/BIO-C.2017.1.

2019

167. C. Latham, A.Egbert, C. Baylis, L. Cohen, R.J. Marks, “Joint Radar Amplifier Circuit and Waveform Optimization for Ambiguity Function, Power-Added Efficiency, and Spectral Compliance.” *IEEE Transactions on Aerospace and Electronic Systems*, Vol. 55, Issue 3, pp/1190-1199 (2019) [html](#)].

168. Matthew Fellows, Sarvin Rezayat, Lucilia Lamers, Joseph Barkate, Alexander Tsatsoulas, Charles Baylis, and Robert J. Marks II. “Bias Smith Tube Optimization of Drain Voltage and Load Reflection Coefficient to Maximize Power-Added Efficiency under ACPR Constraints for Radar Power Amplifiers.” *IEEE Transactions on Aerospace and Electronic Systems*, Volume 55 , Issue 1, pp. 182-191, Feb. 2019. [html]
DOI: 10.1109/TAES.2018.2849239
169. Robert J. Marks II, “Diversity Inadequacies of Parallel Universes: When the Multiverse Becomes Insufficient to Account for Conflicting Contradistinctions,” *Perspectives on Science and Christian Faith*, Volume 71, Number 3, September 2019 [Link]
170. Sarvin Rezayat, Christopher Kappelmann, Zachary Hays, Lucilia Lamers, Matthew Fellows, Charles Baylis, Ed Viveiros, Abigail Hedden, John Penn, and Robert J. Marks. “Real-Time Amplifier Load-Impedance Optimization for Adaptive Radar Transmitters Using a Nonlinear Tunable Varactor Matching Network.” *IEEE Transactions on Aerospace and Electronic Systems* 55, no. 1 (2019): 160-169. [html]
DOI: 10.1109/TAES.2018.2849198
171. Robert J. Marks II “Subtile Sampling Below the Nyquist Density Using Transposed and Rotated Signals,” *Journal of the Optical Society of America A (JOSA-A)*, vol 36, #8, August 2019, pp.1322-1332.

6.3.6 2020-2029**2020**

172. Daniel Andrés Díaz-Pachón and Robert J. Marks II “Generalized Active Information: Extensions To Unbounded Domains,” *BIO-Complexity*, Volume 2020, Issue 3 (2020) [Link]
173. Daniel Andrés Díaz-Pachón and Robert J. Marks II “Active Information Requirements for Fixation on the Wright-Fisher Model of Population Genetics” *BIO-Complexity*, Volume 2020, Issue 3 (2020) [Link]
174. Robert J. Marks II “Tiling Efflorescence of Expanding Kernels in a Fixed Periodic Array: Generalizing the Flower-Of-Life” *Communications of the Blyth Institute*, Volume 3, Issue 1, pp. 13-34 (2020) [Link]

2021

175. Daniel Andrés Díaz-Pachón, Ola Hössler, Robert J. Marks “Is Cosmological Tuning Fine or Coarse?” *Journal of Cosmology and Astroparticle Physics*, July 9, 2021.
176. Robert J. Marks II, “Solution of the Grazing Goat Problem: A Conflict between Beauty and Pragmatism” *Communications of the Blyth Institute*, Volume 3, Issue 1, pp. 23-27 (2021)

2022

177. Samuel Haug, Robert J. Marks, and William A. Dembski. “Exponential Contingency Explosion: Implications for Artificial General Intelligence.” *IEEE Transactions on Systems, Man, and Cybernetics: Systems*, vol.52, #5, May 2022, pp.2800-2808.
178. A. Egbert, A. Goad, C. Baylis, A. F. Martone, B. H. Kirk and R. J. Marks II, “Continuous Real-Time Circuit Reconfiguration to Maximize Average Output Power in Cognitive Radar Transmitters,” *IEEE Transactions on Aerospace and Electronic Systems*, vol.58, No.3, June 2022. [html cache]
179. Glauco Amigo, Justin M. Bui, Charles Baylis, Robert J. Marks, “Cascade watchdog: a multi-tiered adversarial guard for outlier detection,” *Signal, Image and Video Processing*. (Springer, September 2022.)
180. Pedro Rodriguez-Garcia, Jack Sifri, Caleb Calabrese, Adam Goad, Charles Baylis, and Robert J. Marks. “Spurious Beam Suppression in Dual-Beam Phased Array Transmission by Impedance Tuning,” *IEEE Transactions on Aerospace and Electronic Systems*, 2022 Jun 27.
181. A. Egbert, C. Baylis and R. J. Marks, “Extrapolation of Load-Pull Data: A Novel Use of GAN Artificial Intelligence Image Completion,” *IEEE Transactions on Microwave Theory and Techniques*, vol.70, no. 11 (2022): 4849-4856. [html cache]

2023

182. Daniel Andrés Díaz-Pachón, Ola Hössler, Robert J. Marks “Sometimes size does not matter” *Foundations of Physics* (Springer), Vol 53, (2023) pp. 1-29
183. Roessler, Justin, Alden Fisher, Austin Egbert, Zach Vander Missen, Trevor Van Hoosier, Charles Baylis, Mohammad Abu Khater, Dimitrios Peroulis, and Robert J. Marks. “A Plasma-Switch Impedance Tuner With Microsecond Reconfiguration” *IEEE Transactions on Microwave Theory and Techniques*, vol. 71, no. 1, pp. 296-308, Jan. 2023.
184. A. R. Yu, R. J. Marks II, K. E.Schubert, C. Baylis, A. Egbert, A.Goad, & S. Haug “Dilated POCS: Minimax Convex Optimization” *IEEE Access*, Volume 11, April 5, 2023. [Link.]
185. Robert J. Marks, “The Limits of AI: Separating Computer Science Fact from Computer Science Fiction,” *Salvo Magazine* #64, pp.30-33, Spring 2023. [Web Link, Scan Link.]
186. Adam C. Goad, Charles Baylis, Trevor Van Hoosier, Austin Egbert, Robert J. Marks II, “In-Situ RF Current Assessment for Array Transmission and Optimization,” *IEEE Transactions on Microwave Theory and Techniques*, 2023.

2024

187. Samuel Haug, Adam Goad, Austin Egbert, Charles Baylis, Anthony Martone, and Robert J. Marks, II. "Real-Time Circuit Optimizations for Dual-Function Radar-Communications" IEEE TRANSACTIONS ON RADAR SYSTEMS, VOL. 2, 2024, pp.101-111.
188. Samuel Haug, Adam Goad, Austin Egbert, Charles Baylis, Anthony Martone, and Robert J. Marks. "Real-Time Circuit Optimizations for Dual-Function Radar-Communications." IEEE Transactions on Radar Systems, vol.2, 2024, pp.101-111.
189. Adam Goad, Sarah A. Seguin, Charles Baylis, Trevor Van Hoosier, Emma Lever, Albin Gasiewski, Aravind Venkitasubramony, and Robert J. Marks. "Brokering Spectrum Using Dynamic Spatial-Spectral Masks." IEEE Transactions on Electromagnetic Compatibility, VOL. 66, NO. 4, AUGUST 2024, pp.1243-1251.
190. Trevor Van Hoosier, Jordan Alexander, Mariah Montgomery, Austin Egbert, Justin Roessler, Charles Baylis, and Robert J. Marks. "A Hybrid Data Storage Method for Pulse-to-Pulse Optimizations." IEEE Transactions on Radar Systems, VOL. 2, 2024, pp. 899-909.

2025

191. Robert J Marks, Dimitrios Peroulis, Charles Baylis, Trevor Van Hoosier, Austin Egbert, Justin Roessler, "Utilizing Distributed Circuit Topology Techniques to Achieve Greater Power Handling for High Power Impedance Matching RF Applications" IEEE Transactions on Microwave Theory and Techniques, (in press)

6.4 Proceedings & Edited Publications**6.4.1 1970-1979****1976**

1. R.J. Marks II, J.F. Walkup and T.F. Krile "An improved coherent processor for ambiguity function display," Proceedings of the International Optical Computing Conference, Capri, Italy, September 1976

1977

2. R.J. Marks II, G.L. Wise, D.G. Haldeman and J.L. Whited, "Some preliminary results on detection in Laplace noise," Proceedings of the 1977 Conference on Information Science and Systems, Johns Hopkins University, Baltimore, March-April 1977.

3. R.J. Marks II, J.F. Walkup and M.O. Hagler "Sampling theorems for shift-variant systems," Proceedings of the 1977 Midwest Symposium on Circuits and Systems, Texas Tech University, Lubbock, August 1977.
4. R.J. Marks II, G.L. Wise and D.G. Haldeman "Further results on detection in Laplace noise," Proceedings of the 1977 Midwest Symposium on Circuits and Systems, Texas Tech University, Lubbock, August 1977.
5. T.F. Krile, R.J. Marks II, J.F. Walkup and M.O. Hagler "Space-variant holographic optical systems using phase coded reference beams," Proceedings of the International Optical Computing Conference, San Diego, California, August 1977.
6. R.J. Marks II and J.F. Walkup "Coherent optical processors for ambiguity function display and one-dimensional correlation/convolution operations," Proceedings of the SPIE Symposium/Workshop on the Effective Utilization of Optics in Radar Systems, Huntsville, Alabama, September 1977

1978

7. M.O. Hagler, E.L. Kral, J.F. Walkup and R.J. Marks II "Linear coherent processing using an input scanning technique," Proceedings of the 1978 International Computing Conference, London, England, 1978, pp.148-151

6.4.2 1980-1989**1980**

8. R.J. Marks II and D.K. Smith "An iterative coherent processor for bandlimited signal extrapolation," Proceedings of the 1980 International Computing Conference, Washington D.C., April 1980

1983

9. R.J. Marks II "Superresolution via analysis," Proceedings of the Limits of Passive Imaging Workshop, Mackinac Island, MI, pp.45-55, May 24-26, 1983 - invited paper.
10. R.J. Marks II "Processing group report," Proceedings of the Limits of Passive Imaging Workshop, Mackinac Island, MI, pp.13-17, May 24-26, 1983.

1986

11. R.J. Marks II and L.E. Atlas "Image recognition with inexact processing," Proceedings of the IEEE-IECEJ-ASJ International Conference on Acoustics, Speech and Signal Processing, Tokyo, Japan, March 1986.

1987

12. 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.
13. J.A. Ritcey, L.E. Atlas, A. Somani, D. Nguyen, F. Holt and R.J. Marks II "A signal space interpretation of neural networks," Proceedings of the International Symposium on Circuits and Systems, pp.370-376, Philadelphia, May 1987.
14. R.J. Marks II "Message From the President," Newsletter of the Puget Sound Section of the Optical Society of America, September, 1987.
15. L.E. Atlas, Yunxin Zhao and R.J. Marks II "Application of the generalized time-frequency representation to speech signal analysis," Proceedings of the IEEE Pacific Rim Conference on Communications, Computers and Signal Processing, pp.517-519, Victoria, B.C. Canada, June 4-5, 1987.
16. K.F. Cheung, R.J. Marks II and L.E. Atlas "Neural net associative memories based on convex set projections," Proceedings of the IEEE First International Conference on Neural Networks, San Diego, June 1987, pp.III245-III252.
17. R.J. Marks II, L.E. Atlas and K.F. Cheung "A class of continuous level neural nets," Proceedings of the Fourteenth Congress of the International Commission for Optics, pp.29-30, Quebec City, Quebec Canada, August 24-28, 1987.

1988

18. R.J. Marks II "Gleason's Approximation," EE News (University of Washington), vol.II, No. 5, January 1988, pp.3-4.
19. R.J. Marks II, L.E. Atlas, S. Oh and J.A. Ritcey "The performance of convex set projection based neural networks," Neural Information Processing Systems, Dana Z. Anderson, editor, (American Institute of Physics, New York, 1988), pp. 534-543.
20. L.E. Atlas, T. Homma, and R.J. Marks II "An artificial neural network for spatio-temporal bipolar patterns: application to phoneme classification" Neural Information Processing Systems, Dana Z. Anderson, editor, (American Institute of Physics, New York, 1988) pp.31-40.
21. R.J. Marks II, L.E. Atlas and K.F. Cheung "Architectures for a continuous level neural network based on alternating orthogonal projections," Proceedings of O-E/LASE '88 Conference on Neural Network Models for Optical Computing, Los Angeles, January 1988, SPIE volume 882, pp 90-92.
22. R.J. Marks II, L.E. Atlas, J.J. Choi, S. Oh and D.C. Park "Nonlinearity requirements for correlation based associative memories," Proceedings of O-E/LASE '88 Conference

on Optical Computing and Nonlinear Materials, Los Angeles, January 1988, SPIE volume 881, pp 179-183.

23. R.J. Marks II, L.E. Atlas and S. Oh "Generalization in layered classification neural networks," 1988 IEEE International Symposium on Circuits and Systems, pp. 503-506, Helsinki, 7-9 June, 1988.
24. H. Philipp and R.J. Marks II "Microprocessor based light bridge sensors," Industrial Optical Sensing, SPIE vol.961, pp.28-34, 1988 (The Society of Photo-Optical Instrumentation Engineers, Bellingham, WA)
25. S. Oh, L.E. Atlas, R.J. Marks II and D.C. Park "Effects of clock skew in iterative neural network and optical feedback processors," Proceedings of the IEEE International Joint Conference on Neural Networks, San Diego, July 24-27, 1988, vol.II, pp.429-436
26. R.J. Marks II, L.E. Atlas, D.C. Park and S. Oh "The effect of stochastic interconnects in artificial neural network classification," Proceedings of the IEEE International Conference on Neural Networks, San Diego, July 24-27, 1988, vol.II, pp.437-442.
27. R.J. Marks II "Message From the President," Partially Coherent News (Newsletter of the Puget Sound Section of the Optical Society of America), January 1988, p.2.
28. J.G. McDonnell, R.J. Marks II and L.E. Atlas "Neural networks for solving combinatorial search problems: a tutorial," Northcon/88 Conference Record, vol.II, pp.868-876, (Western Periodicals Co., North Hollywood, CA), Seattle WA, October 1988
29. R.J. Marks II and L.E. Atlas "Geometrical interpretation of Hopfield's content addressable memory neural network," Northcon/88 Conference Record, vol.II, pp.964-977, Seattle WA, October 1988 (Western Periodicals Co., North Hollywood, CA)
30. R.J. Marks II "The President's Whimsey," Partially Coherent News (Newsletter of the Puget Sound Section of the Optical Society of America), March 1988, p.2.
31. R.J. Marks II "Message From the President," Partially Coherent News (Newsletter of the Puget Sound Section of the Optical Society of America), November 1988, p.2.

1989

32. 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.
33. M. Aggoune, M.A. El-Sharkawi, D.C. Park, M.J. Damborg and R.J. Marks II "Preliminary results on using artificial neural networks for security assessment," Proceedings of the 1989 Power Industry Computer Applications (PICA) Conference, pp.252-258, June 1989, Seattle, WA.

34. M.E. Aggoune, L.E. Atlas, D.A. Cohn, M.J. Damborg, M.A. El-Sharkawi and R.J. Marks II "Artificial neural networks for static system security assessment," Proc. 1989 IEEE International Symposium on Circuits and Systems, pp.490-494, 9-11 May 1989, Portland - invited paper.
35. R.J. Marks II, S. Oh, D.C. Park and L.E. Atlas "Skew effects due to optical path length variation in iterative neural processors," Proc. 1989 IEEE International Symposium on Circuits and Systems, pp.474-477, 9-11 May 1989, Portland - invited paper.
36. Z. Li and R.J. Marks II "Accelerated convergence of an iterative implementation of a two dimensional IIR filter," Proc. 1989 IEEE International Symposium on Circuits and Systems, pp.1483-1486, 9-11 May 1989, Portland.
37. S. Oh and R.J. Marks II "Noise sensitivity of projection neural networks," Proc. 1989 IEEE International Symposium on Circuits and Systems, pp.2201-2204, 9-11 May 1989, Portland .
38. M.A. El-Sharkawi, R.J. Marks II, M.E. Aggoune, D.C. Park, M.J. Damborg and L.E. Atlas "Dynamic security assessment of power systems using back error propagation artificial neural networks," Proceedings of the 2nd Annual Symposium on Expert Systems Applications to Power Systems, pp.366-370, 17-20 July 89, Seattle.
39. L.E. Atlas, R.J. Marks II, M. Donnell and J. Taylor "Multi-scale dynamic neural net architectures," Proceedings of the IEEE Pacific Rim Conference on Communications, Computers and Signal Processing, 1-2 June, 1989, Victoria B.C. (Canada) pp.509-512.
40. K.F. Cheung and R.J. Marks II "Papoulis' generalization of the sampling theorem in higher dimensions and its application to sample density reduction," Proc. International Conference on Circuits and Systems, July 6-8, 1989, Nanjing, China
41. K.F. Cheung, M.C. Poon and R.J. Marks II "A multidimensional extension of Papoulis' sampling expansion and some applications," Proceedings of the 1989 International Symposium on Computer Architecture and Digital Signal Processing (Hong Kong Convention and Exhibition Centre, 11-14 October, 1989), pp.267-272.
42. K.F. Cheung, S. Oh, R.J. Marks II and L.E. Atlas "Bernoulli clamping in alternating projection neural networks," Proceedings of the 1989 International Symposium on Computer Architecture and Digital Signal Processing (Hong Kong Convention and Exhibition Centre, 11-14 October, 1989), pp.41-45.
43. L.E. Atlas, J. Conner, D.C. Park, M.A. El-Sharkawi, R.J. Marks II, A. Lippman, R. Cole and Y. Muthusamy "A performance comparison of trained multi-layer perceptrons and trained classification trees," Proc. 1989 IEEE International Conference on Systems, Man and Cybernetics, (Hyatt Regency, Cambridge, Massachusetts, 14-17 Nov. 1989), pp.915-920
44. J.N. Hwang, J.J. Choi S. Oh and R.J. Marks II "Classification boundaries and gradients of trained multilayer perceptrons," Proc. 1990 IEEE International Symposium on Circuits and Systems, (1-3 May, 1989, New Orleans , Louisiana) pp. 3256-3259.

6.4.3 1990-1999**1990**

45. L.E. Atlas, D. Cohn, R. Ladner, M.A. El-Sharkawi, R.J. Marks II, M.E. Aggoune, D.C. Park "Training connectionist networks with queries and selective sampling," *Advances in Neural Network Information Processing Systems 2*, Morgan Kaufman Publishers, Inc., San Mateo, CA., 1990, pp.566-573.
46. M.J. Damborg, M.A. El-Sharkawi, M.E. Aggoune and R.J. Marks II "Potential of artificial neural networks to power system operation," *Proc. 1990 IEEE International Symposium on Circuits and Systems*, (1-3 May, 1989, New Orleans , Louisiana) pp. 2933-2937.
47. R.J. Marks II "Welcome," *Proceedings of the International Joint Conference on Neural Networks (IJCNN)*, San Diego, June 17-21, 1990.
48. L.E. Atlas, R. Cole, J. Connor, M. El-Sharkawi, R.J. Marks II, Y. Muthusamy and E. Barnard "Performance comparisons between backpropagation networks and classification trees on three real-world applications," *Advances in Neural Network Information Processing Systems 2*, Morgan Kaufman Publishers, Inc., San Mateo, CA. 1990.
49. D. Cohn, L.E. Atlas, R. Ladner, M.A. El-Sharkawi, R.J. Marks II, M.E. Aggoune, D.C. Park "Training connectionist networks with queries and selective sampling," *Advances in Neural Network Information Processing Systems 2*, Morgan Kaufman Publishers, Inc., San Mateo, CA. 1990.
50. C.M. Lam, D.C. Park, L. Tsang, R.J. Marks II. A. Ishimaru and S. Kitamura "Determination of particle distribution using a neural network trained with backscatter measurement," *Proc. 1990 IEEE Ap-S International Symposium and URSI Radio Science Meeting*, 7-11 May, 1990, Dallas, Texas.
51. A. Ishimaru, R.J. Marks II, L. Tsang, C.M. Lam, D.C. Park and S. Kitamaru "Optical sensing of particle size distribution by neural network technique," *Proc. 10th Annual International Geoscience and Remote Sensing Symposium*, 20-24 May, 1990 , Washington, D.C., (IEEE Press) vol. III, pp. 2129-2132.
52. J.N. Hwang, C.H. Chan, R.J. Marks II "Frequency selective surface design based on iterative inversion of neural networks," *Proceedings of the International Joint Conference on Neural Networks*, San Diego, 17-21 June 1990, vol. I, pp.I39-I44.
53. J.N. Hwang, J.J. Choi, S. Oh, R.J. Marks II "Query learning based on boundary search and gradient computation of trained multilayer perceptrons," *Proceedings of the International Joint Conference on Neural Networks*, San Diego, June, 1990, 17-21 June 1990, vol. III, pp.III57-III62.
54. R.J. Marks II "Neural networks for classification and regression," *Proc. of the First Workshop on Neural Networks: Academic /Industrial /NASA /Defense*, Auburn University and Conference Center, 4-6 February, 1990, Auburn, Alabama - invited paper.

55. M.E. Aggoune, M.J. Damborg, M.A. El-Sharkawi, R.J. Marks II and L.E. Atlas "Dynamic and static security assessment of power systems using artificial neural networks," Proceedings of the NSF Workshop on Applications of Artificial Neural Network Methodology in Power Systems Engineering, April 8-10, 1990, Clemson University, pp.26-30.
56. 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.
57. J.N. Hwang, R.J. Marks II and L.E. Atlas "Neural network research at the University of Washington - recent results and applications," Northcon/90 Conference Record, (Western Periodicals Co., North Hollywood, CA), Seattle WA, October 9-11, 1990, pp. 263-268 - invited paper.
58. S. Weerasooriya, M.A. El-Sharkawi, M. Damborg and R.J. Marks II "Towards static security assessment of a large scale power system using neural networks," IEEE Power Engineering Systems 1991 Summer Meeting, , Minneapolis, Minnesota, 15-19 July 1990.
59. D.C. Park, M.A. El-Sharkawi, R.J. Marks II, L.E. Atlas and M.J. Damborg "Electric load forecasting using an artificial neural network," IEEE Power Engineering Systems 1990 Summer Meeting, Minneapolis, Minnesota, 15-19 July 1990.
60. S.Oh and R.J. Marks II "Performance attributes of generalized time-frequency representations with double diamond and cone shaped kernels," Proceedings of the Twenty Fourth Asimomar Conference on Signals, Systems and Computers, 5-7 November, 1990, Asilomar Conference Grounds, Monterey, California
61. M.A. El-Sharkawi, R.J. Marks II, M.J. Damborg, L.E. Atlas, D.A. Cohn and M. Aggoune "Artificial neural networks as operator aid for on-line static security assessment of power systems," Proceedings of the Power Systems Computation Conference, Graz, Austria (August 19-24, 1990), pp.895-901.

1991

62. L. Tsang, Z. Chen, S. Oh, R.J. Marks II and A.T.C. Chang "Inversion of snow parameters from passive microwave remote sensing measurements by a neural network trained with a multiple scattering model," Proceedings of the 1991 International Geoscience and Remote Sensing Symposium, 3-7 June 1991, Espoo, Finland.
63. R.J. Marks II "Welcome," Proceedings of the International Joint Conference on Neural Networks (IJCNN), Seattle, July 8-12, 1991.
64. Z. Li, R. Krishnan and R.J. Marks II "A modularized RNS-decimal number conversion algorithm and its implementation," Proceedings of the IEEE Pacific Rim Conference

on Communications, Computers and Signal Processing, pp.319-322, May 9-10, 1991 , Victoria, B.C. Canada.

65. D.C. Park, O. Mohammed, M.A. El-Sharkawi and R.J. Marks II "Adaptively trained neural networks and their application to electric load forecasting," Proceedings of the International Symposium on Circuits and Systems, 11-14 June, 1991, Singapore, volume 2, pp.1125-1128.
66. M.A. El-Sharkawi and R. J. Marks II "Preface," in Applications of Neural Networks to Power Systems, (Proceedings of the First International Forum on Applications of Neural Networks to Power Systems), July 23-26, 1991, Seattle, WA, (IEEE Press).
67. M.A. El-Sharkawi and R. J. Marks II "A Brief History Of Neural Networks," in Applications of Neural Networks to Power Systems, (Proceedings of the First International Forum on Applications of Neural Networks to Power Systems), July 23-26, 1991, Seattle, WA, (IEEE Press).
68. M.A. El-Sharkawi, S.Oh, R.J. Marks II, M.J. Damborg and C.M. Brace "Short Term Electric load forecasting using an adaptively trained layered perceptron," Applications of Neural Networks to Power Systems, (Proceedings of the First International Forum on Applications of Neural Networks to Power Systems), July 23-26, 1991, Seattle, WA, (IEEE Press, pp.3-6).
69. S.Oh, R.J. Marks II and M.A. El-Sharkawi "Query based learning in a multilayered perceptron in the presence of data jitter," Applications of Neural Networks to Power Systems, (Proceedings of the First International Forum on Applications of Neural Networks to Power Systems), July 23-26, 1991, Seattle, WA, (IEEE Press, pp.72-75).
70. D.C. Park, O. Mohammed, M.A. El-Sharkawi and R.J. Marks II "An adaptively trainable neural network and its application to electric load forecasting," Applications of Neural Networks to Power Systems, (Proceedings of the First International Forum on Applications of Neural Networks to Power Systems), July 23-26, 1991, Seattle, WA, (IEEE Press, pp.7-11).
71. M.A. El-Sharkawi and R.J. Marks II "Electric load forecasting using adaptive neural networks," Proceedings of the International Symposium on Circuits and Systems, Singapore, 11-14 June 1991.
72. J.J. Choi, S.Oh and R.J. Marks II "Training layered perceptrons using low accuracy computation," Proceedings of the International Joint Conference on Neural Networks, Singapore, 18-20 Nov 91, IEEE Press, pp.554-559.
73. C.F. Bas and R.J. Marks II "The layered perceptron versus the Neyman-Pearson optimal detection," Proceedings of the International Joint Conference on Neural Networks, Singapore, 18-20 Nov 91, IEEE Press, pp.1486-1489.
74. M.A. El-Sharkawi and R.J. Marks II "Can neural networks play a role in power system engineering?," Proc. NSF/EPRI Workshop on Advanced Computing Applications to Power Engineering, Victoria, B.C., October 16-18, 1991.

75. R.J. Marks II "Message from President: IEEE Neural Networks Council," 1991 International Joint Conference on Neural Networks, Singapore, November 18-21 (1991)

1992

76. Witali L. Dunin-Barkowski, R.J. Marks II, Wesley E. Snyder "Preface," Proceedings of the 1992 RNNS/IEEE Symposium on Neuroinformatics and Neurocomputing, Rostov-on-Don, Russia, October 7- 10, 1992.
77. Bob Marks, "Fuzzies" IEEE CoNNections, Volume 2, #1, February 1992
78. C.Ramon, S.Oh, M.G. Meyer and R.J. Marks II "Biomagnetic image reconstruction using the method of alternating projections," Proceedings of the SPIE, vol.1652, 1992.
79. 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.
80. J.J. Choi, P. Arabshahi, R.J. Marks II and T.P. Caudell "Fuzzy parameter adaptation in neural systems," Proceedings of the International Conference on Neural Networks, Baltimore, June 1992.
81. R. Reed, S. Oh and R.J. Marks II "Regularization using jittered training data," Proceedings of the International Joint Conference on Neural Networks, Baltimore MD, pp.III147-III152, June 1992.
82. R. Reed and R.J. Marks II "Genetic Algorithms and Neural Networks: An Introduction," Northcon/92 Conference Record, (Western Periodicals Co., Ventura, CA), Seattle WA, October 19-21, 1992, pp.293-301
83. M.A. El-Sharkawi, S.J. Huang and R.J. Marks II "Applications of Neural Networks for Power Engineering," Northcon/92 Conference Record, (Western Periodicals Co., Ventura, CA), Seattle WA, October 19-21, 1992, pp.302-307
84. R. Reed, R.J. Marks II and S.Oh "An equivalence between sigmoidal gain scaling scaling and training with noisy (jittered) input data," Proceedings of the RNNS/IEEE Symposium on Neuroinformatics and Neurocomputing, (Rostov-on-Don, Russia, October, 1992), pp. 120-127, IEEE
85. R.J. Marks II, S.Oh, P. Arabshahi, T.P. Caudell, J.J. Choi and B.G. Song "Steepest descent of min-max fuzzy if-then rules," Proceedings of the International Joint Conference on Neural Networks, Beijing, vol. III, pp. 471-477, November 3-6, 1992.

1993

86. R.J. Marks II "EE Talent," University of Washington EE News, vol. 4, No.1, February 1993.

87. S. Oh and R.J. Marks II, "Alternating projections onto fuzzy convex sets," Proceedings of the Second IEEE International Conference on Fuzzy Systems (FUZZ-IEEE '93), San Francisco, March 1993, vol.1, pp. 148-155.
88. R.J. Marks II "Moscow Airport Encounters," University of Washington EE News, March 1993, Volume 4, Number 2, p.8.
89. 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
90. J.E. Sanders, R.D. Reed and R.J. Marks II "Neural Network Aided Prosthetic Alignment," Proceedings of the IEEE 15th Annual International Conference on Engineering in Medicine and Biology, October 28-31, 1993 (San Diego).76
91. M.A. El-Sharkawi, R.J. Marks II, S. Oh and C.M. Brace "Data partitioning for training a layered perceptron to forecast electric load," Proceedings of the Second International Forum on Applications of Neural Networks to Power Systems), Nagoya, Japan, 1993
92. Sanders JE, Reed RD , and Marks RJ II "Computer-aided prosthetic alignment for lower-limb amputees," Proceedings of the IEEE Engineering in Medicine and Biology Society Conference, San Diego, California, pp. 1282-1283, October, 1993
93. Robert J. Marks II "Marks on Marx on Rostov-on-Don," EE Alumni Newsletter, University of Washington, Summer 1993, pp.8,10-11.
94. P. Arabshahi, R.J. Marks II and T.P. Caudell "Adaptation of Fuzzy Inferencing: A Survey," Proceedings of the IEEE/Nagoya University WWW on Learning and Adaptive Systems, pp.1-9, October 22-23, 1993, Nagoya University, (Nagoya, Japan) - invited paper.

1994

95. R.J. Marks II "Greetings from the Technical Director," Proceedings of the IEEE World Congress on Computational Intelligence, June 26 - July 2, 1994 Walt Disney World Dolphin Hotel, Orlando, Florida.
96. R.J. Marks II and Payman Arabshahi "Fourier Analysis and Filtering of a Single Hidden Layer Perceptron," Proceedings of the 1994 International Conference on Artificial Neural Networks (Springer-Verlag, London), pp.1099-1104, May 26-29, 1994, Sorrento, Italy.
97. M.A. El-Sharkawi, S.J. Huang, R.J. Marks II, S. Oh, I. Kerszenbaum, A. Rodriguez "Neural Network Application to Short Turn Location Using Fuzzified Data," Proceedings of the International Conference on Intelligent System Application to Power Systems, A. Hertz, A.T. Holen and J.C. Rault, Editors, pp.129-133, Montpellier, France, September 5-9, 1994.

98. J.E. Sanders, R.D. Reed and R.J. Marks II "Dynamic Alignment of a lower limb prosthesis by computational analysis of gait force-time data," Proceedings of the Eighth Canadian Biennial Conference, Canadian Society for Biomechanics, Calgary, August 18-20, 1994, pp. 50-51.

1995

99. R.J. Marks II, Loren Laybourn, Shinhak Lee and Seho Oh "Fuzzy and extra crisp alternating projection onto convex sets (POCS)," Proceedings of the International Conference on Fuzzy Systems (FUZZ-IEEE), pp. 427-435, Yokohama, Japan, March 20-24, 1995. (Announcement)
100. R.C. von Doenhoff, R.J. Streifel and R.J. Marks II "Carbon Brake Friction Model Parameter Identification Using Genetic Algorithms," Proceedings of the 1995 Design Engineering Technical Conferences, DE-Vol.84-1, vol.3 - Part A, American Society of Mechanical Engineers (ASME), Boston Massachusetts, September 17-20, 1995.
101. R.D. Reed, J.E. Sanders and R.J. Marks II "Neural network aided prosthetic alignment," Proceedings of IEEE International Conference on Systems, Man and Cybernetics, pp. 505-508, Vancouver, British Columbia, Canada, October 22-25, 1995
102. Russell D. Reed and Robert J. Marks II "An Evolutionary Algorithm for Function Inversion and Boundary Marking," Proceedings of the IEEE International Conference on Evolutionary Computation, p. 794-797, Perth, Australia. November 26-30, 1995.

1996

103. R.J. Marks II "Neural Network Evolution: Some Comments on the Passing Scene," Proceedings of the IEEE International Conference on Neural Networks (ICNN), pp.1-6, Washington D.C., June 2-6, 1996

1997

104. P. Cho, S. Lee, R.J. Marks II and S. Oh "Comparison of algorithms for intensity modulated beam optimization: projections onto convex sets and simulated annealing," Proceedings of the XII International Conference on the Use of Computers in Radiation Therapy, pp.310-312, May, 1997, Salt Lake City.
105. Craig A. Jensen, Russell D. Reed, Mohamed A. El-Sharkawi, Robert J. Marks II "Location of Operating Points on the Dynamic Security Border Using Constrained Neural Network Inversion," Proceedings of the International Conference on Intelligent Systems Applications to Power Systems (ISAP), pp.209-217, Seoul, Korea, July 6-10, 1997.
106. R.J. Marks II and M.A. El-Sharkawi "Shorted Windings Sensing for Excited Electrical Machines," Proceedings of The 1997 IEEE International Symposium on Diagnostics for

Electrical Machines, Power Electronics and Drives, (SDEMPED '97), Carry-le-Rouet, France, September 1-3, 1997, pp.218-222

1998

107. George Chrysanthakopoulos and Robert J. Marks II "Simulated Autonomous Agents Utilizing Self-Reflection, Instincts and External Behavior Learning in a Simulated Environment: Orgs in Orgland," Proceedings of the 1998 IEEE International Conference on Evolutionary Computation (ICEC) at the 1998 IEEE World Congress on Computational Intelligence, Anchorage, Alaska, May 5-9, 1998, pp.727-734

6.4.4 2000-2009

2000

108. H.G. Kuterdem, Paul Cho, R.J. Marks II, M.H. Phillips and H. Parsaei "Comparison of Leaf Sequencing Techniques: Dynamic vs. Multiple Static Segments," International Conference on the Use of Computers in Radiation Therapy XIII, Heidleberg, Germany (May 22-25, 2000), pp.213-215.
109. S.T. Lam, R.J. Marks II and Paul Cho "Prostate boundary detection and visualization in TRUS Images," International Conference on the Use of Computers in Radiation Therapy XIII, Heidleberg, Germany (May 22-25, 2000), pp.99-101.

2001

110. I. Kassabalidis, M.A.El-Sharkawi, R.J.Marks II, P. Arabshahi, A.A.Gray "Swarm Intelligence for Routing in Communication Networks," IEEE Globecom 2001, Nov. 25-29, 2001 , San Antonio , Texas.
111. S. Lam, P. Cho and R.J. Marks II "Prostate Brachytherapy Seed Segmentation Using Spoke Transform," Proceedings SPIE Conference of Medical Imaging, 17-23 February 2001, San Diego, pp.1490-1500.
112. A.P. Alves da Silva, A.J. Rocha Reis, M.A. El-Sharkawi, R.J. Marks II "Enhancing Neural Network Based Load Forecasting Via Preprocessing," IEEE ISAP2001, Budapest, Hungary, June 18-21,2001, pp.118-123.
113. P. Arabshahi, Andrew Gray, I. Kassabalidis, Arindam Das, Sreeram Narayanan, M. El-Sharkawi and R.J. Marks II "Adaptive Routing in Wireless Communication Networks Using Swarm Intelligence," Proc. 19th AIAA Int. Communications Satellite Systems Conf., 17-20 April 2001, Toulouse, France.

114. Jae-Byung Jung, Mohamed A. El-Sharkawi, Robert J. Marks II, Robert T. Miyamoto, Warren L. J. Fox, G.M. Anderson and C.J. Eggen "Neural Network Training for Varying Output Node Dimension," Proceedings of the International Joint Conference on Neural Networks 2001, Washington D.C., pp.1733-1738
115. Jae-Byung Jung, Mohamed A. El-Sharkawi, G.M. Anderson, Robert T. Miyamoto, Robert J. Marks II, Warren L. J. Fox and C.J. Eggen "Team Optimization of Cooperating Systems: Application to Maximal Area Coverage," Proceedings of the International Joint Conference on Neural Networks 2001, Washington D.C. pp. 2212-2217.

2002

116. 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.
117. R.J. Marks and Sreeram Narayanan "Interpolation of Discrete Periodic Nonuniform Decimation Using Aliasing Unraveling," IEEE International Symposium on Circuits and Systems, Scottsdale, Arizona, May 26-29, 2002, pp. I 281 - I 284.
118. Jiho Park, D.C. Park, R.J. Marks II, M.A. El-Sharkawi "Block Loss Recovery in DCT Image Encoding Using POCS," IEEE International Symposium on Circuits and Systems, Scottsdale, Arizona, May 26-29, 2002, pp.V 245 - V 248.
119. R.J. Marks II, A.K. Das, M.A. El-Sharkawi, P. Arabshahi and Andrew Gray "Minimum Power Broadcast Trees for Wireless Networks," IEEE International Symposium on Circuits and Systems, Scottsdale, Arizona, May 26-29, 2002, pp. I 273 - I 276.
120. Sreeram Narayanan, R.J. Marks II , John L. Vian, J.J. Choi, M.A. El-Sharkawi and Benjamin B. Thompson "Set Constraint Discovery: Missing Sensor Data Restoration Using Auto-Associative Regression Machines," Proceedings of the 2002 International Joint Conference on Neural Networks, 2002 IEEE World Congress on Computational Intelligence, May12-17, 2002, Honolulu, pp. 2872-2877.
121. Benjamin B Thompson, Robert J Marks II , Jai J Choi, Mohamed A El-Sharkawi "Implicit Learning in Autoencoder Novelty Assessment," Proceedings of the 2002 International Joint Conference on Neural Networks, 2002 IEEE World Congress on Computational Intelligence, May12-17, 2002, Honolulu, pp. 2878-2883.
122. Robert J. Marks II, Arindam K. Das , Mohamed El-Sharkawi, Payman Arabshahi, Andrew Gray "Maximizing Lifetime in an Energy Constrained Wireless Sensor Array Using Team Optimization of Cooperating Systems," Proceedings of the 2002 International Joint Conference on Neural Networks, 2002 IEEE World Congress on Computational Intelligence, May12-17, 2002, Honolulu, pp.371-376.

123. I. Kassabalidis, Mohamed El-Sharkawi, Robert J. Marks II, Payman Arabshahi, Andrew Gray "Adaptive-SDR: Adaptive Swarm-based Distributed Routing," Proceedings of the 2002 International Joint Conference on Neural Networks, 2002 IEEE World Congress on Computational Intelligence, May12-17, 2002, Honolulu, pp. 2878-2883.
124. I.N. Kassabalidis, Mohamed El-Sharkawi, Robert J. Marks II "Border Identification For Power System Security Assessment Using Neural Network Inversion: An Overview," 2002 Congress on Evolutionary Computation, 2002 IEEE World Congress on Computational Intelligence May 12-17, 2002, Honolulu, pp.1075-1079.
125. A.K. Das, R.J. Marks II, M.A. El-Sharkawi, Payman Arabshahi and Andrew Gray "Minimum Power Broadcast Trees for Wireless Networks: Optimization Using the Viability Lemma," Proceedings of the NASA Earth Science Technology Conference, June 11-13, 2002 , Pasadena, CA
126. A.K. Das, R.J. Marks II, M.A. El-Sharkawi, P. Arabshahi, and A. Gray "The minimum power broadcast problem in wireless networks: an ant colony system approach," Proc. IEEE CAS Workshop on Wireless Communications and Networking, Pasadena, CA, Sept. 5-6, 2002.
127. Warren L. J. Fox, Robert J. Marks II, Megan U. Hazen, Chris J. Eggen, Mohamed A. El-Sharkawi "Environmentally Adaptive Sonar Control in a Tactical Setting," in 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, pp. 595-602, Sept. 2002.
128. Steve T. Lam, Robert J. Marks II, and Paul S. Cho "Three dimensional seed reconstruction in prostate brachytherapy using Hough transformations," Proc. SPIE Vol 4790, pp. 443-453, Applications of Digital Image Processing XXV;Andrew G. Tescher Ed. Nov. 2002.
129. Seongwon Cho, Jaemin Kim, C.S. Lim, Robert Marks "Neural Network Based Human Iris Recognition," 2nd International Conference on Computer an Information Science (ICIS 2002), Seoul, Korea, August 2002, pp.244-248.
130. Seongwon Cho, Jaemin Kim, C.S. Lim, Robert Marks "Dynamic Competitive Learning Neural Network," 2nd International Conference on Computer an Information Science (ICIS 2002), Seoul, Korea, August 2002, pp.250-254.
131. M.U. Hazen, R.J. Marks, W.L.J. Fox, M.A. El-Sharkawi, C.J. Eggen "Sonar sensitivity analysis using a neural network acoustic model emulator," Oceans '02 MTS/IEEE, Biloxi, Mississippi, Volume: 3, Oct. 29-31, 2002, pp. 1430 -1433

2003

132. 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 For-

- mulations,” Proceedings of IEEE INFOCOM (The Conference of Computer Communications), March 30- April 3, 2003 , San Francisco , CA .
133. Jeffrey J. Weinschenk, Robert J. Marks II, William E. Combs “Layered URC fuzzy systems: a novel link between fuzzy systems and neural network,” 2003 International Joint Conference on Neural Networks, July 20-24, 2003 , Portland , Oregon (pp. 2995-3000).
 134. Benjamin B. Thompson, Robert J. Marks II, and Mohamed A. El-Sharkawi “On the Contractive Nature of Autoencoders: Application to Missing Sensor Restoration,” 2003 International Joint Conference on Neural Networks, July 20-24, 2003 , Portland , Oregon (pp. 3011-3016)
 135. Sreeram Narayanan, John L. Vian, J.J. Choi, R.J. Marks II, M.A. El-Sharkawi, and Benjamin B. Thompson “Missing Sensor Data Restoration for Vibration Sensors on a Jet Aircraft Engine,” 2003 International Joint Conference on Neural Networks, July 20-24, 2003, Portland, Oregon (pp. 3007-3010).
 136. Benjamin B. Thompson, Robert J. Marks II, Mohamed A. El-Sharkawi, Warren J. Fox, and Robert T. Miyamoto “Inversion of Neural Network Underwater Acoustic Model for Estimation of Bottom Parameters Using Modified Particle Swarm Optimizers,” 2003 International Joint Conference on Neural Networks, July 20-24, 2003 , Portland, Oregon (pp. 1301-1306).
 137. T. P. Mann, C. Eggen, Warren L. J. Fox, D. Krout, G. Anderson, M. A. El Sharkawi, and Robert J. Marks II “Orthogonal transformation of output principal components for improved tolerance to error,” 2003 International Joint Conference on Neural Networks, July 20-24, 2003, Portland, Oregon (pp.1290-1294).
 138. Jeffrey J. Weinschenk, William E. Combs, Robert J. Marks II “Avoidance of rule explosion by mapping fuzzy systems to a disjunctive rule configuration,” 2003 International Conference on Fuzzy Systems (FUZZ-IEEE), St. Louis, May 25-28, 2003.
 139. M.A. El-Sharkawi and R.J. Marks II “Missing sensor restoration for system control and diagnosis,” Symposium on Dyagnostics for Electric Machines, Power Electronics and Drives, Atlanta, GA 24-26 August 2003, pp. 338-341.
 140. A.K. Das, R.J. Marks II, M.A. El-Sharkawi, Payman Arabshahi and Andrew Gray “A Cluster-Merge Algorithm for Solving the Minimum Power Broadcast Problem in Large Scale Wireless Networks,” Military Communications Conference, 2003. MIL-COM 2003. IEEE , Volume: 1 , 13-16 Oct. 2003 Pages:416 - 421
 141. M.A. El-Sharkawi and Robert J. Marks II “Missing Sensor Restoration for Systems Control and Diagnosis,” SDEMPED 2003 - Symposium for Diagnostics for Electric Machines, Power Electronics and Drives, Atlanta, GA, USA, 24-26 August 2003, pp. 338-341.

142. A.K. Das, R.J. Marks II, M.A. El-Sharkawi, Payman Arabshahi and Andrew Gray "MDLT: A Polynomial Time Optimal Algorithm for Maximization of Time-to-First-Failure in Energy Constrained Wireless Broadcast Networks," IEEE Global Telecommunications Conference 2003. GLOBECOM '03. ,Volume: 1, 1-5 Dec. 2003, pp.362 - 366.
143. 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.

2004

144. Ian Gravagne, John M. Davis and Jeffrey J. DaCunha, R.J. Marks II "Bandwidth Reduction for Controller Area Networks using Adaptive Sampling," Proc. Int. Conf. Robotics and Automation (ICRA), New Orleans, LA, April 2004, pp. 5250 - 5255.
145. William E. Combs, Jeffrey J. Weinschenk, Robert J. Marks II "Genomic Systems Design: A novel, biologically-based framework for enhancing the adaptive, autonomous capabilities of computer systems," FUZZ-IEEE 2004, IEEE International Conference on Fuzzy Systems, 25-29 July, 2004, Budapest.
146. Jeffrey J. Weinschenk, Robert J. Marks II, William E. Combs "On the use of Fourier methods in URC fuzzy system design," FUZZ-IEEE 2004, Proceedings 2004 IEEE International Conference on Fuzzy Systems, Budapest, Volume 2, 25-29 July 2004, pp. 911 - 916.
147. Arindam K. Das, Mohamed El-Sharkawi, Robert J. Marks, Payman Arabshahi and Andrew Gray "Minimum Hop Multicasting in Broadcast Wireless Networks with Omni-Directional Antennas," Military Communications Conference, 2004. MILCOM 2004 (Oct 31 - Nov 3), Monterey, CA.
148. Arindam K. Das, Mohamed El-Sharkawi, Robert J. Marks, Payman Arabshahi and Andrew Gray "Maximization of Time-to-First-Failure for Multicasting in Wireless Networks : Optimal Solution," Military Communications Conference, 2004. MILCOM 2004 (Oct 31 - Nov 3), Monterey, CA.
149. A.K. Das, R.J. Marks II, M.A. El-Sharkawi, Payman Arabshahi and Andrew Gray "Optimization Methods for Minimum Power Multicasting in Wireless Networks with Sectorized Antennas," Proceedings of the IEEE Wireless Communications and Networking Conference 2004, pp.1299-1304 (2004).
150. Arindam K. Das, Robert J. Marks, Mohamed El-Sharkawi, Payman Arabshahi, Andrew Gray "Optimization Methods for Minimum Power Bidirectional Topology Construction in Wireless Networks with Sectorized Antennas," Proceedings IEEE Globecom 2004 - Wireless Communications, Networks, and Systems. pp.3962-3968 (2004).

2005

151. Paul D. Reynolds, Russell W. Duren, Matthew L. Trumbo and Robert J. Marks II "FPGA Implementation of Particle Swarm Optimization for Inversion of Large Neural Networks," Proceedings 2005 IEEE Swarm Intelligence Symposium. SIS 2005. June 8-10, Pasadena, pp. 389 - 392.
152. Arindam K. Das, Robert J. Marks, Payman Arabshahi, Andrew Gray "Power Controlled Minimum Frame Length Scheduling in TDMA Wireless Networks with Sectorized Antennas," INFOCOM 2005. 24th Annual Joint Conference of the IEEE Computer and Communications Societies. Proceedings IEEE, Volume 3, 13-17 March 2005, pp. 1782 - 1793.
153. Ian Gravagne, John M. Davis, R.J. Marks II "How Deterministic Must a Real-Time Controller Be?" Proceedings of 2005 IEEE/RSJ International Conference on Intelligent Robots and Systems, (IROS 2005), Alberta, Canada. Aug. 2-6, 2005, pp. 3856 - 3861.
154. 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.

2007

155. Robert J. Marks II, "Review: EXPELLED: NO INTELLIGENCE ALLOWED," Christian News, New Zealand, 071212

2009

156. 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.
157. 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.
158. David Sturgill, Benjamin Van Ruitenbeek, and Robert J. Marks II "Image Compression and Recovery through Compressive Sampling and Particle Swarm," Proceedings of the 2009 IEEE International Conference on Systems, Man, and Cybernetics. San Antonio, TX, USA - October 2009, pp. 1822-1826.
159. Ram Balasubramanian, Mohamed El-Sharkawi, R.J. Marks II, Jae-Byung Jung, R.T. Miyamoto, G.M. Andersen/ C.J. Eggen, & W.L.J. Fox "Self-Selective Clustering of

Training Data Using the Maximally-Receptive Classifier/Regression Bank,” Proceedings of the 2009 IEEE International Conference on Systems, Man, and Cybernetics. San Antonio, TX, USA - October 2009, pp. 4243-4249.

160. Charles Baylis, Joseph Perry, Matthew Moldovan, Robert J. Marks II, and Lawrence Dunleavy “Use of a Step-Response Approximation for Thermal Transient Modeling in Power MOSFETs,” 74th ARFTG (Automatic RF Techniques Group) Microwave Measurement Symposium, December 1st - 4th, 2009, Broomfield/Boulder, Colorado

6.4.5 2010-2019

2010

161. John M. Davis, Ian A. Gravagne, Robert J. Marks II, and Alice A. Ramos “Algebraic and Dynamic Lyapunov Equations on Time Scales.” Proceedings of the the 42nd Meeting of the Southeastern Symposium on System Theory, University of Texas at Tyler, March 7-9, 2010, 329-334.
162. John M. Davis, Ian A. Gravagne, Robert J. Marks II, and Billy Jackson “State Feedback Stabilization of Linear Time-Varying Systems on Time Scales,” Proceedings of the the 42nd Meeting of the Southeastern Symposium on System Theory, University of Texas at Tyler, March 7-9, 2010, pp. 9-14.
163. John M. Davis, Ian A. Gravagne, Robert J. Marks II, John E. Miller, Alice Ramos “Stability of Switched Linear Systems on Non-uniform Time Domains,” Proceedings of the the 42nd Meeting of the Southeastern Symposium on System Theory, IEEE, University of Texas at Tyler, March 7-9, 2010, pp.127-132.
164. John M. Davis, Ian A. Gravagne, and Robert J. Marks II “Time Scale Discrete Fourier Transforms,” Proceedings of the the 42nd Meeting of the Southeastern Symposium on System Theory, University of Texas at Tyler, March 7-9, 2010, pp.102-110.
165. Winston Ewert, George Montañez, 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.

2011

166. Dylan R. Poulsen, Michael Z. Spivey, and Robert J. Marks II “The Poisson Process and Associated Probability Distributions on Time Scales,” Proceedings of the 2011 IEEE 43rd Southeastern Symposium on Systems Theory (SSST), Auburn University, March 14-17, 2011, pp. 49 - 54
167. John M. Davis, Ian A. Gravagne, Robert J. Marks II and Billy J. Jackson “Regions of Exponential Stability for LTI Systems on Nonuniform Discrete Domains,” Proceedings

of the 2011 IEEE 43rd Southeastern Symposium on Systems Theory (SSST), Auburn University, March 14-17, 2011, pp.37-42.

168. Charles Baylis, Robert J. Marks “Frequency multiplexing tickle tones to determine harmonic coupling weights in nonlinear systems,” Microwave Measurement Symposium (ARFTG). Tempe, Arizona. 2011 78th ARFTG pp.1-7, 1-2 Dec. 2011.
doi: 10.1109/ARFTG78.2011.6183868

2012

169. Charles Baylis, Robert J. Marks II, Matthew Moldovan, Josh Martin, Oby Akinbule “A Test Platform for Real-Time Waveform and Impedance Optimization in Microwave Radar Systems,” 2012 International Waveform Diversity & Design Conference, Washington DC, 22-27 January 2012
170. Matthew Moldovan, Charles Baylis, Robert J. Marks II, Michael Wicks, Josh Martin “Chirp Optimization Using Piecewise Linear Approach,” 2012 International Waveform Diversity & Design Conference, 22-27 January 2012.
171. Josh Martin, Charles Baylis, Robert J. Marks II, Matthew Moldovan “Perturbation Size and Harmonic Limitations in Affine Approximation for Time Invariant Periodicity Preservation Systems,” 2012 International Waveform Diversity & Design Conference, 22-27 January 2012.
172. Robert J. Marks “The Most Interesting Number,” Statistical Trends & Numbers, February 3, 2012.
173. 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
174. D.R. Poulsen, J.M. Davis, I.A. Gravagne, R.J. Marks “On the stability of μ -varying dynamic equations on stochastically generated time scales,” 2012 44th Southeastern Symposium on System Theory (SSST), pp.18-23, 11-13 March 2012.
doi: 10.1109/SSST.2012.6195126
175. Robert J. Marks II, “Music under Darwinism,” Evolution News and Views, April 23, 2012.

2013

176. Winston Ewert, William A. Dembski and Robert J. Marks II “On the Improbability of Algorithmically Specified Complexity,” Proceedings of the 2013 IEEE 45th Southeastern Symposium on Systems Theory (SSST), Baylor University, March 11, 2013, pp.68

- 70

DOI:10.1109/SSST.2013.6524962

177. Winston Ewert, William A. Dembski and Robert J. Marks II "Conservation of Information in Relative Search Performance," Proceedings of the 2013 IEEE 45th Southeastern Symposium on Systems Theory (SSST), Baylor University, March 11, 2013, pp. 41 - 50
doi: 10.1109/SSST.2013.6524963
178. 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.
doi:10.1109/SSST.2013.6524964
179. 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
DOI: 10.1109/WCNC.2013.6554583
180. Matthew Fellows, Charles Baylis, Lawrence Cohen, and Robert J. Marks II Radar Waveform Optimization Design to Minimize Spectral Spreading and Optimize Target Detection," 2013 Texas Symposium on Wireless & Microwave Circuits & Systems, Waco, Texas, April 4-5, 2013 (4 pgs)
DOI: 10.1109/WMCaS.2013.6563564
181. Liang Dong, Yanqing Liu, and Robert J. Marks II "Reduction of Out-of-Bound Power and Peak-to-Average Ration in OFDM-Based Cognitive Radio Using Alternating Projections," 2013 Texas Symposium on Wireless & Microwave Circuits & Systems, Waco, Texas, April 4-5, 2013 (4 pgs)
DOI: 10.1109/WMCaS.2013.6563566
182. Stuart Gibbs, Matthew Gardner, Brandon Herrera, Chris Faulkner, Adam Parks, Josh Daniliuc, Paul Hodge, B. Randall Jean and Robert J. Marks II "Estimation of Multi-Component Mixture Proportions using Regression Machine Analysis of Ultra-Wideband Spectroscopic Measurements," 2013 IEEE International Conference on Ultra-Wideband (ICUWB), Sydney Australia, September 15-18 2013, pp. 66-71.
DOI 10.1109/ICUWB.2013.6663824
183. Liang Dong, Yanqing Liu, and Robert J. Marks "Joint Reduction of Out-of-Band Power and PAPR for Non-Contiguous OFDM Systems," Proceedings IEEE Global Communications Conference, Atlanta Georgia, Dec 9-13, 2013
DOI: 10.1109/WMCaS.2013.6563566
184. Matthew Fellows, Charles Baylis, Lawrence Cohen, and Robert J. Marks II "Calculation of the Radar Ambiguity Function from Time-Domain Measurement Data for

Real-Time, Amplifier-in-the-Loop Waveform Optimization,” 2013 82nd ARFTG Microwave Measurement Conference, Ohio State University, Columbus, Ohio pp. 1-5. IEEE, 2013.

DOI: 10.1109/ARFTG-2.2013.6737360

185. Jon Roach, Robert J. Marks II and Benjamin B. Thompson “Tactical Task Allocation and Resource Management in Non-Stationary Swarm Dynamics,” 2013 International Joint Conference on Neural Networks (IJCNN), Dallas, Texas, August 4-9, 2013
186. 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.
DOI: 10.1109/RADAR.2013.6586037

2014

187. Matthew Fellows, Matthew Flachsbar, Jennifer Barlow, Charles Baylis, and Robert J. Marks II “The Smith tube: Selection of radar chirp waveform bandwidth and power amplifier load impedance using multiple-bandwidth load-pull measurements,” IEEE 15th Annual Wireless and Microwave Technology Conference (WAMICON), pp. 1-5. IEEE, 2014. // DOI: 10.1109/WAMICON.2014.6857780
188. Charles Baylis, Matthew Fellows, Matthew Flachsbar, Jennifer Barlow, Joseph Barkate, and Robert J. Marks “Enabling the Internet of Things: Reconfigurable power amplifier techniques using intelligent algorithms and the smith tube.” In Circuits and Systems Conference (DCAS), 2014 IEEE Dallas, pp. 1-4. IEEE, 2014.
189. Matthew Fellows, Jennifer Barlow, Joseph Barkate, Matthew Mosley, Matthew Flachsbar, Charles Baylis, Lawrence Cohen, and Robert J. Marks II “Measurement-Based Radar Waveform Optimization Using the Ambiguity Function and Spectral Mask,” 2014 Texas Symposium on Wireless and Microwave Circuits and Systems (WMCS), April 3-4, 2014, Waco, Texas pp.1-4.
DOI: 10.1109/WMCaS.2014.7015886
190. Zachary Hays, Grant Richter, Stephen Berger, Charles Baylis, Robert J. Marks II “Alleviating airport WiFi congestion: An comparison of 2.4 GHz and 5 GHz WiFi usage and capabilities,” 2014 Texas Symposium on Wireless and Microwave Circuits and Systems (WMCS), April 3-4, 2014, Waco, Texas pp.1-4.
DOI: 10.1109/WMCaS.2014.7015885

2015

191. Dylan Eustice, Charles Baylis, Lawrence Cohen, Robert J. Marks II “Effects of Power Amplifier Nonlinearities on the Radar Ambiguity Function,” 2015 IEEE International Radar Conference (RadarCon), May 11-15, Arlington Va.

192. Joseph Barkate, Matthew Fellows, Jennifer Barlow, Charles Baylis, and Robert J. Marks II “The Power Smith Tube: Joint optimization of power amplifier input power and load impedance for power-added efficiency and adjacent-channel power ratio,” In Wireless and Microwave Technology Conference (WAMICON), 2015 IEEE 16th Annual, pp. 1-4. IEEE, 2015.
193. Matthew Fellows, Jennifer Barlow, Matthew Flachsbart, Joseph Barkate, Charles Baylis, Lawrence Cohen AND Robert J Marks “Fast radar power amplifier optimization for bandwidth, efficiency, and spectral confinement using the Smith Tube,” IEEE International Radar Conference (RadarCon 2015), Arlington, VA, May 11-15, 2015, pp. 139 - 144
DOI: 10.1109/RADAR.2015.7130985
194. Dylan Eustice, Charles Baylis, Lawrence Cohen, Robert J Marks “Effects of power amplifier nonlinearities on the radar ambiguity function,” IEEE International Radar Conference (RadarCon 2015), Arlington, VA, May 11-15, 2015, pp. 1725 - 1729
DOI: 10.1109/RADAR.2015.7131277
195. Matthew Fellows, Jennifer Barlow, Charles Baylis, Joseph Barkate, Robert J. Marks II “Designing power amplifiers for spectral compliance using spectral mask load-pull measurements.” IEEE Topical Conference on Power Amplifiers for Wireless and Radio Applications (PAWR), San Diego, 25 Jan 25-28, 2015, pp.1-3.
DOI: 10.1109/PAWR.2015.7139199
196. Joseph Barkate, Matthew Fellows, Jennifer Barlow, Charles Baylis, and Robert J. Marks II “The Power Smith Tube: Joint optimization of power amplifier input power and load impedance for power-added efficiency and adjacent-channel power ratio.” IEEE 16th Annual Wireless and Microwave Technology Conference (WAMICON), pp. 1-4 (2015).
DOI: 10.1109/WAMICON.2015.7120398
197. Dylan Eustice, Charles Baylis and Robert J. Marks II “Woodward’s Ambiguity Function: From Foundations to Applications,” 2015 IEEE Texas Symposium on Wireless and Microwave Circuits and Systems (WMCs), April 23-24, 2015. Waco, Texas (pp. 1-17).
10.1109/WMCaS.2015.7233208
198. Dylan Eustice, Charles Baylis, Casey Latham, Robert J. Marks II, and Lawrence Cohen “Optimizing Radar Waveforms Using Generalized Alternating Projections,” 2015 IEEE Texas Symposium on Wireless and Microwave Circuits and Systems (WMCs), April 23-24, 2015. Waco, Texas (pp. 1-6).
DOI: 10.1109/WMCaS.2015.7233196
199. Dylan Eustice, Charles Baylis, Lawrence Cohen, and Robert J. Marks II “Waveform synthesis via alternating projections with ambiguity function, peak-to-average power ratio, and spectrum requirements,” 2016 IEEE Radio and Wireless Symposium (RWS), pp. 190-192. IEEE, 2016.
DOI: 10.1109/RWS.2016.7444401

2016

200. Joseph Barkate, Alexander Tsatsoulas, Matthew Fellows, Matthew Flachsbart, Charles Baylis, Lawrence Cohen, and Robert J. Marks II “Fast, momentum-aided optimization of transmitter amplifier load impedance and input power for cognitive radio using the power smith tube.” In 2016 IEEE Radio and Wireless Symposium (RWS), pp. 54-56. IEEE, 2016.
DOI: 10.1109/RWS.2016.7444363
201. Matthew Fellows, Sarvin Rezayat, Jennifer Barlow, Joseph Barkate, Alexander Tsatsoulas, Charles Baylis, Lawrence Cohen, and Robert J. Marks II “The bias smith tube: Simultaneous optimization of bias voltage and load impedance in power amplifier design.” 2016 IEEE Radio and Wireless Symposium (RWS), pp. 215-218. IEEE, 2016.
DOI: 10.1109/RWS.2016.7444408
202. Charles Baylis, Matthew Fellows, Joseph Barkate, Alexander Tsatsoulas, Sarvin Rezayat, Lucilia Lamers, Robert J. Marks II, and Lawrence Cohen “Circuit optimization algorithms for real-time spectrum sharing between radar and communications.” IEEE Radar Conference (RadarConf), pp. 1-4, 2016.
DOI: 10.1109/RADAR.2016.7485065
203. Alexander Tsatsoulas, Joseph Barkate, Charles Baylis, and Robert J. Marks “A simplex optimization technique for real-time, reconfigurable transmitter power amplifiers.” 2016 IEEE MTT-S International Microwave Symposium (IMS), San Francisco, California, 22-27 May 2016, pp. 1-4. IEEE, 2016.
DOI: 10.1109/MWSYM.2016.7540376
204. Casey Latham, Charles Baylis, Lawrence Cohen, Robert J. Marks “Dynamic spectral mask construction for radar transmission based on communication receiver locations.” 2016 Texas Symposium on Wireless and Microwave Circuits and Systems (WMCS) March 31-April 1, 2016, Waco, TX.
DOI: 10.1109/WMCaS.2016.7577484

2017

205. Zachary Hays, Christopher Kappelmann, Sarvin Rezayat, Matthew Fellows, Lucilia Lamers, Matthew Flachsbart, Jennifer Barlow Charles Baylis, Edward Viveiros , Ali Darwish, Abigail Hedden , John Penn and Robert J. Marks II ““Real-time amplifier optimization algorithm for adaptive radio using a tunable-varactor matching network.” Radio and Wireless Symposium (RWS), 2017 IEEE, pp. 215-217.
206. Casey Latham, Matthew Fellows, Charles Baylis, Lawrence Cohen, and Robert J. Marks “Radar waveform optimization for ambiguity function properties and dynamic spectral mask requirements based on communication receiver locations.” In Radio and Wireless Symposium (RWS), 2017 IEEE, pp. 147-149.

207. Lucilia Lamers, Zachary Hays, Christopher Kappelmann, Sarvin Rezayat, Matthew Fellows, Eric Walden, Austin Egbert, Charles Baylis, Robert J. Marks II, Ed Viveiros, John Penn, Abigail Hedden, Ali Darwish “Comparison of Bias-Voltage and Reflection-Coefficient Based Reconfiguration of a Tunable-Varactor Matching Network for Adaptive Amplifiers” 2017 IEEE 18th Wireless and Microwave Technology Conference (WAMICON) pp 1- 5
DOI: 10.1109/WAMICON.2017.7930258
208. Sarvin Rezayat, Charles Baylis, Robert J. Marks, and Ed Viveiros “Measurement of load-pull performance in the power smith tube using a tunable varactor matching network.” IEEE Texas Symposium on Wireless and Microwave Circuits and Systems (WMCS), Waco, TX, March 30-31, 2017, pp. 1-4.
209. Zachary Hays, Charles Baylis, Robert J. Marks, Mohammad Abu Khater, Abbas Semnani, Dimitrios Peroulis, and Ed Viveiros “Fast amplifier PAE optimization using resonant frequency interval halving with an evanescent-mode cavity tuner.” IEEE Texas Symposium on Wireless and Microwave Circuits and Systems (WMCS), March 30-31, 2017, pp. 1-3.
210. Lucilia Lamers, Eric Walden, Charles Baylis, Ed Viveiros and Robert J. Marks “Fast design of unconditionally stable power amplifier using the center frequency smith tube,” IEEE Texas Symposium on Wireless and Microwave Circuits and Systems (WMCS), Waco, TX, March 30-31, 2017, pp. 1-4.
211. Jacob Boline, Matthew Fellows, Alicia Magee, Charles Baylis, Lawrence Cohen, and Robert J. Marks “Fast reconfiguration in real-time transmitter amplifier impedance optimization using S-parameters.” IEEE Texas Symposium on Wireless and Microwave Circuits and Systems (WMCS), Waco, TX, March 30-31, 2017, pp. 1-4.
212. Albert R. Yu, Charles Baylis, and Robert J. Marks “Ambiguity function magnitude inversion via a modified Gerchberg-Saxton algorithm.” IEEE Texas Symposium on Wireless and Microwave Circuits and Systems (WMCS), Waco, TX, March 30-31, 2017, pp. 1-4.

2018

213. Austin Egbert, Casey Latham, Charles Baylis, and Robert J. Marks II, “Multi-Dimensional Coexistence: Using a Spatial-Spectral Mask for Spectrum Sharing in Directional Radar and Communication,” IEEE Texas Symposium on Wireless and Microwave Circuits and Systems (WMCS), Waco, TX,
214. Lucilia Hays, Austin Egbert, Charles Baylis, Robert Marks, Christopher Kappelmann, Edward Viveiros, “Real Time Instability Detection for a Reconfigurable Power Amplifier,” IEEE Texas Symposium on Wireless and Microwave Circuits and Systems (WMCS), Waco, TX,

215. Charles Baylis, Robert J. Marks, Lucilia Hays, Zachary Hays, Sarvin Rezayat, Christopher Kappelmann, Mohammad Abu Khater, Abbas Semnani, Dimitrios Peroulis, and Edward Viveiros. “Frequency-agile and spectrally sensitive radar transmitter amplifier optimizations.” Radar Conference (RadarConf18), 2018 IEEE, pp. 0484-0489. IEEE, 2018.

2019

216. 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].
217. Austin Egbert, Kyle Gallagher, Benjamin Kirk, Mark Kozy, Anthony Martone, Charles Baylis, Edward Viveiros, and Robert J. Marks II, “The Effect of Real-Time Radar Transmitter Amplifier Impedance Tuning on Range and Doppler Detection Accuracy.” In 2019 IEEE Texas Symposium on Wireless and Microwave Circuits and Systems (WMCS), pp. 1-4. IEEE, 2019 [html.]
218. Pedro Rodriguez-Garcia, Austin Egbert, Charles Baylis, and Robert J. Marks. “Spatial-Spectral Coexistence: Dual Approach to Search Radar Transmission Synthesis Using a Spatial Mask.” 2019 IEEE Texas Symposium on Wireless and Microwave Circuits and Systems (WMCS), pp. 1-6. IEEE, 2019 [html].
219. Robert J. Marks, Baylis, Charles, Austin Egbert, Jose Alcala-Medel, Angelique Dockendorf, Caleb Calabrese, Ellie Langley, Anthony Martone, Kyle Gallagher, Ed Viveiros, Dimitrios Peroulis, Abbas Semnani and Robert J. Marks II “Reconfigurable and Adaptive Radar Amplifiers for Spectrum Sharing in Cognitive Radar.” In 2019 IEEE Radar Conference (RadarConf), pp. 1-3. IEEE, 2019. [html]
220. Baylis, Charles, Austin Egbert, Jose Alcala-Medel, Angelique Dockendorf, Anthony Martone, and Robert J. Marks. “Real-Time Circuit Reconfiguration for a Cognitive Software-Defined Radar Transmission: A New Paradigm in Spectrum Sharing.” 2019 IEEE International Symposium on Electromagnetic Compatibility, Signal & Power Integrity (EMC+ SIPI), pp. 448-450. IEEE, 2019. [html]
221. Dockendorf, Angelique, Ellie Langley, Charles Baylis, Anthony Martone, Kyle Gallagher, and Ed Viveiros. “Faster Frequency-Agile Reconfiguration of a High-Power Cavity Tuner for Cognitive Radar Using Previous Search Results.” In 2019 IEEE Radio and Wireless Symposium (RWS), pp. 1-3. IEEE, 2019. [html]

6.4.6 2020-2029

2020

222. Angelique Dockendorf, Adam Goad, Caleb Calabrese, Benjamin Adkins, Austin Egbert, Jonathan Owen, Brandon Ravenscroft, Charles Baylis, Robert J. Marks II, Shan-

- non Blunt, Anthony Martone, Kelly Sherbondy, Ed Viveiros “The Impact of Nonlinear Power Amplifier Load Impedance on Notched Waveforms for Cognitive Radar Spectrum Sharing.” In 2020 IEEE Radio and Wireless Symposium (RWS), pp. 317-319. IEEE, 2020. [html]
223. Calabrese, C., Dockendorf, A., Egbert, A., Herrera, B., Baylis, C. and Marks, R.J., 2020, April. “Fast Switched-Stub Impedance Tuner Reconfiguration for Frequency and Beam Agile Radar and Electronic Warfare Applications” 2020 IEEE International Radar Conference (RADAR) (pp. 94-98) [html cache]
224. Goad, Adam, Austin Egbert, Angelique Dockendorf, Charles Baylis, Anthony Martone, and Robert J. Marks. “Optimizing Transmitter Amplifier Load Impedance for Tuning Performance in a Metacognition-Guided, Spectrum Sharing Radar.” 2020 IEEE International Radar Conference (RADAR), pp. 73-76. IEEE, 2020. [html cache]
225. Goad, Adam, Charles Baylis, Paul Flaten, Brian Olson, and Robert J. Marks. “Algorithm for Fast Simultaneous Harmonic and Fundamental Impedance Tuning in Reconfigurable Radar Transmitter Power Amplifiers.” In 2020 IEEE International Radar Conference (RADAR), pp. 872-877. IEEE [html cache]
226. Dockendorf, Angelique, Austin Egbert, Adam Goad, Caleb Calabrese, Benjamin Adkins, Brandon Ravenscroft, Jonathan Owen et al. “Impedance Tuning with Notched Waveforms for Spectrum Sharing in Cognitive Radar.” In 2020 IEEE International Radar Conference (RADAR), pp. 135-140. IEEE, 2020. [html cache]
227. Caleb Calabrese, Austin S Egbert, Angelique Dockendorf, Charles Baylis, Robert J. Marks II “Dynamic Online Learning Applied to Fast Switched-Stub Impedance Tuner for Frequency and Load Impedance Agility in Radar Applications,” 2020 IEEE Texas Symposium on Microwave Circuits & Systems, May 26-28, 2020, Waco, Texas [html cache]
228. Adam Goad, Austin Egbert, Angelique Dockendorf, Charles Baylis, Anthony Martone, and Robert J. Marks. “Optimizing Transmitter Amplifier Load Impedance for Tuning Performance in a Metacognition-Guided, Spectrum Sharing Radar.” 2020 IEEE International Radar Conference (RADAR), pp. 73-76. IEEE, 2020. [html cache]
229. Austin S Egbert, Anthony Martone, Charles Baylis and Robert J. Marks II “Partial Load-Pull Extrapolation Using Deep Image Completion” 2020 IEEE Texas Symposium on Microwave Circuits & Systems, May 26-28, 2020, Waco, Texas. [html cache]
230. Adam Goad, Charles Baylis, Paul Flaten, Brian Olson, and Robert J. Marks. “Algorithm for Fast Simultaneous Harmonic and Fundamental Impedance Tuning in Reconfigurable Radar Transmitter Power Amplifiers.” 2020 IEEE International Radar Conference (RADAR), pp. 872-877. IEEE, 2020. [html cache]
231. Egbert, Austin, Benjamin H. Kirk, Charles Baylis, Anthony Martone, and Robert J. Marks. “Fast Software-Defined Radio-based System Performance Evaluation for Real-time Adaptive RF Systems” 2020 95th ARFTG Microwave Measurement Conference (ARFTG), pp. 1-4. IEEE, 2020. [html cache]

- 232. Justin Bui and Robert J. Marks II “Autoencoder Watchdog Outlier Detection for Classifiers” Proceedings of the 13th International Conference on Agents and Artificial Intelligence - Volume 2: ICAART, 2021, pages 990-996. [ArXiv]
- 233. Austin Egbert, Benjamin H. Kirk, Charles Baylis, Anthony Martone, and Robert J. Marks “Fast Software-Defined Radio-based System Performance Evaluation for Real-time Adaptive RF Systems” 2020 95th ARFTG Microwave Measurement Conference (ARFTG), pp. 1-4. IEEE, 2020. [html cache]
- 234. Pedro Rodriguez-Garcia, Jack Sifri, Caleb Calabrese, Charles Baylis, Robert J. Marks II “Range Improvement in Single-Beam Phased Array Radars by Amplifier Impedance Tuning” 2021 IEEE Texas Symposium on Wireless and Microwave Circuits and Systems (WMCS) IEEE, 2021.
- 235. Austin S. Egbert, Charles Baylis, Anthony Martone, Robert J. Marks II “Recursive Interval-Halving Method for Generating Model Independent Impedance Tuner” 2021 IEEE Texas Symposium on Wireless and Microwave Circuits and Systems (WMCS) IEEE, 2021.

2021

- 236. Egbert, Austin, Adam Goad, Charles Baylis, Robert J. Marks, and Anthony Martone. “Detecting Potential Performance Improvements in Cognitive Radar Systems.” 2021 IEEE Radar Conference (RadarConf21), pp. 1-5. IEEE, 2021. [html cache]
- 237. Baylis, Charles, Robert J. Marks, Austin Egbert, and Casey Latham. “Artificially Intelligent Power Amplifier Array (AIPAA): A New Paradigm in Reconfigurable Radar Transmission.” 2021 IEEE Radar Conference (RadarConf21), pp. 1-5. IEEE, 2021. [html cache]
- 238. Roessler, Justin, Adam Goad, Austin Egbert, Charles Baylis, Anthony Martone, Robert J. Marks, and Benjamin Kirk. “Enhancing Frequency-Agile Radar Range over a Broad Operating Bandwidth with Reconfigurable Transmitter Amplifier Matching Networks.” 2021 IEEE Radar Conference (RadarConf21), pp. 1-5. IEEE, 2021.
- 239. Justin Bui and R.J. Marks, “Symbiotic Hybrid Neural Network Watchdog For Outlier Detection” Proceedings: Machine Learning and Data Mining in Pattern Recognition, IBAI Publishing, New York, July 18-22, 2021 [arXiv reprint]
- 240. Rodriguez-Garcia, Pedro, Jack Sifri, Caleb Calabrese, Charles Baylis, and Robert J. Marks II. “Range Improvement in Single-Beam Phased Array Radars by Amplifier Impedance Tuning.” 2021 IEEE Texas Symposium on Wireless and Microwave Circuits and Systems (WMCS), July 27, 2021, Waco, TX [html cache]
- 241. Austin Egbert, Charles Baylis, Anthony Martone & Robert J. Marks “Recursive Interval-Halving Method for Generating Model Independent Impedance Tuner Characterizations” 2021 IEEE Texas Symposium on Wireless and Microwave Circuits and Systems (WMCS), July 27, 2021, Waco, TX [html cache]

242. Glauco A. Amigo Galán, Pablo Rivas, and Robert J. Marks “Mitigating Algorithmic Bias on Facial Expression Recognition” The 25th International Conference on Image Processing, Computer Vision, & Pattern Recognition (IPCV’21: July 26-29, 2021, USA)
243. Caleb Calabrese, Justin Roessler, Austin Egbert, Alden Fisher, Charles Baylis, Zach Vander Missen, Mohammad Abu Khater, Dimitrios Peroulis, and Robert J. Marks. “A Plasma-Switch Impedance Tuner for Real-Time, Frequency-Agile, High-Power Radar Transmitter Reconfiguration.” 2021 IEEE MTT-S International Microwave Symposium (IMS), pp. 585-588. IEEE, 2021. [html cache]
244. Glauco Antonio Amigo Galn, Liang Dong and Robert J. Marks II “Forecasting Pseudo Random Numbers Using Deep Learning 2021 15th International Conference on Signal Processing and Communication Systems (ICSPCS), IEEE, 2021. [html cache]

2022

245. Charles Baylis & Robert J. Marks II “Solving the 5G Crisis: Enabling Coexistence With Crucial Safety Ststems through Adaptability and Reconfigurability” 2022 IEEE Texas Symposium on Wireless and Microwave Circuits and Systems (WMCS), April 19-20, 2022, Waco, TX.
246. Samuel M. Haug, Adam Goad, Charles Baylis, Austin S. Egbert, Robert J, Marks II, Sarah A. Seguin, Anthony Martone, Benjamin Kirk. “The Effect of Amplifier Nonlinearities on Directionaly Modulated Signals in Phased-Array Transmitters” 2022 IEEE Texas Symposium on Wireless and Microwave Circuits and Systems (WMCS), April 19-20, 2022, Waco, TX.
247. A.W. Clegg, S.A. Seguin, R.J. Marks, and Charles Baylis “Radar Sharing in the U.S. 3 GHz Band” 2022 IEEE Radar Conference (RadarConf22), IEEE, 2022. [html cache]
248. Charles Baylis, Adam Goad, Robert J. Marks, Julian Alonzo, Sarah Seguin, Austin Egbert, Anthony Martone, and Benjamin Kirk “Amplifier Impedance Reconfiguration and Directional Transmission Techniques for Multifunction Arrays.” 2022 IEEE Radar Conference (RadarConf22), IEEE, 2022. [html cache]
249. Justin Roessler, Austin Egbert, Trevor Van Hoosier, Sarah Seguin, Anthony Martone, Charles Baylis, Robert J. Marks “A Fast Impedance Tuner Implementation in a Cognitive Radar for Synchronous Real-Time Optimization in a Congested Environment,” 2022 IEEE/MTT-S International Microwave Symposium-IMS 2022, pp. 645-648. [html cache]
250. Samuel Haug;, Adam Goad, Charles Baylis, Austin Egbert, Robert J. Marks, Sarah A. Seguin, Anthony Martone, Benjamin Kirk “The Effect of Amplifier Nonlinearities on Directionally Modulated Signals in Phased-Array Transmitters,” 2022 IEEE Texas Symposium on Wireless and Microwave Circuits and Systems (WMCS), pp. 1-6. [html cache]

251. Justin Roessler, Alden Fisher, Austin Egbert, Zach Vander Missen, Trevor Van Hoosier, Charles Baylis, Mohammad Abu Khater, Dimitrios Peroulis, and Robert J. Marks "A Low-Loss Reconfigurable Plasma Impedance Tuner for Real-Time, Frequency-Agile, High-Power RF Applications," 2022 IEEE/MTT-S International Microwave Symposium-IMS 2022, pp. 183-186.
252. Sarah A. Seguin, Adam Goad, Charles Baylis, and Robert J. Marks. "Spectrum Sharing Brokers for Active and Passive Devices." 2022 IEEE International Symposium on Electromagnetic Compatibility & Signal/Power Integrity (EMCSI), pp. 131-134. IEEE, 2022. [html cache]
253. Andrew W. Clegg, Sarah A. Seguin, Charles Baylis, Austin Egbert, and Robert J. Marks. "Improving Spectrum Sharing Interference Criteria: A Survey of a Critical Need for Measurements." 2022 IEEE International Symposium on Electromagnetic Compatibility & Signal/Power Integrity (EMCSI), pp. 125-130. IEEE, 2022. [html cache]
254. Charles Baylis, Adam Goad, Trevor Van Hoosier, Austin Egbert, and Robert J. Marks. "In-Situ Assessment of Array Antenna Currents for Real-Time Impedance Tuning." 2022 IEEE International Symposium on Phased Array Systems & Technology, IEEE, 2022.

2023

255. Justin Bui, Glauco A Amigo Galn and Robert J. Marks "Generatively Augmented Neural Network Watchdog for Image Classification Networks" IEEE 13th Annual Computing and Communication Workshop and Conference (CCWC), pp. 229-237, March 8, 2023 [Certificate of Best Presentation]
256. Samuel Hussey, Andrew Clegg, Charles Baylis, Austin Egbert, Adam Goad, Trevor Van Hoosier, Robert J. Marks II. "Spectrum Sharing Policy for a Cooperative Brokering System," IEEE Texas Symposium on Wireless & Microwave Circuits and Systems, Baylor University, April 19-20, 2023.
257. Charles Baylis, Dennis Roberson, Samuel Hussey, Austin Egbert, Andrew Clegg, Robert J. Marks II. "Adaptive and Reconfigurable Collaboration between Aircraft Wireless Systems and Baylor University, Wireless Communications," IEEE Texas Symposium on Wireless & Microwave Circuits and Systems, Baylor University, April 19-20, 2023.
258. Justin Roessler, Alden Fisher, Austin Egbert, Trevor Van Hoosier, Charles Baylis, Dimitrios Peroulis, Robert Marks. "Steady-State Thermal Analysis on a Real-Time Plasma Impedance Tuner for High-Power RF Matching Applications," IEEE Texas Symposium on Wireless & Microwave Circuits and Systems, Baylor University, April 19-20, 2023.

259. Samuel Haug, Adam Goad, Austin Egbert, Charles Baylis, Anthony Martone, Benjamin Kirk, and Robert J. Marks II. “Directional Modulation for Multi-Node Interaction from an Artificially Intelligent Power Amplifier Array: Simultaneous Radar and Communication while Optimizing Circuit Performance.” 2023 IEEE Radar Conference (RadarConf23), San Antonio, May 2-5, 2023
260. Trevor Van Hoosier, Jordan Alexander, Austin Egbert, Justin Roessler, Charles Baylis, and Robert J. Marks. “Pulse-to-Pulse Circuit Reconfiguration in Spectrum Sensing Radar.” 2023 IEEE Radar Conference (RadarConf23), San Antonio, May 2-5, 2023.
261. Charles Baylis, Dennis Roberson, Samuel Hussey, Austin Egbert, Andrew Clegg, and Robert J. Marks, “Adaptive and Reconfigurable Collaboration between Aircraft Wireless Systems and Wireless Communications,” 2023 IEEE Texas Symposium on Wireless and Microwave Circuits and Systems (WMCS), April 19-20, 2023, Waco, Texas.
262. Samuel Haug, Austin Egbert, Robert J Marks II, Charles Baylis, and Anthony Martone “Changepoint Detection for Real-Time Spectrum Sharing Radar,” 2023 IEEE Texas Symposium on Wireless and Microwave Circuits and Systems (WMCS), April 19-20, 2023, Waco, Texas.
263. Austin Egbert, Adam Goad, Samuel Haug, Charles Baylis, Benjamin Kirk, Anthony Martone, Robert J. Marks II, “In-Situ Measurement of Transmitter Antenna Input Current Using a Software-Defined Radio,” 2023 101st ARFTG Microwave Measurement Conference (ARFTG), IEEE, June 16, 2023. Hilton San Diego Bayfront, San Diego [cache].

2024

264. Samuel Haug, Adam C. Goad, Austin Egbert, Charles Baylis, Anthony Martone, Benjamin Kirk, and Robert J. Marks. “Fully Reconfigurable Power Amplifier Array Design.” 2024 IEEE Radar Conference (RadarConf24), Denver, Colorado, May 6-10, 2024.
265. Adam C. Goad, Samuel Haug, Jonathan Swindell, Charles Baylis, Austin Egbert, Casey Latham, Matthew Ozalas Jason Boh, Andy Howard, Daren McClearnon, Robert J. Marks II “Nine-Dimensional Gradient Optimization for Automated RF Power Amplifier Design.” 2024 IEEE Texas Symposium on Wireless and Microwave Circuits and Systems (WMCS), Waco, TX, 2024.
266. Samuel Haug, Charles Baylis, Adam C. Goad, Jason Boh, Matthew Ozalas, Robert J. Marks, Andrew Howard, Casey Latham, and Jonathan Swindell. “Dynamic Faceting in RF Amplifier Design.” 2024 IEEE Texas Symposium on Wireless and Microwave Circuits and Systems (WMCS), Waco, TX, 2024.
267. Jonathan E. Swindell, Carson Slater, Samuel Hussey, Charles Baylis, and Robert J. Marks. “Assessing Interference with Regression Analysis Techniques.” 2024 IEEE

Texas Symposium on Wireless and Microwave Circuits and Systems (WMCS), Waco, TX, 2024.

- 268. Charles Baylis, Adam Goad, Austin Egbert, Andrew Clegg, and Robert J. Marks. “On-Board Test and Measurement: A Needed Enabler for Adaptive and Reconfigurable Spectrum Use.” 2024 IEEE Texas Symposium on Wireless and Microwave Circuits and Systems (WMCS), Waco, TX, 2024.
- 269. Justin Roessler, Emma Lever, Austin Egbert, Charles Baylis, Robert Marks, Benjamin Kirk, and Alex Bouvy. “Overview of Tunable Notch Filters for Radar Systems.” 2024 IEEE Texas Symposium on Wireless and Microwave Circuits and Systems (WMCS), Waco, TX, 2024.
- 270. Charles Baylis, Dimitrios Peroulis, Austin Egbert, Justin Roessler, Alden Fisher, and Robert J. Marks. “Reconfigurable Power Amplifiers for Spectrum Sharing in Arrays.” 2024 IEEE Wireless and Microwave Technology Conference (WAMICON).
- 271. Hussey, Samuel, Jonathan E. Swindell, Adam C. Goad, Austin Egbert, Andrew Clegg, Charles Baylis, and Robert J. Marks. “Application of Mamdani fuzzy inference systems to interference assessments.” 2024 IEEE International Symposium on Dynamic Spectrum Access Networks (DySPAN), pp. 13-18. IEEE, 2024.

2025

- 272. Swindell, Jonathan E., Adam C. Goad, Austin Egbert, Charles Baylis, and Robert J. Marks. “Multidimensional Load-Pull Extrapolation using Generative Adversarial Networks.” In 2025 IEEE MTT-S Latin America Microwave Conference (LAMC), pp. 108-111. IEEE, 2025.
- 273. Luke Mello, Justin Roessler, Austin Egbert, Charles Baylis, Robert Marks, Alex Bouvy, Ben Kirk “Design of a Beam-Steering Algorithm with a Reconfigurable Reflectarray” IEEE Texas Symposium on Wireless & Microwave Circuits and Systems, Waco, Texas, April 8-9, 2025.
- 274. David Cox, Adam Goad, Jonathan Swindell, Austin Egbert, Charles Baylis, Robert Marks “In-Situ Current Measurements of Wideband Signals for Radar Arrays” IEEE Texas Symposium on Wireless & Microwave Circuits and Systems, Waco, Texas, April 8-9, 2025.
- 275. Emma Lever, Justin Roessler, Austin Egbert, Charles Baylis, Robert Marks, Benjamin Kirk, Alex Bouvy “Alleviating Notch Filtering Impacts on Radar Range Detection with the Gerchberg-Saxton Algorithm” IEEE Texas Symposium on Wireless & Microwave Circuits and Systems, Waco, Texas, April 8-9, 2025.
- 276. Jonathan Swindell, Adam Goad, Austin Egbert, Casey Latham, Matthew Ozalas, Andy Howard, Daren McClearnon, Charles Baylis, Robert Marks “Measurement Validation of AI-Powered Multidimensional Nonlinear Load-Pull Extrapolation” IEEE

Texas Symposium on Wireless & Microwave Circuits and Systems, Waco, Texas, April 8-9, 2025.

277. Justin Roessler, Emma Lever, Luke Mello, Austin Egbert, Charles Baylis, Robert Marks, Alex Bouvy, Benjamin Kirk “A MEMS-Switched Decade-Bandwidth Tunable Notch Filter for Low-Loss, High-Linearity, Wideband Receiving Applications” IEEE Texas Symposium on Wireless & Microwave Circuits and Systems, Waco, Texas, April 8-9, 2025.

6.5 Patents

1. Robert J. Marks II “Method and Apparatus for Generating Sliding Tapered Windows and Sliding Window Transforms,” (assigned to R.J. Marks II), U.S. Patent No. 5,373,460, December 13, 1994.
2. Pieter J. van Heerden, Robert J. Marks II and Seho Oh “Method and apparatus for identifying that one of a set of past or historical events best correlated with a current or recent event,” U.S. Patent No. 4,939,683 (assigned to van Heerden, Marks and Oh), July 3, 1990.
3. R.J. Marks II, L.E. Atlas and S. Oh “Optical neural net memory,” U.S. Patent No. 4,849,940 (assigned to the Washington Technology Center, University of Washington, Seattle), July 18, 1989.
4. Robert J. Marks, Joshua J. Marks, Jonathan Swindell, “Method of Measuring Original Content from Computers” (Baylor University) Patent Pending. [Link]

6.6 Endorsements

1. Cloete, Ian, and Jacek M. Zurada, eds. Knowledge-based neurocomputing. MIT press, 2000. [Link]

“Zurada’s first volume is arguably the best neural network text ever written. Cloete and Zurada’s Knowledge-Based Neurocomputing continues in this tradition of excellence. Clearly and precisely written, this volume belongs in the library of every neuro smith” Robert J. Marks II, Department of Electrical Engineering, University of Washington, Seattle, and former Editor-in-Chief, IEEE Transaction on Neural Networks

2. Smith, Gary, and Jay Cordes. The 9 Pitfalls of Data Science. Oxford University Press, 2019. [Link]

“Using fascinating personal anecdotes and eye-opening historical accounts, Smith and Cordes guide us through interesting accounts of the prairie dog holes of data analysis where the unexperienced often break their ankles. I read it in two sittings” – Robert J. Marks II, Ph.D., Distinguished Professor of Electrical & Computer Engineering, Baylor University, Director, The Walter Bradley Center for Natural & Artificial Intelligence

6.7 Abstracts

6.7.1 1970-1979

1976

1. R.J. Marks II, J.F. Walkup, M.O. Hagler and T.F. Krile "General one-dimensional space-variant coherent optical processors," Journal of the Optical Society of America, vol. 66, p.1130A (1976)

1977

2. R.J. Marks II, J.F. Walkup and C.A. Irby "Techniques in one-dimensional space-variant processing," Journal of the Optical Society of America, vol. 67, p.1423 (1977)

1978

3. E.L. Kral, M.O. Hagler, J.F. Walkup and R.J. Marks II "An input scanning technique for coherent processing," Journal of the Optical Society of America, vol. 68, p.1414A (1978).
4. M.W. Hall and R.J. Marks II "Sampling theorem characterization of variation limited systems at reduced sampling rates," Journal of the Optical Society of America, vol. 68, p.1362A (1978).

1979

5. R.J. Marks II and D.K. Smith "A technique for coherent optical extrapolation of two-dimensional bandlimited signals," Journal of the Optical Society of America, vol. 69, p.1467A (1979).
6. R.J. Marks II "Space-variant processing using temporal holography," Journal of the Optical Society of America, vol. 69, p.1467A (1979).

6.7.2 1980-1989

1986

7. C. Green, K.F. Cheung, L.E. Atlas and R.J. Marks II "Performance of conventional and composite matched "Space-variant processing using temp filters with error correction," Journal of the Optical Society of America A, vol. 3, p.P13 (1986).
8. K.F. Cheung and R.J. Marks II "Image sampling density reduction below that of Nyquist," Journal of the Optical Society of America A, vol. 3, pp.P42-43 (1986).

9. L.E. Atlas, J.A. Ritcey, K.F. Cheung and R.J. Marks II "Improving the performance of composite matched filters," Journal of the Optical Society of America A, vol. 3, p.P13 (1986).

1988

10. J.A. Ritcey, L.E. Atlas, R.J. Marks II, D.C. Park and S.Oh, "The Parametric Transform," National Meeting of the Optical Society of America, J. Opt. Soc. Am. A (October 1988)

6.7.3 1990-1999

1993

11. J.E. Sanders, R.D. Reed, R.J. Marks II et al., "Prosthetic Alignment for Lower-Limb Amputees Using Computer-Aided Methods," VA Rehabilitation Research and Development Progress Reports, 1993.
12. J.E. Sanders, C.H. Daly, W.R. Cummings, R.D. Reed, and R.J. Marks II: "Furthering Incorporation of Gait Analysis into Prosthetic Fitting: A Simple System for Measurement and Display of Shank Loads During Ambulation," Journal of Clinical Engineering, 1993.
13. R. J. Marks II "Neural Networks and Their Application," NORTHCON, October 12-14, 1993 Oregon State Convention Center, Portland, Oregon.

1994

14. C. Ramon, P. Czapski, R.J. Marks II, H.C. Lai and S. Lee, "Noninvasive Biomagnetic Sensing of Biological Currents," Proceedings of the Radio Science Meeting, June 19-24, 1994, The University of Washington, Seattle, p.272.
15. R.J. Marks II "Evolutionary Inversion and Hausdorf Distance Evaluation of Trained Layered Perceptions," International Conference on Neural Information Processing (ICONIP), Seoul, Korea, October 17-20, 1994
16. M.A. El-Sharkawi and R.J. Marks II "Localization of Winding Shorts Using Fuzzified Neural Networks," Electrical Engineering Industrial Consortium, Seattle, Washington, November 9, 1994.

1995

17. R.J. Marks II, M.A. El-Sharkawi, R.J. Streifel and I. Kerszenbaum, "Twin signal signature sensing: application to shorted winding monitoring, detection and localization," Workshop on Environmental and Energy Applications of Neural Networks, Richland, Washington, 30-31 March 1995, pp.133-134.

18. R.J. Marks II “Intelligence: Computational vs. Artificial,” Proceedings of 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, p.13

1997

19. Frank S. Holman III and Robert J. Marks II, “Platform Independent Geometry Verification Using Neural Networks Including Color Visualization,” Proceedings of the International Conference on Vision, Recognition and Action: Neural Models of Mind and Machine, May 29-31,1997 , Boston University.
20. Robert J. Marks II, “Modern Neural Networks: The First Decade,” Proceedings of the III Congresso Brasileiro de Redes Neurais, IV Escola de Redes Neurais, Florianopolis, Brazil, L. Caloba e J. Barreto, Editor; pp. 499-500.

1999

21. H. Kuterdem, P. Cho, R. Marks II “Dynamic multileaf-diaphragm sequencing with adjacency gap constraint“ Medical Physics, 26:1136(abs), 1999

6.7.4 2000-2009**2004**

22. Robert J. Marks II, Ian Gravagne, John M Davis, Jeffrey J DaCunha, “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.

2007

23. J.M. Davis, I.A. Gravagne, B.J. Jackson, R.J. Marks II and A.A.Ramos, “Control of Linear Time Invariant Sytems, Part I“ , 113th Annual Meeting of the American Mathematical Society (AMS), New Orleans, January 5-7, 2007.
24. J.M. Davis, I.A. Gravagne, B.J. Jackson, R.J. Marks II and A.A.Ramos, “The Generalized Laplace Transform: Applications to Adaptive Control “, University of Nebraska-Lincoln Math Symposium, December 7, 2007.
25. J.M. Davis, I.A. Gravagne, B.J. Jackson, R.J. Marks II and A.A.Ramos, “Control of Linear Time Invariant Sytems, Part I“ , 113th Annual Meeting of the American Mathematical Society (AMS), New Orleans, January 5-7, 2007.

26. J.M. Davis, I.A. Gravagne, B.J. Jackson, R.J. Marks II and A.A.Ramos, "Control of Linear Time Invariant Sytems, Part II" , 113th Annual Meeting of the American Mathematical Society (AMS), New Orleans, January 5-7, 2007.

2009

27. R.J. Marks II "Cross Disciplinary Research in Microwave Circuitry & Metrology," 2009 Mini-Symposium on Wireless and Microwave Circuits and Systems (WMCS), Baylor University, March 2009.
28. Albert Yu, B.B. Thompson, M. Robinson, R.J. Marks II, "Inversion of Swarm Dynamics for Underwater Tactical Applications," ONR University/Laboratory Initiative in Undersea Weapons Technology at the Naval Undersea Warfare Center (NUWC), Newport, RI (June 2-4, 2009).
29. Robert J. Marks II and William A Dembski "Evolutionary Informatics: Measuring the Cost of Success," American Scientific Affiliation, 2009 Annual Meeting, 3 August 2009. [ppt Slides]

6.7.5 2010-2019

2010

30. R.J. Marks II "Solutions Looking For Problems" 2010 Mini-Symposium on Wireless and Microwave Circuits and Systems (WMCS), Baylor University, March 2010.
31. Charles Baylis and R.J. Marks II, "Spectrum Issues in Amplifier Design," Fifth Annual Emerging Spectrum Technology (EST) Workshop on Advanced Radar Technologies to Improve Spectrum Use, Double Tree Hotel, Annapolis Maryland, September 13-14, 2010.
32. Charles Baylis and Robert J. Marks II, "Simultaneous Circuit & Waveform Optimization for Cognitive Radar," 2010 ONR S&T Naval Partnership Conference, November 8-10. Hyatt Regency Crystal City, Arlington, VA., November 8-10, 2010.

2011

33. Dr. Charles Baylis, Dr. Robert J. Marks II, Josh Martin, Loria Wang, Matthew Moldovan, and Hunter Miller, "Wirtinger Calculus as a Means to Assess and Improve Linearity and Efficiency in Radar Power Amplifiers," URSI National Radio Science Meeting, University of Colorado, Boulder, (January 4-6, 2011)
34. Josh Martin, Charles Baylis and Robert Marks II, "Using Wirtinger Calculus to Predict the Behavior of Time-Invariant Periodicity Preservation Systems," 2011 Mini-Symposium on Wireless and Microwave Circuits and Systems (WMCS), Baylor University, April 2011.

35. Matthew Moldovan, Charles Baylis and Robert Marks II, "Using Wirtinger Calculus to Predict the Behavior of Time Invariant Periodicity Preservation Systems," 2011 Mini-Symposium on Wireless and Microwave Circuits and Systems (WMCS), Baylor University, April 2011.

2012

36. Josh Martin, Matthew Moldovan, Charles Baylis, Robert J. Marks II, "Radar Power Amplifier Spectrum Optimization for Chirp Waveforms Using ACPR Load-Pull Measurements," The 2012 USNC-URSI National Radio Science Meeting, 4-7 January, Boulder, CO
37. Jon Roach, Robert J. Marks II, and Dr. Benjamin B. Thompson, "Tactical Task Allocation and Resource Management in Nonstationary Swarm," 2012 ONR University/Laboratory Initiative Program Review, University of Maryland University College, June 5-7, 2012
38. J. Martin, C. Baylis, R.J. Marks II, L. Cohen, and J. de Graaf "A Peak-Search Algorithm for Combined PAE and ACPR Load-Pull," Power Amplifier Symposium, San Diego, California, September 2012.
39. C. Baylis, J. Martin, M. Moldovan, R.J. Marks II, L. Cohen, and J. de Graaf, "Engineering Reconfigurable, Spectrally Confined Radar Systems," Department of Defense E3 Review (Environmental Electromagnetic Effects), Orlando, Florida, March 2012.

2013

40. Josh Martin, Charles Baylis, Robert J. Marks II, Lawrence Cohen, "Fast Load-Impedance Optimization to Reduce Spectral Spreading and Maximize Efficiency in Radar Transmitter Amplifiers," URSI National Radio Science Meeting, Boulder, Colorado, January 2013.
41. Charles Baylis, Matthew Moldovan, Matthew Fellows, David Moon, Robert J. Marks II, Lawrence Cohen "Radar Waveform Optimization to Reduce Spectral Spreading and Maximize Target Detection," URSI National Radio Science Meeting, Boulder, Colorado, January 2013.
42. Charles Baylis, Josh Martin, Matthew Fellows, David Moon, Robert J. Marks II, Lawrence Cohen, "Designing and Optimizing High-Efficiency Power Amplifiers to Meet Spectral Constraints in Radar Systems," 8th Annual Military Radar Summit, February 25 - 27, 2013, Ronald Reagan Building, Washington, District of Columbia
43. Jon Roach, Robert J. Marks, Benjamin B. Thompson. "Tactical Task Allocation and Resource Management in Nonstationary Swarm Dynamics," 2013 ONR University/Laboratory Initiative Program Review, Aloft National Harbor, MD June 4-6, 2013

44. Matthew Fellows, Charles Baylis, Josh Martin, Lawrence Cohen, and Robert J. Marks II, "Direct Fast Load-Pull Algorithm for PAE and ACPR Optimization," *Wireless and Microwave Circuits and Systems*, UCSD (2013).

2014

45. Robert Marks "Functional Information on and the Intelligent Design Theistic Evolution Dialogue," CSCA/ASA/CiS 2014 Conference, July 25-28, 2014, McMaster University, Hamilton, Ontario.

2015

46. Charles Baylis, Matthew Fellows, Joseph Barkate, Jennifer Barlow, Matthew Flachsbart, Lawrence Cohen, Robert J. Marks II, "The Smith Tube: Providing the Foundation for Real-Time, Spectrally Sensitive Circuit Optimizations." 2015 IEEE International Symposium on Antennas and Propagation and North American Radio Science Meeting, URSI, July 19-24, 2015, Vancouver, BC
47. Dylan Eustice, Charles Baylis, Lawrence Cohen, Robert J. Marks II, "Mythbusting: Exploring Common Misconceptions about the Ambiguity Function." 2015 IEEE International Symposium on Antennas and Propagation and North American Radio Science Meeting, URSI, July 19-24, 2015, Vancouver, BC
48. Matthew Fellows, Sarvin Rezayat, Jennifer Barlow, Joseph Barkate, Alexander Tsatsoulas, Charles Baylis, Lawrence Cohen, and Robert J. Marks II. "The Bias Smith Tube for Simultaneous Optimization of Power Amplifier Bias Voltage and Load Impedance," IEEE Power Amplifier Symposium, September 21-22 2015, San Diego, CA
49. Alexander Tsatsoulas, Matthew Fellows, Joseph Barkate, Charles Baylis, Lawrence Cohen and Robert J. Marks II. "Multidimensional Smith Tubes for Multi-Objective, Multi-Parameter Power Amplifier Design Optimization," IEEE Power Amplifier Symposium, September 21-22 2015, San Diego, CA
50. Joseph Barkate, Alexander Tsatsoulas, Matthew Fellows, Matthew Flachsbart, Charles Baylis, Lawrence Cohen, and Robert J. Marks II. "Momentum-Aided Search in the Power Smith Tube for Simultaneous Optimization of Power Amplifier Input Power and Load Impedance," IEEE Power Amplifier Symposium, September 21-22 2015, San Diego, CA

2016

51. Dylan Eustice, Charles Baylis, Lawrence Cohen, Robert J. Marks II. "Waveform Synthesis via Alternating Projections with Ambiguity Function, Peak-to-Average Power Ratio, and Spectrum Requirement," 2016 IEEE Radio & Wireless Week, Austin, Texas, USA, JW Mariott, Austin, 24-27 January, 2016

52. Joseph Barkate, Alexander Tsatsoulas, Matthew Fellows, Matthew Flachsbart, Charles Baylis, Lawrence Cohen, Robert J. Marks II. "Fast, Momentum-Aided Optimization of Transmitter Amplifier Load Impedance and Input Power for Cognitive Radio Using the Power Smith Tube," 2016 IEEE Radio & Wireless Week, Austin, Texas, USA, JW Marriott Austin, 24-27 January, 2016
53. Matthew Fellows, Sarvin Rezayat, Jennifer Barlow, Joseph Barkate, Alexander Tsatsoulas, Charles Baylis, Lawrence Cohen, Robert J. Marks II. "The Bias Smith Tube: Simultaneous Optimization of Bias Voltage and Load Impedance in Power Amplifier Design," 2016 IEEE Radio & Wireless Week, Austin, Texas, USA, JW Marriott Austin, 24-27 January, 2016
54. Eric Holloway and Robert Marks II, "High Dimensional, Human Guided Machine Learning," The Fourth AAAI Conference on Human Computation and Crowdsourcing (HCOMP 2016) October 30 - November 3, 2016, Austin, TX, USA.

2017

55. Matthew W. Fellows, Sarvin Rezayat, Alicia Magee, Charles Baylis, Lawrence Cohen, Robert J. Marks II, "OPTIMIZATION OF LOAD IMPEDANCE AND BIAS VOLTAGE FOR POWER-ADDED EFFICIENCY, DELIVERED POWER, AND ADJACENT-CHANNEL POWER RATIO USING THE BIAS SMITH TUBE." USNC-URSI National Radio Science Meeting, January 2017, Boulder, Colorado.
56. Zachary Hays, Lucilia Lamers, Charles Baylis, Robert Marks II, Ed Viveiros, Ali Darwish, John Penn, Abigail Hedden. "COMPARISON OF GAIN OPTIMIZATION TECHNIQUES ON RECONFIGURABLE POWER AMPLIFIERS WITH A REAL-TIME VARACTOR TUNING NETWORK." USNC-URSI National Radio Science Meeting, January 2017, Boulder, Colorado.
57. Charles Baylis, Robert J. Marks II, Liang Dong, Andrew Clegg, Lawrence Cohen. "DYNAMIC SPECTRUM COLLABORATION BETWEEN RADAR AND WIRELESS COMMUNICATION: A PROPOSED FRAMEWORK FOR THE SIMULTANEOUS OPTIMIZATION OF POLICY, NETWORKS, AND CIRCUITS." USNC-URSI National Radio Science Meeting, January 2017, Boulder, Colorado.
58. Casey Latham, Alicia Magee, Jacob Boline, Alexander Tsatsoulas, Matthew Fellows, Charles Baylis, Lawrence Cohen, Robert J. Marks II. "DUAL-LOOP JOINT CIRCUIT AND WAVEFORM OPTIMIZATION TECHNIQUE FOR AMBIGUITY FUNCTION, SPECTRAL PERFORMANCE, AND POWER EFFICIENCY." USNC-URSI National Radio Science Meeting, January 2017, Boulder, Colorado.
59. Charles Baylis and Robert J. Marks II. "Adaptive Amplifier Design for Dynamic Spectrum Allocation in the Next-Generation Radar," IEEE International Microwave Symposium, Hawaii Jun 9, 2017.

2018

60. Austin S. Egbert, Casey Latham, Pedro Rodriguez-Garcia, Charles Baylis, Lawrence Cohen, Robert J. Marks. "MULTI-DIMENSIONAL COEXISTENCE: EXTENDING THE CONCEPT OF THE SPECTRAL MASK TO INCLUDE TRANSMITTER TRANSMISSION PATTERN FOR SPECTRUM SHARING," USNC-URSI National Radio Science Meeting, January 2018, Boulder, Colorado.
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.
64. Sarvin Rezayat, Charles Baylis, Ed Viverios, John Penn, Robert J. Marks II "REAL-TIME MULTI-VARIABLE AMPLIFIER OPTIMIZATION USING A NONLINEAR TUNABLE VARACTOR MATCHING NETWORK IN THE POWER SMITH TUBE," USNC-URSI National Radio Science Meeting, January 2018, Boulder, Colorado.

2019

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.
67. Angelique Dockendorf, Ellie Langley, Austin Egbert, Charles Baylis, Abbas Semnani, Dimitrios Peroulis, Anthony Martone, Ed Viveiros, Robert J. Marks II. "Frequency-Agile Reconfiguration for a High-Power Resonant Cavity Tuner Using Previous Search Results," URSI National Radio Science Meeting, Boulder, Colorado, January 9-12, 2019.

68. Austin S. Egbert, Kyle Gallagher, Charles Baylis, Anthony Martone, Ed Viveiros, Robert Marks, "EFFECTS OF TIME-VARYING TRANSMIT AMPLIFIER MATCHING NETWORKS IN COGNITIVE RADAR APPLICATIONS," 2019 USNC-URSI National Radio Science Meeting, University of Colorado at Boulder, January 9-12, 2019.
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 Flatten, 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
78. Adam Goad, Austin Egbert, Angelique Dockendorf, Charles Baylis, Anthony Martone, Robert J. Marks II, “Optimizing Transmitter Amplifier Load Impedance for Tuning Performance in a Metacognition-Guided, Spectrum Sharing Radar” 2020 IEEE International Radar Conference, Washington DC (virtual), April 27, 2020
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.

2021

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, Mohammad Abu 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

2022

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, “Change-point 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.

2023

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," TheBestSchools.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 & Artificial 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, December 20, 2018. [Link.]
26. Robert J. Marks, “9: WILL THAT ARMY ROBOT SQUID EVER BE “SELF-AWARE”?,” Mind Matters, December 21, 2018. [Link.]
27. Robert J. Marks, “8: AI JUST NEEDS A BIGGER TRUCK!” Mind Matters, , December 21, 2018. [Link.]
28. Robert J. Marks, “7: COMPUTERS CAN DEVELOP CREATIVE SOLUTIONS ON THEIR OWN!” Mind Matters, December 24, 2018. [Link.]
29. Robert J. Marks, “6: AI CAN EVEN EXPLOIT LOOPHOLES IN THE CODE!” Mind Matters, December 26, 2018. [Link.]
30. Robert J. Marks, “5: AI CAN FIGHT HATE SPEECH!” Mind Matters, December 26, 2018. [Link.]
31. Robert J. Marks, “4: MAKING AI LOOK MORE HUMAN MAKES IT MORE HUMAN-LIKE!” Mind Matters, December 28, 2018. [Link.]
32. Robert J. Marks, “3: WITH MIND-READING AI, YOU WILL NEVER HAVE SECRETS AGAIN!” Mind Matters, December 28, 2018. [Link.]
33. Robert J. Marks, “2: AI CAN WRITE NOVELS AND SCREENPLAYS BETTER THAN THE PROS!” Mind Matters, December 31, 2018. [Link.]
34. Robert J. Marks, “1: IBM’S WATSON IS NOT OUR NEW COMPUTER OVERLORD,” Mind Matters, December 31, 2018. [Link.]

2019

35. Robert J. Marks, “THE IDOL WITH FEET OF SILICON.” Mind Matters, FEBRUARY 3, 2019 [Link.]
36. Robert J. Marks, “STEM EDUCATION 1. PURSUING NERD QUALITY OVER NERD QUANTITY,” Mind Matters, January 23, 2019. [Link.]
37. Robert J. Marks, “STEM EDUCATION 2. NOT EVERYONE IS LUCKY ENOUGH TO BE A NERD,” Mind Matters, January 29, 2019. [Link.]
38. Robert J. Marks, “STEM EDUCATION 3. KILLING PEOPLE AND BREAKING THINGS,” Mind Matters, February 8, 2019. [Link.]
39. Robert J. Marks, “STEM EDUCATION 4: DO STEM NERDS NEED TO LEARN LATIN?,” Mind Matters, February 13, 2019. [Link.]
40. Robert J. Marks, “STEM EDUCATION 5: WHAT DIFFERENCE DO FAMILY AND PRIVILEGE MAKE TO SUCCESS?,” Mind Matters, February 21, 2019. [Link.]

41. Robert J. Marks, “STEM EDUCATION 6: HOW TO GUIDE A NERD,” Mind Matters, February 28, 2019. [Link.]
42. Robert J. Marks, “STEM EDUCATION 7: SELL THE SIZZLE,” Mind Matters, March 7, 2019. [Link.]
43. Robert J. Marks, “STEM EDUCATION 8: HELP CREATE CREATIVITY,” Mind Matters, March 14, 2019. [Link.]
44. Robert J. Marks, “WHY WE CAN’T JUST BAN KILLER ROBOTS: Should we develop them for military use? The answer isn’t pretty. It is yes,” Mind Matters, February 15, 2019. [Link.]
45. Robert J. Marks, “AI ETHICS AND THE VALUE OF HUMAN LIFE: Unanticipated consequences will always be a problem for totally autonomous AI,” Mind Matters, February 22, 2019. [Link.]
46. Robert J. Marks, “AUTONOMOUS AI IN WAR: TRIAL BY ORDEAL,” Mind Matters, February 28, 2019. [Link.]
47. Robert J. Marks, “RANDOM THOUGHTS ON RECENT AI HEADLINES,” Mind Matters, March 18, 2019. [Link.]
48. Robert J. Marks, “THINGS EXIST THAT ARE UNKNOWABLE,” Mind Matters, March 19, 2019. [Link.]
49. Robert J. Marks, “AI AND THE SEDUCTIVE OPTICS OF THE FRANKENSTEIN COMPLEX,” Mind Matters, March 26, 2019. [Link.]
50. Robert J. Marks, “BIG DATA CAN LIE: SIMPSON’S PARADOX,” Mind Matters, April 15, 2019. [Link.]
51. Robert J. Marks, “HOW ARE ZOMBIES EMPOWERED BY ALGORITHMS?,” Mind Matters, April 23, 2019. [Link.]
52. Robert J. Marks, “WHAT IT REALLY TAKES TO BUILD A HIGH-TECH COMPANY, SELL IT, AND GET RICH,” Mind Matters, May 8, 2019. [Link.]
53. Robert J. Marks, “WHAT ONE THING DO AI, EVOLUTION, AND ENTREPRENEURSHIP ALL NEED?,” Mind Matters, May 17, 2019. [Link.]
54. Robert J. Marks, “AI AS THE ARTFUL DODGER,” Mind Matters, May 28, 2019. [Link.]
55. Robert J. Marks, “SEVEN MINUTES TO GOOSEBUMPS: CONFRONTING MATERIALISM HEAD ON,” Mind Matters, June 4, 2019. [Link.]
56. Robert J. Marks, “AI IS NO MATCH FOR AMBIGUITY,” Mind Matters, June 17, 2019. [Link.]

57. Robert J. Marks, “MCPATHOGENS: ARE MCDONALDS ORDER KIOSKS CLEAN? ANOTHER LOOK,” Mind Matters, June 19, 2019. [Link.]
58. Robert J. Marks, “RANDOM THOUGHTS ON RECENT AI HEADLINES: GOOGLE GIVES AWAY FREE COOKIES,” Mind Matters, 2019. [Link.]
59. Robert J. Marks, “WHY ITS SO HARD TO REFORM PEER REVIEW,” Mind Matters, July 18, 2019. [Link.]
Reprinted at Social Science Space, July 25, 2019. [Link.]
60. Robert J. Marks, “CAN AI PREDICT AND PREVENT POLITICAL UNREST?,” Mind Matters, July 19, 2019. [Link.]
61. Robert J. Marks, “CAN COMPUTER ALGORITHMS BE FREE OF BIAS?,” Mind Matters, July 20, 2019. [Link.]
62. Robert J. Marks, “RANDOM THOUGHTS ON THE PASSING SCENE: HOW TO SPELL GUD,” Mind Matters, August 1, 2019. [Link.]
63. Robert J. Marks, “PURSUIT OF THE AI SINGULARITY IS MODERN ALCHEMY,” Mind Matters, September 4, 2019. [Link.]
64. Robert J. Marks, “SMART CITIES?: PROCEED WITH CAUTION!,” Mind Matters, October 18, 2019. [Link.]
65. Robert J. Marks, “THE GREATEST THREAT WE FACE FROM AI AND WHAT WE CAN DO,” Mind Matters, November 14, 2019. [Link.]
66. Robert J. Marks, “Random Comments on the Passing Scene: Carbon Computing and Much More,” Mind Matters, December 9, 2019. [Link.]
67. Robert J. Marks, “Abandoning Reality: Getting Lost in Oculus Quests VR,” Mind Matters, December 12, 2019. [Link.]
68. Robert J. Marks, “Moore or Less: Why the Exponential Speed of AI Cant Be Sustained,” Mind Matters, December 17, 2019. [Link.]

6.8.3 2020-2029

2020

69. Robert J. Marks II, “Iran Conflict Shows Why the US Needs Autonomous Lethal AI Weapons,” CNS News, January 29, 2020 [Link.]
70. Robert J. Marks, “Introducing Walter Bradley: Friend, Hero, and Coauthor of *The Mystery of Life’s Origin*” Evolution News & Science Today, January 30, 2020 [Link.]
71. Robert J. Marks, “Coronavirus: Is Data Mining Failing Its First Really Big Test?,” Mind Matters, April 29, 2020. [Link.]

72. Robert J. Marks, "CALVIN AND HOBBS EXPLAIN WHY AI WILL NEVER RULE THE BATTLEFIELD" Mind Matters, May 4, 2020 [Link]
73. Robert J. Marks, "SHOULD AI HOLD PATENTS? THE FLASH-OF-GENIUS ANSWER" Mind Matters, May 8, 2020 [Link]
74. Robert J. Marks, "Einstein's Only Rejected Paper" Mind Matters, May 14, 2020 [Link]
75. Robert J. Marks, "FLUBBED HEADLINES: NEW CHALLENGE FOR AI COMMON SENSE" Mind Matters, May 18, 2020 [Link]
76. Robert J. Marks, "DEVS BOTH GRIPS AND CHALLENGES HULU VIEWERS" Mind Matters, May 23, 2020 [Link]
77. Robert J. Marks, "ADVICE TO PHYSICISTS: 'SHUT UP AND DO PHYSICS' " Mind Matters, May 25, 2020 [Link]
78. Robert J. Marks, "HULU DEVS SERIES: WHERE THEY GET DETERMINISM WRONG" Mind Matters, May 30, 2020 [Link]
79. Robert J. Marks, "IS BIG BANG THEORY'S SHELDON RIGHT RE THE MULTI-VERSE?" Mind Matters, June 4, 2020 [Link]
80. Robert J. Marks, "EINSTEIN'S SINGLE JOURNAL PAPER ENDED WWII" Mind Matters, June 9, 2020 [Link]
81. Robert J. Marks, "STARK LESSONS FROM THE 75TH ANNIVERSARY OF THE ATOMIC BOMB" Mind Matters, Articles August 6, 2020 [Link]
82. Robert J. Marks, "DARPA Has Scheduled AI vs. AI Aerial Dogfights for Next Week" Mind Matters, August 14, 2020 [Link]
83. Robert J. Marks, "After Thursday's Dogfight, It's Clear: DARPA Gets AI Right" Mind Matters, August 23, 2020 [Link]
 - (a) Reprinted in Zelpedia [Link]
 - (b) Reprinted at Gistree.com [Link]
 - (c) Reprinted at Full Stack [Link]
 - (d) Reprinted at Alive Blog [Link]
84. Robert J. Marks, "What's To Be Done About Cheating with Chegg in the COVID era?" Mind Matters, September 17, 2020 [Link]
85. Robert J. Marks, "Meet the U.S. Army's New Drone Swarms" Mind Matters, September 11, 2020 [Link]
86. Robert J. Marks, "AI: Design Ethics vs. End User Ethics the Difference Is Important" Mind Matters, September 15, 2020 [Link]

◇ Reprinted at *Anti Corruption Digest*, September 17, 2020 [Link]

87. Robert J. Marks, “Has Microsoft Ever Really Innovated?” *Mind Matters*, September 23, 2020 [Link]
88. Robert J. Marks, “Pigeons Can Solve the Monty Hall Problem. But Can You?” *Mind Matters*, October 5, 2020 [Link]
89. Robert J. Marks, “Should We Really ”Listen to Science”? What Should We Listen For? ”*Mind Matters*, October 13, 2020 [Link]
90. Robert J. Marks, “The First War Using Modern AI-Based Weapons Is Here” *Mind Matters*, October 15, 2020 [Link]
91. Robert J. Marks, “Can Blockchain Help Ensure Fraud Free Voting?” *Mind Matters*, November 27, 2020 [Link]
 - (a) Reposted at BTC Express [Link]
 - (b) Reposted at Jiffy 360 [Link]
 - (c) Reposted at My Pipro [Link]
 - (d) Reposted at Coin Hub News [Link]
 - (e) Reposted at Mario Lost Coins [Link]
 - (f) Reposted at Navs.com [Link]
 - (g) Reposted at iammarketingmedia.com [Link]
 - (h) Reposted at Daily Coin [Link]
 - (i) Reposted at Block Review [Link]
92. Robert J. Marks, “WERE THE WALTER BRADLEY CENTER. BUT WHO IS WALTER BRADLEY?” *Mind Matters*, December 20, 2020 [Link]
93. Robert J. Marks, “Jill Biden: Who Should, and Shouldnt, Be Called Doctor?” *Mind Matters*, December 22, 2020 [Link]

2021

94. Robert J. Marks, “AI Tool Now Predicts Attacks of Locust Swarms for African Farmers” *Mind Matters*, January 7, 2021 [Link]
95. Robert J. Marks, “Most Real Numbers Are Not Real, or Not in the Way You Think” *Mind Matters*, January 21, 2021 [Link]
96. Robert J. Marks, “THE PRESIDENT PARDONS THE FOUNDER OF A CHURCH THAT WORSHIPS AI” *Mind Matters*, January 22, 2021 [Link]
97. Robert J. Marks, “FIVE SURPRISING FACTS RE FAMOUS SCIENTISTS WE BET YOU NEVER KNEW” *Mind Matters*, February 2, 2021 [Link]

98. Robert J. Marks, “A Review of Peer Review: Whats wrong with scholarly publishing?” Academic Influence, January 2021 [Link]
99. Robert J. Marks, “FERMATS LAST TANGO: LIVELY MUSICAL FOR NERDS” Mind Matters, April 9, 2021 [Link]
100. Robert J. Marks, “HOW MATERIALISM PROVES UNBOUNDED SCIENTIFIC IGNORANCE” Mind Matters, April 18, 2021 [Link]
101. Robert J. Marks, “Inside the Economics of Science Papers” Mind Matters, May 13, 2021 [Link]
102. Robert J. Marks, “CHICKEN LITTLE AI DYSTOPIANS: IS THE SKY REALLY FALLING?” Mind Matters, June 1, 2021 [Link]
 - (a) Reposted at FullStackFeed.com
103. Robert J. Marks & Samuel Haug, “GÖDEL SAYS GOD EXISTS AND PROVES IT” Mind Matters, June 7, 2021 [Link]
 - (a) Reposted at Flipboard (2201 Shares): FullStackFeed.com
104. Robert J. Marks, “THE MOST PROMISING DEFENSE AGAINST MILITARIZED DRONE SWARMS” Mind Matters, June 23, 2021 [Link]
105. Robert J. Marks, “NO FREE LUNCHES: BERNOULLI IS RIGHT, KEYNES IS WRONG” Mind Matters, June 29, 2021 [Link.] Reposted at:
 - (a) Finshorts.com
 - (b) LatestFy.com
 - (c) Startup Times
106. Robert J. Marks, “Bernoulli, Keynes, and the Big Bang” Evolutionary News & Science Today, July 1, 2021 [Link]
107. Robert J. Marks, “ITS AI ART BUT IS THAT REALLY ART?” Mind Matters, August 30, 2021 [Link]. Reposted at:
 - ◇ AI-Summary.com
 - ◇ Zelpedia
108. RoberR J. Marks, “Why Just Anything Cant Happen via Infinite Universes” Mind Matters, October 28, 2021 [Link.] Reposted at:
 - ◇ Today Science and News
 - ◇ Evolution News & Science Today , October 30, 2021 [Link]
109. Robert J. Marks, “Rittenhouse Trial: Are Attorneys and Judge Tech/Math-Challenged?” Mind Matters, November 11, 2021 [Link]

110. Robert J. Marks, “Can Higher Dimensions Help Us Understand Biblical Miracles?” Mind Matters, December 12, 2021 [Link.] Reposted at

- ◇ WiTech.co.zw (Zimbabwe)
- ◇ Eric Michel Ministries (Canada)

2022

111. Robert J. Marks, “Michael Crichton would call Twitterheads ‘Scoundrels’ ” Mind Matters, April 25, 2022. [Link]

112. Robert J. Marks, “Top Gun Maverick: Thrilling but Outdated by Todays AI” Mind Matters, June 14, 2022. [Link]. Reposted at:

- ◇ The Tech Best

113. Robert J. Marks, “The Non-Computable Human” Evolution & Science Today, June 22, 2022 [Link]

114. Robert J. Marks, “The Software of the Gaps” Mind Matters, June 24, 2022 [Link]. Reposted at:

- ◇ Uncommon Descent
- ◇ Prometheism
- ◇ The Tech Best

115. Robert J. Marks, “No Pony in the Manure, No Consciousness in the Code” Evolution News & Science Today, June 24, 2022 [Link]

116. Robert J. Marks, “GOOGLES LAMDA NOT AS SMART AS SOME THINK” Mind Matters, June 27, 2022 [Link]

117. Robert J. Marks, “Artificial Intelligence Is No More Creative Than a Pencil ” Mind Matters, June 28, 2022 [Link]

- ◇ My Blog
- ◇ Brainly Tech
- ◇ The Tech Best

118. Robert J. Marks, “WHY INFINITY DOES NOT EXIST IN REALITY” Mind Matters, July 1, 2022. [Link]. Reposted at:

- ◇ Uncommon Descent
- ◇ Tech Tech
- ◇ Nach Welt (in German)
- ◇ Nouvelles de monde (in French)

- ◇ dcimadvisory (in Russian)
- ◇ Futur En Seine (in French)

119. Robert J. Marks, “INFINITY ILLUSTRATES THAT THE UNIVERSE HAS A BEGINNING” Mind Matters, July 2, 2022. [Link]

“The logical consequences of a literally infinite past are absurd, as a simple illustration will show”

Reposted at:

- ◇ Uncommon Descent
- ◇ Gestta
- ◇ VipiUp
- ◇ Backwater Tacoma
- ◇ Yummy Meals

120. Robert J. Marks, “IN INFINITY, LINES AND SQUARES HAVE AN EQUAL NUMBER OF POINTS” Mind Matters, July 3, 2022. [Link]

“We can demonstrate this fact with simple diagram”

Reposted at:

- ◇ Triodos-Elcolordeldnero (in Spanish)
- ◇ F1 Mundial (in Spanish)

121. Robert J. Marks, “MACHINES WITH MINDS? THE LOVELACE TEST VS. THE TURING TEST” Mind Matters, July 5, 2022. [Link.] Reposted at:

- ◇ Rich Tech
- ◇ Technical Caps
- ◇ Bookie Tech
- ◇ Brainly Tech
- ◇ The Tech Best

122. Robert J. Marks, “HOW ALMOST ANY NUMBER CAN ENCODE THE LIBRARY OF CONGRESS” Mind Matters, July 5, 2022. [Link]

“Thats a weird, counterintuitive but quite real consequence of the concept of infinity in math”

Reposted at:

- ◇ Uncommon Descent

123. Robert J. Marks, “For AI to Be Creative, Heres What It Would Take” Evolution & Science News Today, July 5, 2022. [Link]
124. Robert J. Marks, “The Church of Artificial Intelligence of the Future” The Stream, July 6, 2022. [Link.] Reposted at:
- ◇ Golden AI
 - ◇ Nommou.org
 - ◇ Technical Angel
 - ◇ Law Glitz
 - ◇ Bible Student Guide
 - ◇ C9 News
125. Robert J. Marks, “Some Infinities Are Bigger Than Others But Theres No Biggest One” Mind Matters, July 8, 2022. [Link]
126. Robert J. Marks, “ARTIFICIAL INTELLIGENCE, WORSHIPPED AS GOD, IS NO ORDINARY DEITY!” Mind Matters, July 10, 2022. [Link]
127. Robert J. Marks, “AI: THE SHADOW OF FRANKENSTEIN LURKS IN THE UNCANNY VALLEY” Mind Matters, July 12, 2022. [Link]
128. Robert J. Marks, “Hyping Artificial Intelligence with Seductive Optics and the Frankenstein Complex” July 12, 2022. Evolution News & Science [Link]
129. Robert J. Marks, “Should AI Be Granted Patents on the Designs It Helps Develop?” Mind Matters, July 20, 2022. [Link]
- “Artificial intelligence (AI) should no more be given a patent on an invention than my word processor should be granted a copyright on the article Im writing. ”
- Reposted at:
- ◇ News Express Hindi
 - ◇ Rich Tech
 - ◇ Brainly Tech
130. Robert J. Marks, “Modern Bitcoins Surprising Lesson About Ancient Scripture” Mind Matters, September 25, 2022. [Link.] Reposted at:
- ◇ CobyBlog
 - ◇ InstaCoin
 - ◇ EPHOSP.com
 - ◇ DefiMagnets.com

- ◇ WowPics.xyz
- ◇ StickySatoshi.com
- ◇ XRPFamily.com
- ◇ ETHPubs.com
- ◇ CryptoNewsHerald.com
- ◇ CryptoNewsHerald.com
- ◇ UncryptoNote.com
- ◇ BitWolf.com
- ◇ PresenciaDigital.us as “La sorprendente ciencia de Bitcoin novedoso sobre las escrituras antiguas”
- ◇ CryptoCoinPress.com
- ◇ CryptoExBullitin.com
- ◇ CryptoZoneDaily.com
- ◇ MillionCrypto.com
- ◇ TheCryptoDays.com
- ◇ BlockChainUSA.tech
- ◇ CoinMarketDo.com
- ◇ CryptoNewsPluss.com
- ◇ TheCryptoSpecialist.net
- ◇ NFTNewsPrime.com
- ◇ US-China Investment News
- ◇ ChainRadar.com
- ◇ BPing.com
- ◇ DefiMoneyTeam.com
- ◇ NationalCyberSecurityNews.com
- ◇ DefiHerald.com
- ◇ CyptoAdvisory.ch
- ◇ CyptoNewsDoJao.com
- ◇ BlockSurgeNews.com
- ◇ Gaijint.com as “Bitcoin Lekcija Iznenadujuci govor o drevnoj Bibliji”
- ◇ BlockPatriot.com
- ◇ Cryptelicious.com
- ◇ TechTelegraph.co.uk
- ◇ BitCoinMetaCrypto.com

131. Robert J. Marks & Keri Ingraham, “Preparing Students to Work in an Artificial Intelligence World” Mind Matters, October 26 2022. [Link]
132. Robert J. Marks, “How the Inflation of Journal Citations Impacts Academia” Mind Matters, December 7, 2022. [Link]
133. Robert J. Marks, “How Googles LaMDA Resolved an Old Conflict in AI ” Mind Matters, December 12, 2022. [Link]. Reposted at:

◇ & MMO Club

134. Robert J. Marks, “Did the GPT3 Chatbot Pass the Lovelace Creativity Test?” Mind Matters, December 14, 2022. [Link]
135. Robert J. Marks, “Celebrating My 2 Billionth Birth-Second: What Big Numbers Mean” Mind Matters, December 19, 2022 [Link]

“I have lived for over two billion seconds. In 2013, I celebrated my 2 billionth birth-second. The party did not last long.”

2023

136. Robert J. Marks, “How San Franciscos Gun Fears Prevented Lifesaving Innovation” Mind Matters, January 6, 2023. [Link]

“Killer robots in law enforcement would reduce the death toll but they are a bridge too far for many politicians.”
137. Robert J. Marks, “Note to Parents: Grooming and Wokeness Are Embedded in Chatbots” Mind Matters, January 11, 2023. [Link]
138. Robert J. Marks, “US MILITARY UPDATES AUTONOMOUS KILLER ROBOT POLICY” Mind Matters, January 30, 2023 [Link]
139. Robert J. Marks, “War With China: Who Will Win?” Mind Matters, February 3, 2023 [Link]
140. Robert J. Marks, “Artificial Intelligence and the Love of Jesus” Mind Matters, February 13, 2023 [Link]
141. Robert J. Marks, “China Balloons, EMPs and Bioweapons: A Chilling Possibility” Mind Matters, February 13, 2023 [Link]
142. Robert J. Marks, “The Asbury Revival and the Cure for TikTok” Mind Matters, February 21, 2023 [Link]
143. Robert J. Marks, “From Political Bias To Outlandish Dares, Heres Why Robots Cannot Replace Us” The Daily Caller, March 25, 2023 [Link]

144. Robert J. Marks, “How to Stop Troubling Abuse from Artificial Intelligence” The Stream, April 27, 2023. [Link]
145. Robert J. Marks, “AI: Guns Don’t Kill. Fathers Protecting Daughters Do” Mind Matters, April 28, 2023. [Link]
146. Robert J. Marks, “Another AI Hype Bubble Pops” Mind Matters, May 30, 2023 [Link.] Reposted at:
 - ◊ Entertainment World (Spanish translation)
147. Robert J. Marks, “The Age of Improving Giant AI Models Like ChatGPT is Over: Another AI Hype Bubble Pops” The Stream, May 5, 2023. [Link]
148. Robert J. Marks, “Funny ChatGPT: a Solution to Striking Joke Writers?” Mind Matters, May 12, 2023. [Link]
149. Robert J. Marks, “Not to Worry - AI Isn’t Going to Take Over” Mind Matters, June 5, 2023. [Link]
150. Robert J. Marks, “Recent SCOTUS Decision May Be Legal Gut-Punch to AI” Newsmax, June 7, 2023. [Link.]
151. Robert J. Marks, “AI Complex, Making You a Caregiver” Newsmax, June 26, 2023. [Link.]
152. Robert J. Marks, “Revisiting the Mission of Mind Matters” Mind Matters, June 30, 2023. [Link.]
153. Robert J. Marks, “Is Mathematics Discovered or Invented?” Mind Matters, July 6, 2023. [Link.]
154. Robert J. Marks, “Is Mathematics Discovered or Invented?” [Reprint], Evolution News & Science Today, July 9, 2023. [Link.]
155. Robert J. Marks, “MISSION IMPOSSIBLE: DONT BOTHER ME WITH FACTS” Mind Matters, July 20, 2023. [Link.]
156. Robert J. Marks, “How AI May Increase Baptisms” Newsmax, July 31, 2023. [Link.]
157. Robert J. Marks, “The Secret Ingredient for AI: Ergodicity” Mind Matters, August 4, 2023. [Link.]
158. Robert J. Marks, “Consensus Doesn’t Equal Science” Newsmax, September 14, 2023. [Link.]
159. Angus Menuge, Brian Krauss, Robert J. Marks, “An Introduction to Minding the Brain” Mind Matters, September 25, 2023. [Link.]
160. Robert J. Marks & Jonathan Swindell, “If ChatGPT Had Children, Would They Be Geniuses or Blubbering Idiots?” Mind Matters, September 28, 2023. [Link.]

161. Robert J. Marks with Jonathan Swindell, “AI Inbreeding Produces Artificial Idiocy” Newsmax, November 13, 2023. [Link.] Reposted at:

◇ Michael Medved.com

162. Robert J. Marks, “TESLA RECALL DUE TO THE SHORT ATTENTION SPAN OF DRIVERS” Mind Matters, December 22, 2023. [Link.]

“Tesla did nothing wrong, but some claim they didn’t do enough right.”

163. Robert J. Marks, “CHATGPT: YOU’VE COME A LONG WAY, BABY” Mind Matters, December 28, 2023. [Link.]

164. Robert J. Marks, “ChatGPT Improved in 2023, Here’s How” Newsmax, December 29, 2023. [Link.]

2024

165. Robert J. Marks, “Will AI Mean No More Free Lunch Online?” Newsmax, January 18, 2024. [Link.]

166. Robert J. Marks, “AI and Wall Street’s Hype Curve” Mind Matters, February 28, 2024. [Link.]

167. Robert J. Marks, “Pink Dancing Hippos: Dont Tell ChatGPT-4 Not to do Something” Mind Matters, March 11, 2024. [Link.] Reposted at:

◇ Skeptic Society Magazine.

168. Robert J. Marks, “THE TWO-SIDED LOTTERY CARD PARADOX AND INFINITY” Mind Matters, March 18, 2024. [Link.] Reposted at:

◇ Skeptic Society Magazine

169. Robert J. Marks, “CYBERWARFARE IN THE ISRAELI WAR” Mind Matters, April 7, 2024. [Link.]

170. Robert J. Marks, “THE AI BANDWAGON & BIDEN’S EXECUTIVE ORDER” Mind Matters, April 9, 2024. [Link.]

171. Robert J. Marks, “Biden Jumps on AI Bandwagon Way Too Fast” NEWSMAX, April 12, 2024. [Link.]

172. Robert J. Marks, “AI and Common Sense” Mind Matters, May 20, 2024. [Link.] Reposted at:

◇ Parlour News

173. Robert J. Marks, “Marvin Minsky Asks: Can GPT4 Hack Itself?” Mind Matters, June 14, 2024. [Link.] Reposted at:

◇ Parlour News

174. Robert J. Marks, “No Foundational Evidence for Creating an AI God” NEWSMAX, July 5, 2024. [Link.]
175. Robert J. Marks, “High Tech Wizards Are Trying To Create a God in Their Own Image” Mind Matters, July 10, 2024. [Link.]
176. Robert J. Marks, “Can Free Will and Predestination Both Be True?” Mind Matters, July 11, 2024. [Link.]
177. Robert J. Marks, “Harris vs. Trump? Why Not an AI for President Instead?” Mind Matters, September 2, 2024. [Link.]¹²
178. Robert J. Marks, “Jason Allen’s Battle With AI Copyright Law” Mind Matters, October 9, 2024. [Link.]
179. Robert J. Marks, “No to an AI President” Newsmax, October 31, 2024. [Link.]
180. Robert J. Marks, “Are We Now Giving Nobel Prizes to Cheerleaders?” Mind Matters, November 1, 2024. [Link.]
181. Robert J. Marks, “Chegged Out: How ChatGPT Schooled a Study Giant” Mind Matters, November 11, 2024. [Link.]
182. Robert J. Marks, “Microsoft: What Did You Need To Work There in the Early Days?” Mind Matters, November 18, 2024. [Link.]
183. Robert J. Marks, “Monday Micro Softy 2: The Dead Presidents Club” Mind Matters, November 25, 2024. [Link.]
184. Robert J. Marks, “Monday Micro Softy 3: The Wolverton Mountain Puzzle” Mind Matters, December 3, 2024. [Link.]
185. Robert J. Marks, “Australias Social Media Ban: The Law of Forbidden Fruit” Mind Matters, December 3, 2024. [Link.]
186. Robert J. Marks, “Meet the Prof” Faculty Commons, December 4, 2024. [Link.]
187. Robert J. Marks, “Monday Micro Softy 4: Claude King Bests Clifton Clowers” Mind Matters, December 9, 2024. [Link.]
188. Robert J. Marks, “Micro Softy 5: The Puzzle of Claude and Chloe’s Two Kids” Mind Matters, December 16, 2024. [Link.]
189. Robert J. Marks, “The Man Behind the First Billion-Dollar AI Business” Mind Matters, December 19, 2024. [Link.]

¹²This article was repeated on Newsmax. See entry 179.

190. Robert J. Marks, “Monday Micro Softy 6: Bad Adding?” Mind Matters, December 23, 2024. [Link.]
191. Robert J. Marks, “Only in America” Mind Matters, December 24, 2024. [Link.]
192. Robert J. Marks, “Monday Micro Softy 7: Whos the Champ?” Mind Matters, December 30, 2024. [Link.]

2025

193. Robert J. Marks, “Monday Micro Softy 8: Whos the Better Barber?” Mind Matters, January 6, 2025. [Link.]
194. Robert J. Marks, “Monday Micro Softy 9: To Flip or Not to Flip?” Mind Matters, January 13, 2025. [Link.]
195. Robert J. Marks, “The Monday Micro Softy 10: The Monte Hall Problem” Mind Matters, January 20, 2025. [Link.]
196. Robert J. Marks, “Monday Micro Softy 11: What Happened to That Other Dollar?” Mind Matters, January 27, 2025. [Link.]
197. Robert J. Marks, “AI Pioneer Was Ahead of the Curve, Bridged Differences” Newsmax, January 30, 2025. [Link.] Reposted at:
 - ◊ WLS, 890 AM, Chicago, Illinois, April 25, 2025.
198. Robert J. Marks, “Monday Micro Softy 12: Can You Connect the Dots?” Mind Matters, February 3, 2025. [Link.]
199. Robert J. Marks, “AI Generated Content May Now Be Copyrighted” Mind Matters, 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, February 10, 2025. [Link.]
201. Robert J. Marks, “Monday Micro Softy 14: How Did the Blind Ticket Seller Know?” Mind Matters, February 17, 2025. [Link.]
202. Robert J. Marks, “Micro Softy 15: What Happens to the Hole in a Hot Washer?” Mind Matters, February 24, 2025. [Link.]
203. Robert J. Marks, “Monday Microsofty 16: The Leaky Bucket” Mind Matters, 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, 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, March 10, 2025. [Link.]
206. Robert J. Marks, “Monday Micro Softy 18: The Twin Paradox” Mind Matters, March 17, 2025. [Link.]
207. Robert J. Marks, “Monday Micro Softy 19: The ‘Bermuda Triangle’ ” Mind Matters, March 24, 2025. [Link.]
208. Robert J. Marks, “Micro Softy 20: Which Bottle Holds the Deadly Fentanyl?” Mind Matters, March 31, 2025. [Link.]
209. Robert J. Marks, “Monday Micro Softy 21: Finding More of the Deadly Fentanyl Pills” Mind Matters, April 7, 2025. [Link.]
210. Robert J. Marks, “Monday Micro Softy Monday 22: Can There Be Two Daddies?” Mind Matters, April 14, 2025. [Link.]
211. Robert J. Marks, “Monday Micro Softy 23: Barnums Circus Receipts” Mind Matters, April 21, 2025. [Link.]
212. Robert J. Marks, “Is U.S. Funding Graduate Education of Iranians, Chinese?” NEWS-MAX, 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, April 28, 2025. [Link.]
214. Robert J. Marks, “Monday Micro Softy 25: The Fishing Rod Blues” Mind Matters, May 5, 2025. [Link.]
215. Robert J. Marks, “Defense: EMP Cannons Could Down Drone Swarms like Bug Spray” Mind Matters, 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, 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, May 18, 2025. [Link.]
218. Robert J. Marks, “Micro Softy 27: Diamond in the Rough” Mind Matters, May 19, 2025. [Link.]
219. Robert J. Marks, “Settled Science Is a Contradiction in Terms” Mind Matters, 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, May 25, 2025. [Link.]
221. Robert J. Marks, “Monday Micro Softy 28: Beating the Odds of Winning Sweepstakes?” Mind Matters, May 26, 2025. [Link.]

6.9 Selected Talks

6.9.1 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, Irete University in Nantes France (tutorial), March 5-30, 1990.

6.9.2 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).

6.9.3 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/L_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>

6.9.4 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 Technologies 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 113, item 65)
63. "Dr. Robert Marks: Active Information in Metabiology," May 30, 2014
<http://youtu.be/tJSJg0IZtfl>
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.

6.9.5 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/Ji3rUIIu9A?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/7Z5FIUvJumM>
- 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/WelQwVBDBIU>
- 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 Geometrical 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, 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/yMbvy1WZ04E>]
 - 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/qCSC0a4IUWc>]
 - 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/14LTfeTPZeY>]

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 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, 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, “Evolutionary 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. 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.]
- 137. 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.]
- 138. Robert J. Marks II, “Answers to every question you have about AI” Teal Residential College, Baylor, March 12, 2024.
- 139. Robert J. Marks II, “Where is Heaven?” Ratio Christi, Elliston Chapel, Baylor University, April 2, 2024, 7PM. [Flyer]
- 140. 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.]
- 141. 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]
- 142. Robert J. Marks II, “Where is Heaven” Grace Bible Church, Nacogdoches, TX, April 16, 2024.
- 143. 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.
- 144. “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
145. 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.
146. 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 June 29, 2024.
147. 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.
148. 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.
149. Robert J. Marks II, “Non-Computable You” Ratio Christi, Elliston Chapel, Baylor University, October 29, 2024.
150. “It’s Just an Apparition: Unmasking AI 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.
151. Robert J. Marks “Minding the Brain: Are You a Computer Made Out of Meat?” Teal Residential College, Baylor University, November 3, 2024.

2025

152. 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>]
153. Robert J. Marks, "Prediction, AI and Machine Learning" SMART Hub (briefing of DOD and Industry), Arlington VA, February 5, 2025.
154. Robert J. Marks "Non-Computable You" University of North Texas, Denton, TX, Ratio Christi, February 10, 2025. [Link, Flyer, Thanks!]
155. Robert J. Marks "The challenges of AI" HS & Adult Learners, Marsha Michaelis, Kettle Falls, WA, February 13, 2025. [Zoom Video]
156. Robert J. Marks "AI Implications for Business" Technology Entrepreneurship, Baylor Hankamer School of Business, February 24, 2025.
157. Memphis University School, Memphis, Tennessee. [Instagram, cache.] [Facebook, cache.] [MUS, cache.]
 - ◇ 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.]
158. Robert J. Marks "Is Your Mind the Same as Your Brain? Are You a Computer Made Out of Meat?" North Creek Presbyterian Church, Mill Creek, WA, June 15, 2025.
159. Robert J. Marks "Can AI Replace Humans" Discovery Summer Seminar, Glen Eyrie Castle & Conference Center, Colorado Springs, June 27, 2025.
160. Robert J. Marks "Non-Computable You," International Conference on Machine Learning and Cybernetics (ICMLC), Bali, Indonesia, 12-15 July, 2025. Keynote talk.
161. Robert J. Marks "What You Do AI Never Will" Hong Kong Church, Hong Kong, China, July 8, 2025.
162. Robert J. Marks "Is Your Soul Contained in Your Brain? Are You a Super- Computer Made Out of Meat?" Hong Kong Church, Hong Kong, China, July 10, 2025.
163. Robert J. Marks "Non-Computable You" Center for Professional Selling, Baylor Hankamer School of Business, Friday, September 19, 2025.
164. Robert J. Marks, World Economic Catholic Forum, 2025

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;
 - o Ibid. 1997-98 \$23,000;
 - o 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)
 - o Ibid. 2021-2022, \$60,790.
 - o Ibid. 2022-2023, \$32,000.
 - o Ibid. 2023-2024, \$32,000.
 - o 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 Artificially 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 Professional Activities

8.1 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

8.2 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

8.3 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