

Robert J. Marks II

Curriculum Vitae

May 4, 2017

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	7
5	Professional Societies	8
5.1	Publications	8
5.2	Administrative	9
5.3	Conferences	12
6	Publications	15
6.1	Books	16
6.2	Journal Articles	16
6.3	Proceedings & Other Publications	29
6.4	Book Chapters	50
6.5	Patents	53
6.6	Abstracts	53
6.7	Videos	59
6.7.1	Lectures	59
6.7.2	Online Classes	61
6.8	Tutorials	63
6.9	Technical Essays	64

7	Research Grants & Contracts	65
8	Courses Taught	69
8.1	Baylor University	69
8.2	University of Washington	69
9	Consulting & Other External Activities	70
9.1	Organizations	70
9.2	Expert Witness	70
9.3	Consulting	71
10	Statistics	71
10.1	Publication Count	71
10.2	Erdős and Bacon Numbers	72
10.3	Citation Count	73
10.4	Website Rankings	73
11	Appendices	74
11.1	Graduate Theses and Dissertations	74
11.1.1	Students Advised	74
11.1.2	Cross Disciplinary Research	76
11.2	Coauthors	77
11.2.1	Publications with Nationals	80
11.3	Journals	81
11.4	Venues	82

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

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.
 - 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-present: IEEE Baylor Student Branch, Faculty Advisor.
 - 2009-2011: Baylor Compensation, Benefits, and Personnel Committee, Member.
- ◇ 1987-2003: Professor of Electrical Engineering, University of Seattle, Washington.
- ◇ 1982-1987: Associate Professor of Electrical Engineering, University of Seattle, Washington.
- ◇ 1978-1982: Assistant Professor of Electrical Engineering, University of Seattle, Washington.

- ◇ 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
- ◇ Honorary Inductee: Junior Membership in the Ohio Academy of Science (at the age of eighteen)
- ◇ IEEE Distinguished Lecturer
- ◇ Honorary Member: Puget Sound Section of the Optical Society of America
- ◇ IEEE Centennial Medal and Certificate
- ◇ IEEE Outstanding Branch Counselor/Advisor Award
- ◇ Charter President of the IEEE Neural Networks Council
- ◇ Rose-Hulman Institute of Technology Outstanding Young Alumni Award
- ◇ Texas Tech Electrical Engineering Academy
- ◇ IEEE Neural Networks Council Meritorious Service Award
- ◇ IEEE CASS (Circuits and Systems Society) Golden Jubilee Medal
- ◇ Judith Stitt Award, American Brachytherapy Society 23rd Annual Meeting (2001)
- ◇ NASA Tech Brief Award (2004)
- ◇ Pioneer in Neural Network Award (IJCNN) (2006)
- ◇ IEEE Dallas Section Volunteer of the Year Award (2007)

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.”

- ◇ DARPA³

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
- ◇ SuperScholar.org. “The 20 Most Influential Christian Scholars,” 2010.⁶
- ◇ TheBestSchools.org. “The 50 Smartest People of Faith.” 2012.⁷

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.”

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,

- ◇ L. A. Yahaya, “PERSONAL CHARACTERISTICS OF REPUTABLE SCHOLARS” 2013.⁸
- ◇ TheBestSchools.org. “The 50 Most Influential Scientists in the World Today.” 2014.⁹

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...

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 interest-

4.3 Honorary Conference Positions

- ◇ International Advisory Chair. 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

ingcolorful 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.

⋮

28. Robert J. Marks II

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

Marks received his PhD in electrical engineering from Texas Tech University. He has over 300 peer-reviewed journal publications. He is also a proponent of intelligent design, holding that certain features of the universe and of living things are best explained by an intelligent cause, not an undirected process such as natural selection.

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

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

Marks has received numerous awards, including the IEEE Distinguished Lecturer twice, once from the IEEE Neural Networks Council in 1991/92, and again from the IEEE Neural Networks Society in 2002/03, 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.

- ◇ 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

5 Professional Societies

5.1 Publications

- ◇ IEEE
 - IEEE Transactions on Neural Networks, Editor-in-Chief (1992-1997)
 - IEEE Transactions on Fuzzy Systems, Associate Editor (1993-1999)
 - IEEE Transactions on Systems, Man & Cybernetics, Associate Editor (2011-2014)
- ◇ Optical Society of America
 - Topical Editor, Journal of the Optical Society of America A: Optics and Image Science in Optical Signal Processing and Image Science (1990-92).
- ◇ Other
 - International Journal of Computer Vision & Signal Processing (2011-present)
 - Bio-Complexity, Editorial Board Member (2010-2014), Editor-in-Chief (2015-present) [<http://bio-complexity.org/>]
 - International Journal of Neurocomputing, Editorial Board Member (1989-1992).
 - Australian Journal of Intelligent Information Processing Systems, Editorial Board Member (1994-2007).

- Journal of Advanced Computational Intelligence, (ACI), Fuji Press Co., Tokyo, Editorial Board Member (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).

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).
- ◇ 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).
- ◇ 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).
- ◇ 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 Advisory 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, 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.

- ◇ American Mathematical Society
 - 1051st AMS Meeting, Baylor University, October 16-18, 2009, Session Co-Organizer (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
- ◇ 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 Goup Meeting, Silverado Country Club, Napa Valley , California , (August 22-23, 1991).
- Fuzzy Logic & Intelligent Systems Seminar, Boeing Computer Services, Red Lion Inn, Bellevue, WA, December 2, 1991, Panel Discussion: Moderator.
- International Workshop on Artificial Neural Networks, June 9-11, 1993 , Sitges (Barcelona), Spain , Program Committee -member.
- 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 & 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

6 Publications

Reprints of many of these papers can be downloaded from RobertMarks.org.

6.1 Books

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).#
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).
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). 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).

6.2 Journal Articles

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).
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).
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).
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).
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).
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).
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).
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) - book review.
29. R.J. Marks II and D. Radbel, "Error of linear estimation of lost samples in an over-sampled 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) ...invited paper.
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).
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).
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).
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).
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). - invited paper.
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.
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. 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).
60. 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.
61. 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).

62. 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
63. 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).
64. S. Oh, R.J. Marks II and D. Sarr, "Homogeneous alternating projection neural networks," Neurocomputing, volume 3, pp. 69-95 (1991).
65. 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.
66. 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.
67. 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).
68. 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).
69. 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
70. R.J. Marks II, "Council Activities," IEEE Transactions on Neural Networks, vol. 2, pp.481-482 (September, 1991).
71. 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).
72. 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.
73. 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).
74. 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).

75. R.J. Marks II, "Transactions Update," IEEE Transactions on Neural Networks, vol. 4, p 1 (January, 1993).
76. 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).
77. 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).
78. E. Sánchez-Sinencio and R.J. Marks II, "Editorial: Computationally Intelligent Video Reviews," IEEE Transactions on Neural Networks, vol. 4, p 2 (March, 1993).
79. R.J. Marks II, "Intelligence: Computational Versus Artificial," IEEE Transactions on Neural Networks, vol. 4, p 737 (September, 1993).
80. 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.
81. 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.
82. 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.
83. 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.
84. R.J. Marks II, "The Transactions Gains Weight," IEEE Transactions on Neural Networks, vol. 6, p 1 (January, 1995).
85. 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.
86. 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.
87. 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.

88. 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.
89. R..J. Marks II, "Web Abstracts," *IEEE Transactions on Neural Networks*, vol.7, p 265 (March, 1996).
90. 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.
91. 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.
92. 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
93. 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.
94. R.J. Marks II, "The TNN On Line," *IEEE Transactions on Neural Networks*, vol. 8, (March, 1997).
95. R.J. Marks II, "Old Neural Network Editors Dont Die, They Just Prune Their Hidden Nodes," *IEEE Transactions on Neural Networks*, vol. 8, no 6 (November, 1997), p.1221.
96. 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).
97. 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).
98. 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).
99. 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).
100. 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.

101. 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
102. 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).
103. P.S. Cho and R.J. Marks II, "Hardware-sensitive optimization for intensity modulated radiotherapy," Phys. Med. Biol, 2000 (pp. 429-440) .
104. 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).
105. Robert J. Marks II, "The Well Tempered Pythagorean: The Remarkable Relation Between Western and Natural Harmonic Music," Computer Books, pp. 1-16, July 2001 [link, cache]
106. 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).
107. 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).
108. 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.
109. 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.
110. 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 Systems Transient Stability Analysis with Input Dimensionality Reduction," IEEE Transactions on Power Engineering, Volume 17, 2002, pp.1308-1313.
111. 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.

112. 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.
113. 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.
114. 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.
115. 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).
116. 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).
117. 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).
118. 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).
119. 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).
120. 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).
121. R.J. Marks II, "Awards - 2006 CIS neural networks pioneer award," *IEEE Computational Intelligence Magazine*, Volume 1, #2, May 2006, pp.45 - 48.
122. 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.
123. 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.

124. 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.
125. 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.
126. 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).
127. Robert J. Marks II, "IEEE Fellows - Class of 2007," *IEEE Computational Intelligence Magazine*, pp. 5-9, August 2007.
128. 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.
129. 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.
130. 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
131. 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.OA]
132. 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]
133. 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]
134. 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.
135. 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).

136. 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
137. 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]
138. Charles Baylis, Robert J. Marks II, Josh Martin, Hunter Miller, and Matthew Moldovan. "Going Nonlinear" *IEEE Microwave Magazine*, April 2011, pp.55-64
139. Winston Ewert, William A. Dembski and Robert J. Marks II, "Climbing the Steiner TreeSources of Active Information in a Genetic Algorithm for Solving the Euclidean Steiner Tree Problem," *Biocomplexity*, Vol. 2012, Issue 1, pp.1-14, (April, 2012).
140. 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
141. 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
142. 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.
143. 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/ijsiec/235569.
144. 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
145. 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
146. 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/ijsiec/235569.

147. 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
148. Winston Ewert, and Robert Marks, "A Mono-Theism Theorem: Gödelian 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.
149. 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/TEMC.2013.2291540
150. 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
151. 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
152. 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.
153. 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
154. 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
155. Matthew Fellows, Matthew Flachsbar, 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

156. 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
157. 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>
158. Joseph Barkate, Matthew Flachsbarth, 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
159. 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
160. 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
161. 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).

6.3 Proceedings & Other Publications

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
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.
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.
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 - invited paper.
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.
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.
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. Published as a reprint in Proceedings of the 1988 Connectionist Models Summer School, (Morgan Kaufman Publishers, San Mateo, CA. 1988) pp.380-387.
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.
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. 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.
26. 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.

27. 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.
28. 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.
29. 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 - invited paper.
30. 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) - invited paper.
31. 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.
32. 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.
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 - invited paper.
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. 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.
45. 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.- invited paper.
46. 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.
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. 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.
62. R.J. Marks II, "Welcome," Proceedings of the International Joint Conference on Neural Networks (IJCNN), Seattle, July 8-12, 1991.
63. 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.
64. 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.
65. 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).
66. 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).
67. M.A. El-Sharkawi, S.Oh, R.J. Marks II, M.J. Damborg and C.M. Brace "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).
68. 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).

69. 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).
70. 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.
71. 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.
72. 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.
73. 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.
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).
76. 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.
77. 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.
78. 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.
79. 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.
80. 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 - invited paper.

81. 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 - invited paper.
82. R. Reed, R.J. Marks II and S.Oh, "An equivalence between sigmoidal gain 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- invited paper.
83. 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.
84. R.J. Marks II, "EE Talent," University of Washington EE News, vol. 4, No.1, February 1993.
85. 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.
86. R.J. Marks II, "Moscow Airport Encounters," University of Washington EE News, March 1993, Volume 4, Number 2, p.8.
87. 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.
88. 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.
89. 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; reprinted in Neural Networks Applications, Patrick K. Simpson, Editor, IEEE Technical Activities Board, (IEEE, New York, NY), 1996, pp.265-267.75
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. 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
92. Robert J. Marks II, "Marks on Marx on Rostov-on-Don," EE Alumni Newsletter, University of Washington, Summer 1993, pp.8,10-11.

93. 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.
94. 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.
95. 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.
96. 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.
97. 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.
98. 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.
99. 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.
100. 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 - invited paper.
101. 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.
102. 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 - plenary paper.

103. 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 .
104. 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.
105. 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 (invited paper).
106. 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.
107. 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.
108. 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.
109. H.V. Poor, C.G. Looney, R.J. Marks II, S Verdu, J.A. Thomas, T.M. Cover, "Information Theory," The Electrical Engineering Handbook, Boca Raton: CRC Press, 2000.
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.
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 May12-17, 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. 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
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 Formulations," 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. 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.
142. 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.

143. 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.
144. 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.
145. 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.
146. 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.
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).
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.
 155. 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.
 156. 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.
 157. 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.
 158. 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.
 159. 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
 160. 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.
 161. 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.

162. 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.
163. 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.
164. 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.
165. 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
166. 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.
167. 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
168. 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
169. 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
170. 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
171. 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

172. D.R. Poulsen, J.M. Davis, I.A. Gravagne, R.J.Marks, "On the stability of mu-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
173. 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
174. 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
175. 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
176. 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
177. 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
178. 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
179. 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

180. 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
181. 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
182. 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
183. 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
184. Matthew Fellows, Matthew Flachsbart, 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
185. Charles Baylis, Matthew Fellows, Matthew Flachsbart, 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.
186. Matthew Fellows, Jennifer Barlow, Joseph Barkate, Matthew Mosley, Matthew Flachsbart, 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
187. 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

188. 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.
189. 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.
190. 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
191. 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
192. 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
193. 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
194. Dylan Eustice, Charles Baylis and Robert J. Marks II, "Woodwards 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
195. 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

196. 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
197. 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
198. 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
199. 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
200. 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
201. 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
202. 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.
203. 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.

6.4 Book Chapters

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).
2. 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).
3. 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).
4. 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).
5. 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).
6. 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).
7. R.J. Marks II, “The Sampling Theorem,” in The Electrical Engineering Handbook, Richard C. Dorf, Editor, pp.1510-1517, CRC Press, 1993.7
 R.J. Marks II, “The Sampling Theorem,” in The Electrical Engineering Handbook, Second Edition, Richard C. Dorf, Editor, CRC Press, 1997.
 R.J. Marks II, ”The Sampling Theorem,” in Broadcasting and Optical Communication Technology, Richard C.Dorf, editor, CRC Press, 2012.
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).

9. 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).
10. 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).
11. 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).
12. R.J. Marks II, "Acknowledgments," Advanced Topics in Shannon Sampling and Interpolation Theory, (Springer-Verlag, 1993).
13. 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).
14. 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).

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).
15. 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.
16. 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.
17. 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.

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).

18. Jacek Zurada, R.J. Marks II and C.J. Robinson, "Preface," Computational Intelligence: Imitating Life, (IEEE Press, 1994), p.iii
19. Jacek Zurada, R.J. Marks II and C.J. Robinson, "Introduction," Computational Intelligence: Imitating Life, (IEEE Press, 1994), p.v-xi
20. 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.
21. 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.
22. 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-Castaeda, 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).
23. 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. (Front material.)
24. William A. Dembski and R.J. Marks II, "The Jesus Tomb Math," a Chapter in Buried Hopes or Risen Saviour (BandH Publishing Group), 2007.
25. 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.
26. 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
27. 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

28. 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
29. 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
30. 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
31. 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.

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.

6.6 Abstracts

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).
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).

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).
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).
7. C. Green, K.F. Cheung, L.E. Atlas and R.J. Marks II "Performance of conventional and composite matched 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).
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) - invited paper.
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 (submitted)
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.
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, 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.

16. 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 - invited paper (not presented at conference)
17. 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
18. 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.
19. 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.
20. H. Kuterdem, P. Cho, R. Marks II "Dynamic multileaf-diaphragm sequencing with adjacency gap constraint" Medical Physics, 26:1136(abs), 1999 .
21. 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.
22. 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.
23. 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.
24. 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.
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 II" , 113th Annual Meeting of the American Mathematical Society (AMS), New Orleans, January 5-7, 2007.
26. 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.
27. 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).
28. R.J. Marks II “Solutions Looking For Problems” 2010 Mini-Symposium on Wireless and Microwave Circuits and Systems (WMCS), Baylor University, March 2010.
 29. 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.
 30. 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.
 31. 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)
 32. 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.
 33. 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.
 34. 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
 35. Jon Roach, Baylor, 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
 36. 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.
 37. 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.

38. 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.
39. 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.
40. 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
41. 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
42. 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).
43. 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.
44. Charles Baylis, Matthew Fellows, Joseph Barkate, Jennifer Barlow, Matthew Flachs-bart, Lawrence Cohen, Robert J. Marks II, "The Smith Tube: Providing the Founda-tion for Real-Time, Spectrally Sensitive Circuit Optimizations." 2015 IEEE Interna-tional Symposium on Antennas and Propagation and North American Radio Science Meeting, URSI, July 19-24, 2015, Vancouver, BC
45. Dylan Eustice, Charles Baylis, Lawrence Cohen, Robert J. Marks II, "Mythbusting: Exploring Common Misconceptions about the Ambiguity Function." 2015 IEEE Inter-national Symposium on Antennas and Propagation and North American Radio Science Meeting, URSI, July 19-24, 2015, Vancouver, BC
46. Matthew Fellows, Sarvin Rezayat, Jennifer Barlow, Joseph Barkate, Alexander Tsat-soulas, 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
47. 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 Sym-posium, September 21-22 2015, San Diego, CA

48. 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 2 Waveform Synthesis via
49. 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
50. 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 Mariott Austin, 24-27 January, 2016
51. 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 Mariott Austin, 24-27 January, 2016
52. 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.
53. 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.
54. 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.
55. 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.
56. 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.

6.7 Videos

6.7.1 Lectures

1. 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.
2. 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).
3. 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.)
4. 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.
5. R.J. Marks II, “Great Expectations: Information Theory,” for Ricochet.com.
<http://youtu.be/Uc6Ktq0SEBo>
6. Casey Luskin & R.J. Marks II, “Darwin as the Pinball Wizard: Talking Probability with Robert J. Marks II”, ID the Future, (Podcast 2010. Video posted 2013),
<http://youtu.be/Kxv3Q0VaX9E>
7. “ ‘Darwin or Design’ with Dr. Tom Woodward with guest Dr. Robert J. Marks II,” C.S. Lewis Society, Jan 5, 2011.
<http://youtu.be/Yoj9xo0YsOQ>
8. “Information. What is it?,” Intro. to Engineering Lecture, January 17, 2012.
<http://youtu.be/d7seCcS.gPk>
9. “IEEE CIS History Committee: Donald C. Wunsch II interviews R.J. Marks II,” March 26, 2012.
<http://youtu.be/RigIZwpCWOA>
10. “ ‘TeleTalk’ With Bob Marks (November 26, 1973),” published Apr 26, 2012.
<http://youtu.be/v5eFEQ6-0h4>
11. “Dr. Robert Marks: Active Information in Metabiology,” May 30, 2014
<http://youtu.be/tJSJg0IZtfl>

12. “From PODCAST to ‘Expelled: No Intelligence Allowed’ published June 8, 2014
<http://youtu.be/15YTKyMPaXM>
13. “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>
14. “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
15. “Alternating Projections onto Convex Sets Examples,”
<https://youtu.be/-T4Y0aof3s>
16. “Seven Things Not To Do With Electricity.” Baylor Student IEEE Group, April 13, 2015.
<https://youtu.be/BzeHgmW5xfl>
17. “2015 IEEE Radar Conference Tutorial: Radar Transmitter Design for the Crowded Radio Spectrum” May 10, 2015, Texas Symposium
https://youtu.be/vrmN_2kQ8Cs
18. “Information: What Is It Anyway?” ID the Future Podcast, November 9, 2015
<https://youtu.be/c2UCPX5mKio>
19. “Ten Thousand Expanding Psychedelic Circle Hexes,” Periodicity Examples for Multi-dimensional Signal Processing, Published on Nov 8, 2014 <http://youtu.be/bXoP5F0s33c>
20. Small Group Apologetics
 - #1: Scientists & Their Faith
https://youtu.be/tpKK83Xr_s
 - #2: The Origin of Life
<https://youtu.be/iELmvoAsgzk>
 - #3: The Origin of Life: No Natural Explanation
https://youtu.be/WxItsmEHu_g The Origin of Life: No Natural Explanation
 - #4: Evolution A
<https://youtu.be/Un8F0idwx1Y>
 - #5: Evolution B & Where is God Math
<https://youtu.be/Wgw9uYgq3Jo>
21. Algorithmic Specified Complexity, ID the Future Podcast (with Winston Ewert) 2016
 - ◊ Part I: Genesis
https://youtu.be/m3_S-nglVek

- ◇ Part II: Application to Conways Game of Life
<https://youtu.be/yivqPiuqQf8>
 - ◇ Part III: Measuring Meaning in Images
<https://youtu.be/2lhiB8jTLjc>
22. “Evo-Info: Algorithmic Information Theory & Why Automata Will Never Create Information,” Origin of Biological Information, Aug 19-21, Canaan Valley Resort, Davis, WV).
<https://youtu.be/RCWJXIIH7ZU>
 23. “The Nature of Omniscience: A Conversation with Dr. Robert Marks,” Apologetics Academy Podcast, August 27, 2016.
<https://youtu.be/cW6N8NCH-dI>
Unedited: <https://youtu.be/Vof0tt3cB9Q>
 24. “POCS: Alternating Projection onto Convex Sets Tutorial”
 - (a) Lecture #1:
<https://youtu.be/ooIphlOOzcE>
 - (b) Lecture #2:
<https://youtu.be/xczjmF1j2Z0>
 - (c) Lecture #3:
<https://youtu.be/zP7jj3iUfso>
 25. “Evolutionary Informatics: The Bob Phillips Show: Bob hosts Robert J. Marks,” THE BRIDGE, KTXW, 1120 AM, Austin, TX, April 24, 2017
<https://youtu.be/dmNOrtWPVzs>
 26. “Some Things Computers Will Never Do: Nonalgorithmic Creativity and Unknowability,” (Dabney Hall, Caltech, October 28, 2016)
<https://youtu.be/Cm0s7ag3SEc>

6.7.2 Online Classes

27. R.J. Marks II, *Probability and Random Processes*
 - ◇ Lecture 1, <http://youtu.be/SEoH-51EzaM>
 - ◇ Lecture 2, <http://youtu.be/l5gMUK-Toj4>
 - ◇ Lecture 3, <http://youtu.be/muVqs9tJ8Ck>
 - ◇ Lecture 4, http://youtu.be/_B1MYUPu95o
 - ◇ Lecture 5, <http://youtu.be/iHbNnXqf1Sg>
 - ◇ Lecture 6, <http://youtu.be/oSyACKCkJJc>
 - ◇ Lecture 7, http://youtu.be/Q_d-NF8_px4

- ◇ Lecture 8, <http://youtu.be/IYgce7JHZ1w>
- ◇ Lecture 9, <http://youtu.be/mZ75uM6YZLk>
- ◇ Lecture 10, <http://youtu.be/dJPNHfcFC9I>
- ◇ Lecture 11, http://youtu.be/CO59JL9Z_0k
- ◇ Lecture 12, <http://youtu.be/E07nr-flg8E>
- ◇ Lecture 13, <http://youtu.be/-ZV1J3Hv6dE>
- ◇ Lecture 15, http://youtu.be/jQXMSi_pKFo
- ◇ Lecture 16, <http://youtu.be/ph1lCDc-1UE>
- ◇ Lecture 17, <http://youtu.be/j6XaLQkcee8>

28. R.J. Marks II, *Introduction to Computational Intelligence*

- ◇ Lecture 1, <http://youtu.be/fgtUFzxNztA>
- ◇ Lecture 2, <http://youtu.be/8RrBmnFufn4>
- ◇ Lecture 3, http://youtu.be/PCyBEy_22F4
- ◇ Lecture 4, http://youtu.be/L_Oj1qe8jO4
- ◇ Lecture 5, <http://youtu.be/OWKzDmXV1->
- ◇ Lecture 6, <http://youtu.be/WW4sMx1-cC0>
- ◇ Lecture 7, <http://youtu.be/MVHiE0NS5hY>
- ◇ Lecture 8, http://youtu.be/1sp-OHr4_YA
- ◇ Lecture 9, <http://youtu.be/EyHHxP5UHcE>
- ◇ Lecture 10, <http://youtu.be/BzUZRtwAaBs>
- ◇ Lecture 11, <http://youtu.be/RXHq7B0-V9s>
- ◇ Lecture 12, <http://youtu.be/Ef7seYvoFFc>
- ◇ Lecture 13, <http://youtu.be/rDsLmikMjG>
- ◇ Lecture 14, http://youtu.be/XOOpDhkX_k8
- ◇ Lecture 15, <http://youtu.be/pJh3dWLSigM>
- ◇ Lecture 16, <http://youtu.be/LSXKLtqJ8a8>
- ◇ Lecture 17, <http://youtu.be/FK33Lj382KI>
- ◇ Lecture 18, <http://youtu.be/i2SHIXdHgC0>
- ◇ Lecture 19, <http://youtu.be/j6-dcqvT0w>

6.8 Tutorials

Video tutorials are listed separately in in Section 6.7.

- ◇ Introduction to Artificial Neural Systems, College of Engineering , University of Washington, Seattle, August 20-21, 1987 . Offered again on September 15-16, 1988 (video made available by AMCEE) - with Les Atlas.
- ◇ Shannon Sampling and Interpolation Theory, regular UW course offering taped Spring Quarter, 1989 and Spring Quarter, 1990 (video made available by AMCEE.)
- ◇ Artificial Neural Systems, Ireste University in Nantes France, March 5-30, 1990 .
- ◇ 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).
- ◇ Artificial Neural Networks in Electric Power Systems, Decisions Systems International, Monaco, July 1-3, 1991 (with M.A. El-Sharkawi).
- ◇ Neural Networks Tutorial, First International Forum on Applications of Neural Networks to Power Systems, Seattle, WA, July 23, 1991 (with R. Thomas and H. Mori).
- ◇ Auditory Neural Systems and Time-Frequency Theory, IEEE Conference on Neural Networks for Ocean Engineering, Washington D.C., August 15-17, 1991 (with L.E. Atlas).
- ◇ Artificial Neural Networks in Electric Power Systems, Decisions Systems International, Madrid, Spain , September 7-11, 1992 (with M.A. El-Sharkawi).
- ◇ Artificial Neural Networks: Supervised Models, 1996 Winter Meeting, IEEE Power Engineering Society January 24, 1996, and Summer Meeting, IEEE Power Engineering Society, July 31, 1996, Denver, CO .
- ◇ Modern Neural Networks: The First Decade, IV Escola de Redes Neurais, Florianopolis , Brazil, July 21, 1997.
- ◇ Diagnostics and Control of Electric Machines Using Computational Intelligence IEEE IEMDC'99. International Electric Machines and Drives Conference. May 9, 1999 Seattle , Washington, USA (with M.A. El-Sharkawi).
- ◇ Neural Networks: The Fundamentals, Buryat State University, Ulan-Ude, Russia, March 5, 2001.
- ◇ An Introduction to Fuzzy Inference, IEEE PES Summer Meeting 2000, Seattle , WA .
- ◇ Introduction to Evolutionary Informatics, Discovery Institute Summer Symposium, Seattle, WA., July 2007.
- ◇ Information and Evolution, Discovery Institute Summer Symposium, Seattle, WA., July 2009.

- ◇ Power Amplifier Circuit and Waveform Optimization for Reduced Spectral Spreading in Radar Transmitters, 4th Annual Military Radar Summit, Washington, D.C., February 79, 2011 (with Charles Baylis)
- ◇ Why Design Information is Required to Find Improbable Complex Targets, Discovery Institute Summer Symposium, Seattle, WA., July 2011.
- ◇ Radar Transmitter Design for the Crowded Radio Spectrum, 2015 IEEE International Radar Conference (RadarCon), Crystal City, Arlington, VA. May 10, 2015 (with Charles Baylis & Lawrence Cohen)
- ◇ Radar in a Communications-Driven Spectrum: Innovative System, Component, and Circuit Design for the Evolving Spectrum Environment, International Microwave Symposium, May 22, 2015, Phoenix, AZ (with Charles Baylis & Lawrence Cohen)

6.9 Technical Essays

- ◇ Robert J. Marks II, “Music under Darwinism,” *Evolution News and Views*, April 23, 2012.
- ◇ Robert J. Marks II, “The Turing Test Is Dead. Long Live the Lovelace Test,” *Evolution News and Views*, July 3, 2014,
- ◇ Robert J. Marks II, “Biological information: New perspectives from intelligent design,” *Human Events*, Aug 19, 2014.
- ◇ Robert J. Marks II, “Everything You Ever Wanted to Know about Peer Review (and probably more),” *TheBestSchools.org*,
 1. ‘ “1. The Way It Was”
 2. ‘ “2. The Sausage Factory”
 3. ‘ “3. Towers of Mostly Babble”
 4. ‘ “4. How To Publish Your Scholarly Paper”
 5. ‘ “5. Artificial Unintelligence: will journals accept papers written by a computer?”
- ◇ Robert J. Marks II, “Texas should let kids explore whether Darwin got it right,” *Dallas Morning News*, April 17, 2017
- ◇ Robert J. Marks II, “New Video Game Proves Adaptation Is Ubiquitous,” *CNS News*, May 2, 2017

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. Stage 2: 6-1-94 to 2 29, 1996 (co PI with C. Ramon)-\$497,080 + 104,358.
16. "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.
17. "S&P 500 Trading Using Spectrally Trained Neural Networks," Washington Technology Center, January 1993 to June 1993, \$25,000.
18. "Tune & Prune Adaptation of Fuzzy Inference Engines," Royalty Research Fund, University of Washington, June 15, 1993 to September 1994, \$14,000.
19. "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.
20. "Financial Neural Networks," Washington Technology Center, August 1993 to March 1994, \$10,000.
21. "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.
22. "Advanced Neural Network Paradigms and Applications," Boeing Computer Services, January 1, 1994 to December 31, 1996-\$90,000. "Wavelet Based Neural Networks," Washington Technology Center, January 1995 to June 1995, \$7,000.
23. "Genetic Algorithm Carbon Brake Analysis," Boeing Airplane Company, September 1994 to December 1994, \$23,000.
24. "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.
25. "Intelligent Systems Applications for Transmissions and Distribution Systems," (Co-PI with Mohamed A. El-Sharkawi), Southern California Edison, 1996-97, \$79,530.
26. "Advanced Neural Network Paradigms and Applications," Boeing Computer Services, January 1, 1996 to December 31, 1997-\$23,000; 1997-98 \$23,000; 1998-99 \$23,000.
27. "UG Cable Replacement," Southern California Edison, 1997 - \$50,000 (Co-PI with Mohamed A. El-Sharkawi).
28. "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.

29. "Environmentally Adaptive Sonar," Office of Naval Research/ Applied Physics Laboratory, September 1997 to September 1999 - \$90,000 (Co-PI with Mohamed A. El-Sharkawi).
30. "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.)
31. "Automatic Decision Aggregation," Boeing Defense, Nov 1997 through May 1998, \$26,000.
32. "Automatic Environmentally Adaptive Sonar Control," Office of Naval Research, 1998-2001, - \$333,000 (Co-PI with M.A. El-Sharkawi).
33. "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.
34. "Sensor Coverage for Vehicle Health and Safety Systems," Boeing Defense, June 2001 to Dec. 2001 (PI \$25,000).
35. "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.)
36. "Model-Based Complex Data Set Correlation Boeing Airplane Company, Jan 16, 2001 to Jan 16, 2002, (PI \$42,099)
37. "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.).
38. "Reconstruction of Missing Sensor Readings on Jet Aircraft Engines," Boeing Phantom Works, September 2001 to May 2002 (\$32,000).
39. "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). Undergraduate support addenda, \$12,000.
40. "Intraoperative Dose Optimization for Prostate Brachytherapy," ARO, co-PI with Paul Cho and Y. Kim. \$550,000, 2003-06 (3 years).
41. "Application of computationally intelligence techniques to long term multistatic sonar systems (ONR - EE/APL, 3 years, Marks Co-PI) \$960k total.
42. "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.

43. “Reconstruction of Missing Sensor Readings on Jet Aircraft Engines: Phase II,” Boeing Phantom Works, April 2003 to July 2003, (\$32,000),
44. “Supplemental RA Support,” Applied Physics Lab, University of Washington, Spring Quarter, 2003, (\$11,138).
45. “Real-Time Distributed Control Networks: Dynamic Bandwidth Allocation via Adaptive Sampling” (with Ian Gravagne and John Davis, Baylor University) NSF, 3 years, \$311k. [Supplemental REU funds obtained for supporting summer undergraduate research.]
46. “Mu-Dynamics on Time Scales: Adaptive Time Domains for Dynamical Systems,” (with Ian Gravagne and John Davis, Baylor University) NSF, 3 years, \$143k.
47. “Multi-Agent System Based Intelligent Distributed Control System for Power Plants,” (with Kwang Y. Lee, P.I. and Ian Gravagne), 2008–2011, \$132k.
48. “Inversion of Swarm Dynamics for Underwater Tactical Applications,” Office of Naval Research, 2009–2011, \$270,000 (with Benjamin B, Thompson, ARL Penn State)
49. “Joint Optimization of Radar Power Amplifier and Waveforms for Reduced Spectral Spreading,” ARL (Chales Baylis, P.I.) \$62,000.
50. “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)
51. “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 .
52. “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. Supplemental \$16,000 Research Experiences for Undergraduates (REU) awarded 2015. Supplemental \$16,000 Research REU awarded 2016.
53. “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.) \$855,453.19, May 11, 2016 to December 11, 2017
54. “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).

8 Courses Taught

8.1 Baylor University

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

8.2 University of Washington

1. EE 306, Elements of Electrical Engineering
2. EE 310, Electronics Laboratory
3. EE 235, Circuits & Systems I
4. EE 333, Circuits & Systems II
5. EE 335, Linear Systems Analysis I
6. EE 381, Electrophysics I
7. EE 383, Electrophysics II
8. EE 416, Random Signals for Communications and Signal Processing
9. EE 417, Introduction to Communication Theory I
10. EE 418, Introduction to Communication Theory II
11. EE 341, Discrete Time Linear Systems
12. EE 440, Linear Systems Analysis II
13. EE 446, Control Systems Analysis
14. EE 468, Fourier Optics & Holography
15. EE 500, Graduate Seminar
16. EE 505, Introduction to Probability & Random Processes
17. EE 508, Stochastic Processes

18. EE 518, Digital Signal Processing
19. EE 521, Multidimensional Signal Processing
20. EE 522, Shannon Sampling & Interpolation Theory
21. EE 523, Signal Analysis
22. EE 559, Computational Neural Networks
23. EE 579, Advanced Topics in Electromagnetics
24. EE 595, Introduction to Fuzzy Systems
25. EE 595, Advanced Topics in Communication Theory

9 Consulting & Other External Activities

9.1 Organizations

- ◇ 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).
- ◇ Education Axis (EduAxis) Advisory Board, (2015-present)

9.2 Expert Witness

- ◇ Neuromedical Systems, Inc (Plaintiff) vs. Neopath (Defendant), United States District Court, Southern District of New York (1997-98) - for the Defendant.
- ◇ Neopath (Plaintiff) vs Neuromedical Systems, Inc (Defendant) vs., United States District Court, Seattle (1997-98) - for the Plaintiff.
- ◇ Nestor, (Plaintiff) vs. Hecht-Nielsen Corporation Software (Defendant), filed Nov. 25, 1998, in U.S. District Court in Rhode Island.
- ◇ Hecht-Nielsen Corporation Software (Plaintiff) vs. Transaction Systems Architects Inc. and ACI Worldwide Inc. (Defendants), U.S. District Court in San Diego.
- ◇ Ysleta Del Sur Pueblo: Tigua Gaming Agency (Defendant)vs State of Texas (Plaintiff) -for the Defendant

9.3 Consulting

- ◇ Microsoft Corporation, Redmond, WA
- ◇ Boeing Computer Services
- ◇ Boeing Airplane Company
- ◇ Applied Physics Lab, University of Washington
- ◇ APPA Systems Inc., Bellevue, WA
- ◇ Technical Arts Mfg. Co. Inc., Redmond, WA
- ◇ John Fluke Manufacturing Company Inc., Everett, WA
- ◇ Space Labs, Redmond, WA
- ◇ Lasentec, Bellevue, WA
- ◇ Flow Industries, Kent, WA.
- ◇ Philipp Technologies, Bellevue, WA
- ◇ Multidimensional Systems Corporation, Lynnwood, WA
- ◇ Pacific Gas & Electric
- ◇ American Pioneer Corporation, Ballard
- ◇ Decisions Systems Corporation, Atlanta, GA
- ◇ Inficom Corp, Redmond, WA
- ◇ DARPA, Crystal City, VA
- ◇ Lineage Media and Solutions, Inc. Bellevue, WA

10 Statistics

For the bean counters.

10.1 Publication Count

- ◇ 10 books. (List in Section 6.1 on page 16.)
- ◇ 161 journal publications. (List in Section 6.2 on page 16.)
- ◇ 203 conference papers. (List in Section 6.3 on page 29.)
- ◇ 31 book chapters. (List in Section 6.4 on page 50.)

- ◇ 3 patents. (List in Section 6.5 on page 53.)
- ◇ 56 abstracts. (List in Section 6.6 on page 53.)
- ◇ 28 videos. (List in Section 6.7 on page 59.)
- ◇ 64 supervised theses and dissertations. (List in Section 11.1.1 on page 74.)
- ◇ 54 cross disciplinary theses and dissertations. (List in Section 11.1.2 on page 76.)
- ◇ 54 grants. (List in Section 7 on page 65.)
- ◇ 231 coauthors. (List in Section 11.2 on page 77.)
- ◇ 26 different coauthor countries. (List in Section 11.2.1 on page 80.)
- ◇ 57 distinct journals. (List in Section 11.3 on page 81.)
- ◇ 141 different city venues. (List in Section 11.4 on page 82.)
- ◇ Number of different courses taught.
 - 6 at Baylor University. (List in Section 8.1 on page 69.)
 - 25 at the University of Washington. (List in Section 8.2 on page 69.)

10.2 Erdős and Bacon Numbers

- ◇ Erdős number¹⁰ = 3
- ◇ Bacon number¹¹ = 2
- ◇ Erdős - Bacon number¹² = 5

¹⁰ Here are the details.

1. Robert J. Marks II coauthored with Donald C. Wunsch.
 - D.C. Wunsch II, R.J. Marks II, T.P. Caudell and C.D. Capps, "Limitations of a class of binary phase-only filters," *Applied Optics*, vol. 31, no.26. pp.5681-5687 (1992).
 - D.C. Wunsch II, T.P. Caudell, C.D. Capps, R.J. Marks II and R. A. Falk, "An optoelectronic implementation of the adaptive resonance neural network," *IEEE Transactions on Neural Networks*, vol.4, no.4, pp.673-684 (1993).
2. Donald C. Wunsch coauthored with Frank Harary.
 - Frank Harary, Meng-Hiot Lim, Amit Agarwal, Donald C. Wunsch, "Algorithms for derivation of structurally stable Hamiltonian signed graphs," *Int. J. Comput. Math.* 81(11): 1349-1356 (2004)
3. Frank Harary coauthored with Paul ö.
 - Paul Erdős, Frank Harary and W.T. Tutte, "On the dimension of a graph," *Mathematika* 12 (1965) pp.118-122
 - Paul Erdős, Frank Harary and M. Klawe, "Residually-Complete- Graphs," *Annals of Discrete Mathematics*, Vol. 6, pp 117- 123 (1980).

¹¹Marks was in *Expelled: No Intelligence Allowed* with Ben Stein who was in *Planes, Trains and Automobiles* with Kevin Bacon. IMDb data: <http://www.imdb.com/name/nm2990293/>

¹²The sum of one's Erdős and Bacon number

10.3 Citation Count

Citation data¹³ taken from Google Scholar.¹⁴

- ◇ h-index¹⁵ = 50.
- ◇ i-10 index¹⁶ = 164.
- ◇ citations = 10,677

10.4 Website Rankings

Rankings from www.alexa.com¹⁷ All rankings times 1000.

Date	EI	GS	HB	RM	TC	TiS	TeS	STD
9/5/14	11,180	2,411	18,730	16,286	17,266	11,620	–	
12/20/14	20,711	5,196	–	9,719	24,466	23,559	–	
3/13/15	3,241	4,019	–	4,931	21,559	–	27,618	19,431
US Rank	–	808	–	–	–	–	–	–
5/9/15	2,938	3,624	27,467	6,308	20,179	–	18,563	–
US Rank	–	425	–	–	–	–	–	–
4/30/16	18,410	3,551	–	13,430	18,892	–	3,100	–
US Rank	–	1,475	–	–	–	–	677	–
11/6/16	22,454	5,093	–	4,983	13,849	–	16,483	–

¹³The publications and their citations are listed in Section ?? on page ??.

¹⁴Google Scholar gives the most liberal citation counts. Counts include self citations.

¹⁵This means that 48 papers have been cited 50 or more times.

¹⁶The number of papers cited 10 or more times.

¹⁷EI=Evoinfo.org, GS=GunsmokeNet.com, HB = HandbookOfFourierAnalysis.com, RM=RobertMarks.org, TC=TheChortle.com, TiS= TimeScales.org TeS=TexasSymposium.org, STD=SaberToothDuck.com

11 Appendices

11.1 Graduate Theses and Dissertations

11.1.1 Students Advised

Following is a list of graduate students with an MS thesis or a Ph.D. dissertation.

1. D. K. Smith, "Extrapolation of Two-dimensional Bandlimited Images," Thesis (1980).
2. R. C. Hickey, "An Iterative Design Technique for Computer Generated Holograms," Physics Master's Project (1982).
3. D. Radbel, "Noise and Truncation Effects in the Estimation of Sampled Bandlimited Signals," Thesis (1983).
4. C. M. Maxey, "Optical Detection of Flaws in Thirty Five Millimeter Photographic Film," Thesis (1983).
5. R. A. Spielmaker, "A Coherent Optical Implementation of an Algorithm to Restore Continuously Sampled Aliased Data," Thesis (1983).
6. K. F. Cheung, "The Generalized Sampling Expansion: Its Stability, Posedness and Discrete Equivalent," Thesis (1983).
7. D. Kaplan, "Bandlimited Signal Interpolation: Continuous and Interlaced Sampling," Thesis (1983).
8. M. H. Goldberg, "Signal Synthesis in the Presence of an Inconsistent Set of Constraints," Thesis (1984).
9. T. Reightly, Iterative evaluation of extrema of integrals of trigonometric polynomials (1985).
10. C.A. Green, Composite Matched Filters, Thesis (1987).
11. Shiao-Min Tseng, "Noise Level Analysis for Linear Restoration Algorithms," Thesis (1984).
12. M. Dadi, "A Study of Relative Efficiency in Laplace Noise," Thesis (1985).
13. H. K. Ching, "Truncation Effects on the Estimation of Two-Dimensional Continuous Bandlimited Signals," Thesis (1985).
14. W. C. Wu, "Multidimensional Window Design Using Abel Projection," Thesis (1985).
15. J. J. Choi, "A Performance Analysis of Associative Memories With Nonlinearities in the Correlation Domain," Thesis (1987).
16. H. Amindavar, "CMF Performance in the Presence of Input and Processor Noise," Thesis (1987).
17. W. S. Leung, "Use of a Liquid Crystal Television as a Programmable Spatial Light Modulator," Thesis (1987).
18. K. H. Ho, "A Monte Carlo study of fault tolerant aspects of the alternating projection neural network," Thesis (1988).
19. K. F. Cheung, "Image sampling density reduction below that of Nyquist," Dissertation (1988).
20. Dennis Sarr, "Image processing using the alternating projection neural network," Thesis (1989).
21. S. Oh, "Homogeneous alternating projection neural networks," Dissertation (1989).
22. P. Arabshahi, "Fully parallel, real-time optical architectures for superior time-frequency representations of signals," Thesis (1990).
23. D.C. Park, "Identification of stationary/nonstationary systems using artificial neural networks," Dissertation (1990).
24. J.J. Choi, "Efficient learning in artificial neural networks," Dissertation (1990).
25. Rabayrol Bruno, "Training set selection for a binary classifier artificial neural network," Practical Training for IRESTE Engineer Degree, (Nantes, France), Thesis, (1990).
26. Christophe F. Bas, "Artificial neural networks as detectors of signals corrupted with Laplace noise," Practical Training for IRESTE Engineer Degree, (Nantes, France), Thesis, (1991).
27. D. Wunsch, "An Electro-Optical Learning Machine," Dissertation, (1991).
28. J.N. Hwang, Query based learning, (1991).
29. R. Streifel, "Synthesis of time-frequency representation by the method of projections onto convex sets," Thesis (1991).
30. M.G. Meyer, "Application of the projection theorem in biomagnetic computed tomography," Thesis (1991).

31. Zhi Li, "A partial table-lookup RNS-decimal number conversion algorithm and its implementation," Dissertation (1993).
32. Payman Arabshahi, "Fuzzy Adaptive Inference in Neural Networks and Search," Dissertation (1994).
33. Piotr Czapski, "Finite Element Modeling of Magnetic Fields Resulting From the Excitation Process in the Normal and Diseased Heart," Dissertation (1995).
34. Russell Reed, "Some Aspects of Generalization in Feed-Forward Neural Networks," Dissertation (1995).
35. Robert Streifel, "Application of Computational Intelligence to Electromechanical Systems," Dissertation (1996).
36. Frank S. Holman III, "Platform Independent 2D and 3D Geometry Representation and Related Applications Using Neural Networks," Thesis (1996).
37. Sigurdur Guttormsson, "Novelty Detection of Shorted Turns in Turbo-Generator Rotors," Thesis (1997).
38. Shinhak Lee, "Projections onto Fuzzy Convex Sets and Its Application to Radiation Beam Optimization in Radio Therapy," Dissertation (1997).
39. Georgios Chrysanthopolis, "Autonomous Agents Utilizing Self-Reflection, Instincts and External Behavior Learning in a Simulated Environment: Orgs in Orgland," Thesis, (1998).
40. Frank S. Holman II, "Neural Network Based Shaped Neighborhoods: A Design Retrieval System," Dissertation (1999).
41. Gorkem Kuterdem, "Automatic control of Radiation Therapy Dosage," Thesis, (1999).
42. Martin Weikart, "Dynamic Control of Radiation Therapy Dosage," Thesis, (1999).
43. Frank S. Holman III, PhD EE, "Neural Network Based Shaped Neighborhoods: A Design Retrieval System," Dissertation 1999.
44. Brian Adams, MS EE, "Automatic Decision Aggregation for Smart Cockpit Control," (MS Project), 1999.
45. Ram Balasubramanian, "The Maximally-Receptive Classifier/Regression Bank," Thesis (2000).
46. George Chrysanthakopoulos, "A Fuzzy-Logic Autonomous Agent Applied as a Supervisory Controller in a Simulated Environment," Dissertation 2000.
47. Sreeram Narayanan, "Fast Cross-projection Algorithm for Reconstruction of Seeds," MS Thesis, 2001.
48. Jae-Byung Jung, "Neural Network Emulation of Acoustic Models," Dissertation, 2001.
49. Benjamin Thompson, "Implicit Learning in Neural Network Encoders," MS Thesis, 2002.
50. Arindam Das, "Swarm Intelligence Applications to Communications Routing," Dissertation, Summer 2003.
51. Stephen Lam, "Query Based Data Base Construction for Supervised Learning," Dissertation, 2002.
52. Jiho Park "POCS Restoration of Degraded JPEG Images," Dissertation, 2002.
53. Sreeram Narayanan, "Rapid 3D Seed Reconstruction from Incomplete Data Sets for Image Guided Prostate Brachytherapy," Dissertation, 2004.
54. Jeffrey Weinschenk, "Reducing the rule explosion in fuzzy inferencing," Dissertation (2004).
55. Benjamin B. Thompson, "Ensonification control using layered perceptrons," Dissertation (2004).
56. Matthew Trumbo, "A New Modality for Microwave Tomographic Imaging: Time Transit Tomography," Thesis (2006).
57. Firasath Riyaz, "Evolving a Disjunctive Predator Prey Swarm using PSO: Adapting Swarms with Swarms," Thesis (Computer Science) (2006).
58. Steve Maule, "Principal Component and Artificial Neural Network Calibration of a Microwave Frequency Composition Measurement Sensor," Thesis (2007).
59. Winston Ewert, "Studies of Active Information in Search," Thesis (2010).
60. George Moñtanez, "Information Storage Capacity of Genetic Algorithm Fitness Maps," Thesis (2011).
61. Benjamin Van Ruitenbeek, "Image Compression and Recovery Using Compressive Sampling and Particle Swarm Optimization," Thesis (2009)

62. Albert Yu, "Optimizing Multi-Agent Dynamics for Underwater Tactical Applications," Thesis, (2011).
63. Winston Ewert, "Algorithmic Specified Complexity" Dissertation (2013).
64. Jon Roach, "Emergent Behaviors of Multi-Objective Swarms with Applications in a Dynamic Underwater Environment," Thesis, (2013).
15. C.H. Daly, Amputee prosthetic fitting, (1994) [Joan Sanders].
16. W.R. Cummings, Amputee prosthetic fitting, (1994) [Joan Sanders].
17. H.C. Lai, Biomagnetic sensing, (1994) [Ceon Ramon].
18. B.G. Song, Fuzzy Systems, (1997) [James Ritcey].
19. C.A. Jensen, Feature Selection and Inverse Problems, (1999) [Mohamed El-Sharkawi].
20. P. Peng, Load forecasting, (1999) [Mohamed El-Sharkawi].
21. A.S. Kulkarni, Shorted field rotors, (2000) [Mohamed El-Sharkawi].
22. J. Xing, Shorted field rotors, (2000) [Mohamed El-Sharkawi].
23. L.S. Moulin, Support Vector Machines in Power Engineering, (2002) [A.P.A. da Silva].

11.1.2 Cross Disciplinary Research

This is partial list of students worked with during undergraduate research, thesis or dissertation work in cross disciplinary research that resulting in one or more publications coauthored with the student and their advisor. The student's advisor is indicated in the square brackets at the end of the citation. Papers co-authored are listed in the publications Section 6 on page 15.

1. E.L. Kral, Optical Computing, (1978)[John Walkup]
2. S.V. Bell, Optical Computing, (1978) [John Walkup]
3. J.L. Whited, Optical Computing, (1978) [John Walkup]
4. M.I. Jones, Optical Computing, (1978) [John Walkup]
5. M.E. Aggoune, Application of Neural Networks to Power Systems, Dissertation 1989 [Mohamed El-Sharkawi]
6. J.W. Taylor, Neural Networks (1988) [Les Atlas].
7. Yunxin Zhao, Cone Shapped Kernels, (1989) [Les Atlas].
8. James W. Pitton, Time-Frequency Representations, (1990) [Les Atlas].
9. C.M. Lam, Neural Networks, (1990) [Leung Tsang]
10. S. Kitamaru, Neural Networks, (1990) [Akira Ishimaru]
11. S.Y. Chung, Power neural networks. (1991) [O. Mohammed]
12. Z. Chen, Remote Sensing, (1992) [Leung Tsang]
13. A.T.C. Chang, Remote Sensing, (1992) [Akira Ishimaru]
14. S. Weerasooriya, Security Assessment of Power System, (1992) [Mohamed El-Sharkawi].
24. Ioannis N Kassabalidis, Swarm Intelligence, (2002) [Mohamed El-Sharkawi].
25. J. Schreiber, Biomagnetic imaging, (2002) [Ceon Ramon].
26. Jens Haueisen, Biomagnetic imaging, (2002) [Ceon Ramon].
27. Paul Schimpf, Biomagnetic imaging, (2002) [Ceon Ramon].
28. Seongwon Cho, Iris recognition (2004) [Jaemin Kim]
29. Jinsu Choi, Iris recognition (2004) [Jaemin Kim]
30. Paul Reynolds, "Algorithm Implementation in FPGAs Demonstrated Through Neural Network Inversion on the SRC-6e," Thesis (2005) [Russ Duren].
31. Eric Green, "Design of a microwave sensor for non-invasive determination of blood-glucose concentration," Thesis (2005) [Randall Jean].
32. Jeffrey DaCunha, "Lyapunov Stability and Floquet Theory for Nonautonomous Linear Dynamic Systems on Time Scales," Dissertation (Mathematics) (2004) [John Davis].
33. Billy Jackson, "A General Linear Systems Theory on Time Scales: Transforms, Stability and Control," Dissertation (Mathematics) (2007) [John Davis].

34. Alice Ramos, “The Dynamic Lyapunov Equation on Time Scales,” Dissertation (Mathematics) (2009) [John Davis].
35. John Miller, “Stability of Simultaneously Triangularizable Switched Linear Systems on Time Scales” Thesis (ECE) 2009.
36. Ben Van Ruitenbeek, “Image Compression and Recovery Using Compressive Sampling and Particle Swarm Optimization,” Thesis (Computer Science) (2009) [David Sturgill].
37. Joseph Perry, Thermal Transient Modeling in Power MOSFETs, (2009) [Charles Baylis]
38. Dylan R. Poulsen, Time Scales, (2011) [John Davis].
39. Matthew Moldovan, “Piecewise Linear Approach for Optimizing Radar Chirps,” (2012) [Charles Baylis].
40. Josh Martin, “Adaptive Load Impedance Optimization for Power Amplifiers in Reconfigurable Radar Transmitters,” Thesis, (2012) [Charles Baylis].
41. Oby Akinbule, Microwave optimization, (2012) [Charles Baylis].
42. Loria Wang, “Side Lobe Modulation of Radar Antenna Pattern Utilizing an Auxiliary Array,” Thesis, (2012) [Charles Baylis].
43. Yanqing Liu, Wireless Communication, (2013) [Liang Dong].
44. Stuart Gibbs “Estimation of Multi-Component Mixture Proportions using Regression Machine Analysis of Ultra-Wideband Spectroscopic Measurements” (2013) [Randall Jean]
45. Matthew Gardner “Estimation of Multi-Component Mixture Proportions using Regression Machine Analysis of Ultra-Wideband Spectroscopic Measurements” (2013) [Randall Jean]
46. Brandon Herrera “Estimation of Multi-Component Mixture Proportions using Regression Machine Analysis of Ultra-Wideband Spectroscopic Measurements” (2013) [Randall Jean]
47. Chris Faulkner “Estimation of Multi-Component Mixture Proportions using Regression Machine Analysis of Ultra-Wideband Spectroscopic Measurements” (2013) [Randall Jean]
48. Adam Parks “Estimation of Multi-Component Mixture Proportions using Regression Machine Analysis of Ultra-Wideband Spectroscopic Measurements” (2013) [Randall Jean]
49. Josh Daniliuc “Estimation of Multi-Component Mixture Proportions using Regression Machine Analysis of Ultra-Wideband Spectroscopic Measurements” (2013) [Randall Jean]
50. Paul Hodge “Estimation of Multi-Component Mixture Proportions using Regression Machine Analysis of Ultra-Wideband Spectroscopic Measurements” (2013) [Randall Jean]
51. Adam Parks “Feasibility of Microwave Radar System for Proton Therapy Control” (2015) [Randall Jean]
52. Yanqing Liu “Resource Management of Cognitive Radio Networks with Optimization Methods” (2015) [Liang Dong]
53. Brandon Herrera “A Low-Cost Embedded Network Analyzer for the Measurement of Material Properties” (2015) [Randall Jean]
54. Dylan Eustice “Adaptive Radar Waveform Synthesis via Alternating Projection,” (2016) [Charles Baylis]

11.2 Coauthors

Here is a list of coauthors with whom I’ve published.

1. Oby Akinbule
2. George Andexler
3. M.E. Aggoune
4. Gregory M. Anderson
5. Payman Arabshahi
6. Les E. Atlas
7. Yianni Attikiouzel
8. Ram Balasubramanian
9. Joseph Barkate
10. Jennifer Barlow
11. Charles Baylis
12. Christophe F. Bas
13. Michael Behe
14. S.V. Bell
15. Matthew A. Beauregard
16. Stephen Berger
17. Jacob Boline
18. C.M. Brace

19. Walter Bradley
20. C Bunje
21. C. David Capps
22. Thomas P. Caudell
23. A.T.C. Chang
24. Zhengxiao Chen
25. Kwang F. Cheung
26. Paul S. Cho
27. Seongwon Cho
28. Jai J. Choi
29. Jinsu Choi
30. Georgios Chrysanthakopoulos
31. Suk Y. Chung
32. Andrew Clegg
33. Lawrence Cohen
34. D.A. Cohn
35. Ronald Cole
36. William E. Combs
37. Jerome Conner
38. T.M. Cover
39. William R. Cummings
40. P. Czapski
41. M.I. Dadi
42. Colin H. Daly
43. Jeffrey J. DaCunha
44. Mark J. Damborg
45. Josh Daniliuc
46. Arindam Das item Ali Darwish
47. A. P. Alves da Silva
48. John M. Davis
49. Jean de Graaf
50. William A. Dembski
51. Tharam Dillon
52. R.C. von Doenhoff
53. Liang Dong
54. Witali L. Dunin-Barkowski
55. Lawrence Dunleavy
56. Russell Duren
57. Mohamed El-Sharkawi
58. Christian J. Eggen
59. Dylan Eustice
60. Winston Ewert
61. R. Aaron Falk
62. Chris Faulkner
63. Matthew Fellows
64. Robert Fischl
65. Jorge Fernandez
66. Matthew Flachsbart
67. David Fogel
68. Warren L. J. Fox
69. Toshio Fukuda
70. Stuart Gibbs
71. Ann K. Gauger
72. Stuart Gibbs
73. Marc Goldberg
74. Bruce Gordon
75. Ian A. Gravagne
76. Andrew Gray
77. Charles A. Green
78. Eric C. Green
79. Sigurdur E. Guttormsson
80. Marion O. Hagler
81. Douglas G. Haldeman
82. Michael W. Hall
83. Zachary Hays
84. Jens Haueisen
85. Megan U. Hazen
86. Michael Healy
87. Abigail Hedden
88. Brandon Herrera
89. Paul Hodge
90. Wolfgang Hoffmann
91. Frank S. Holman III
92. F. Holt

-
- | | |
|-----------------------------|----------------------------|
| 93. T. Homma | 130. Michael Lexa |
| 94. M.Y. Huang | 131. Zhi Li |
| 95. Steven Shyh-Jier Huang | 132. C.S. Lim |
| 96. Pieter J. van Heerden | 133. Yanqing Liu |
| 97. Jenq-Neng Hwang | 134. Alan Lippman |
| 98. C.A. Irby | 135. C.G. Looney |
| 99. Akira Ishimaru | 136. Alicia Magee |
| 100. Billy J. Jackson | 137. T. P. Mann |
| 101. B. Randall Jean | 138. Kirk Marquard |
| 102. Craig A. Jensen | 139. Josh Martin |
| 103. Daniel Jepson | 140. J.G. McDonnell |
| 104. Michael I. Jones | 141. M.G. Meyer |
| 105. Robert Jonk | 142. John E. Miller |
| 106. Jae-Byung Jung | 143. Hunter Miller |
| 107. Dmitry Kaplan | 144. Robert T. Miyamoto |
| 108. Ioannis N Kassabalidis | 145. Osama Mohammed |
| 109. Isidor Kerszenbaum | 146. Matthew Moldovan |
| 110. Jaemin Kim | 147. George Montañez |
| 111. Mingoo Kim | 148. David Moon |
| 112. S. Kitamura | 149. Hiroyuki Mori |
| 113. E. Lee Kral | 150. L. S. Moulin |
| 114. Thomas F. Krile | 151. Yeshwant Muthusamy |
| 115. Ramasamy Krishnan | 152. Sreeram Narayanan |
| 116. David Krout | 153. D. Nguyen |
| 117. Amol S. Kulkarni | 154. V. Bogdan Neculaes |
| 118. H. Görkem Kuterdem | 155. Aghogho Obi |
| 119. Richard Ladner | 156. Seho Oh |
| 120. H.C. Lai | 157. Marimuthu Palaniswami |
| 121. Chi M. Lam | 158. Yoh-Han Pao |
| 122. Steve T Lam | 159. Alex Papalexopoulos |
| 123. Lucilia Lamers | 160. Dong Chul Park |
| 124. J.N. Larson | 161. Jiho Park |
| 125. Steven Lardizabal | 162. Adam Parks |
| 126. Casey Latham | 163. Homayoon Parsaei |
| 127. Loren Laybourn | 164. John Penn |
| 128. Kwang Y Lee | 165. Joseph Perry |
| 129. Shinhak Lee | 166. Hal Philipp |

167. Mark H. Phillips
 168. James W. Pitton
 169. William Platt
 170. M.C. Poon
 171. H.Vincent Poor
 172. D.R. Poulsen
 173. Dmitry Radbel
 174. Ceon Ramon
 175. Alice A. Ramos
 176. Russell D. Reed
 177. Tonya Reightley
 178. Sarvin Rezayat
 179. A.J. Rocha Reis
 180. Sarvin Rezayat
 181. Grant Richter
 182. James C. Ritcey
 183. Jon Roach
 184. C.J. Robinson
 185. Alberto Rodriguez
 186. Alonso Rodriguez
 187. Benjamin Van Ruitenbeek
 188. Fariborz Salamat
 189. Joan E. Sanders
 190. Frank Sanders
 191. Iwan Njoto Sandjaja
 192. Edgar Sánchez-Sinencio
 193. John Sanford
 194. Dennis P. Sarr
 195. Hiroshi Sasaki
 196. Paul Schimpf
 197. J. Schreiber
 198. David K. Smith
 199. Michael J. Smith
 200. Wesley E. Snyder
 201. Mani Soma
 202. Arun Somani
 203. B.G. Song
 204. Michael Z. Spivey
 205. David Sturgill
 206. Robert J. Streifel
 207. J.W. Taylor
 208. J.A. Thomas
 209. Benjamin B. Thompson
 210. Leung Tsang
 211. Alexander Tsatsoulas
 212. Shiao-Min Tseng
 213. Matthew L. Trumbo
 214. Alexander Tsatsoulas
 215. Pieter J. van Heerden
 216. S. Verdu
 217. John L. Vian
 218. Ed Viveiros
 219. John F. Walkup
 220. Jack M. Webster
 221. S.Weerasooriya
 222. Jeffrey J. Weinschenk
 223. John L. Whited
 224. Wen-Chung Stewart Wu
 225. Michael Wicks
 226. Donald C. Wunsch II
 227. Jian Xing
 228. H.J. Youn
 229. Albert R. Yu
 230. Yunxin Zhao
 231. Jacek Zurada

11.2.1 Publications with Nationals

Here is a list of some co-authors not born in the United State. Some have since become US citizens. Only one entry per country is given.

1. Argentina (Isidor Kerszenbaum)
2. Australia (Yianni Attikiouzel)
3. Brazil (A. P. Alves da Silva)
4. Canada (Winston Ewert)

5. China (Steven Shyh-Jier Huang)
6. Egypt (Mohamed El-Sharkawi)
7. India (Ram Balasubramanian)
8. Iran (Payman Arabshahi)
9. France (Christophe F. Bas)
10. Germany (Wolfgang Hoffmann)
11. Greece (Georgios Chrysanthakopoulos)
12. Iceland (Sigurdur E. Guttormsson)
13. Hong Kong (Kwang F. Cheung)
14. Indonesia (Iwan Njoto Sandjaja)
15. Japan (Toshio Fukuda)
16. Korea (Seho Oh)
17. Lebanon (M.E. Aggoune)
18. Mexico (Edgar Sánchez-Sinencio)
19. Nigeria (Oby Akinbule)
20. Poland (Jacek Zurada)
21. Romania (Josh Daniliuc)
22. Russia (Witali L. Dunin-Barkowski)
23. Taiwan (Wen-Chung Stewart Wu)
24. Turkey (H. Görkem Kuterdem)
25. Ukraine (Dmitry Radbel)
26. Vietnam (Steve T. Lam)
11. IEEE Computational Intelligence Magazine
12. IEEE Microwave Magazine
13. IEEE Power Engineering Review
14. IEEE Transactions on Acoustics, Speech and Signal Processing
15. IEEE Transactions on Aerospace and Electronic Systems
16. IEEE Transactions on Biomedical Engineering
17. IEEE Transactions on Circuits and Systems
18. IEEE Transactions on Circuits and Systems I: Regular Papers
19. IEEE Transactions on Electromagnetic Compatibility
20. IEEE Transactions on Energy Conversion
21. IEEE Transactions on Geoscience and Remote Sensing
22. IEEE Transactions on Image Processing
23. IEEE Transactions on Instrumentation and Measurement
24. IEEE Transactions on Fuzzy Systems
25. IEEE Transactions on Neural Networks
26. IEEE Transactions on Power Engineering
27. IEEE Transactions on Power Systems
28. IEEE Transactions on Signal Processing
29. IEEE Transactions on Systems, Man and Cybernetics: Systems
30. IEEE Transactions on Systems, Man and Cybernetics A, Systems and Humans
31. IEEE Transactions on Systems, Man and Cybernetics, Part B: Cybernetic
32. IEE Proceedings-C
33. IET Computer Vision
34. IET Radar, Sonar & Navigation
35. International Journal of Dynamical Systems and Differential Equations
36. International Journal of Information Technology and Intelligent Computing
37. International Journal of Microwave and Wireless Technologies
38. International Journal of Swarm Intelligence and Evolutionary Computation (IJSIEC)

11.3 Journals

Here are journals in which publications appear.

1. Analog Integrated Circuits and Signal Processing,
2. Applied Optics
3. Bio-Complexity
4. Canadian Applied Mathematics Quarterly
5. Circuits, Systems, and Signal Processing
6. Computational Science and Engineering
7. Connections: Newsletter of the IEEE Neural Networks Council
8. Electronic Journal of Differential Equations
9. Engineering Intelligent Systems
10. IEEE Circuits and Devices Magazine

39. International Journal of Tomography & Statistics
40. Journal of Advanced Computational Intelligence and Intelligent Informatics
41. Journal of The American Scientific Affiliation: Perspectives on Science and Christian Faith
42. Journal of the International Measurement Confederation (Measurement)
43. Journal of Clinical Engineering
44. Journal of Mathematical Analysis and Applications
45. Journal of the Optical Society of America
46. Journal of the Optical Society of America A
47. Journal of VLSI Signal Processing Systems
48. Mathematical and Computer Modelling
49. Measurement (Journal of the International Measurement Confederation)
50. Medical Physics
51. Neurocomputing
52. Neural Networks
53. Optical Engineering
54. Optics Letters
55. Perspectives on Science & Christian Faith
56. Phys. Med. Biol.
57. Proceedings of the IEEE

11.4 Venues

Conference, presentations and similar activities from a geographical perspective. Only one activity per city is listed.

Australia

1. Perth - IEEE International Conference on Evolutionary Computation, Perth, Australia. November 26-30, 1995.
2. Sydney - 2013 IEEE International Conference on Ultra-Wideband (ICUWB), Sydney Australia, September 15-18, 2013.

Austria

3. Graz - Power Systems Computation Conference, Graz, Austria (August 19-24, 1990)

Brazil

4. Florianopolis - "Modern Neural Networks: The First Decade," IV Escola de Redes Neurais, Florianopolis, Brazil, July 21, 1997.

Canada

5. Alberta - Calgary - Eighth Canadian Biennial Conference, Canadian Society for Biomechanics, Calgary, August 18-20, 1994
6. Quebec City - Quebec - Fourteenth Congress of the International Commission for Optics, Quebec City, Quebec Canada, August 24-28, 1987.
7. British Columbia - Vancouver - IEEE International Conference on Systems, Man and Cybernetics, Vancouver, British Columbia, Canada, October 22-25, 1995
8. Hamilton - Ontario - CSCA/ASA/CiS 2014 Conference, McMaster's University
9. Ottawa - 2013 IEEE Radar Conference (RADAR), Ottawa, ON, Canada, April 29-May 3 2013
10. Victoria - IEEE Pacific Rim Conference on Communications, Computers and Signal Processing, Victoria, B.C. Canada, June 4-5, 1987.

China

11. Beijing - International Joint Conference on Neural Networks, Beijing, November 3-6, 1992.
12. Chengdu - "Computational Intelligence: A Free Source of Information?" International Symposium on Neural Networks (ISNN), Chengdu, China (May 29, 2006)
13. Hong Kong - 1989 International Symposium on Computer Architecture and Digital Signal Processing (Hong Kong Convention and Exhibition Centre, 11-14 October, 1989),
14. Nanjing - International Conference on Circuits and Systems, July 6-8, 1989, Nanjing, China
15. Shanghai - IEEE Wireless Communications and Networking Conference (WCNC), Shanghai, China, 7-10 April 2013
16. Wuhan - Sixth International Symposium on Neural Networks (ISNN 2009) Wuhan, China, May 26-29, 2009

England

17. London - 1978 International Computing Conference, London, England, 1978

Finland

18. Espoo - 1991 International Geoscience and Remote Sensing Symposium, 3-7 June 1991, Espoo, Finland.
19. Helsinki - 1988 IEEE International Symposium on Circuits and Systems, pp. 503-506, Helsinki, 7-9 June, 1988.
- France**
20. Carry-le-Rouet - 1997 IEEE International Symposium on Diagnostics for Electrical Machines, Power Electronics and Drives, (SDEMPED '97), Carry-le-Rouet, France, September 1-3, 1997,
21. Montpellier - International Conference on Intelligent System Application to Power Systems, Montpellier, France, September 5-9, 1994.
22. Nantes - "Artificial Neural Systems," Ireste University in Nantes France, March 5-30, 1990 .
23. Paris - IEEE/IAFE [International Association of Financial Engineers] Computational Intelligence in Financial Engineering, (CIFER). Paris, France, April 11-15, 2011.
24. Toulouse - 19th AIAA Int. Communications Satellite Systems Conf., 17-20 April 2001, Toulouse, France.
- Germany**
25. Heidleberg - International Conference on the Use of Computers in Radiation Therapy XIII, Heidleberg, Germany (May 22-25, 2000)
26. Munich - IEEE Nanotechnology Council Meeting
27. Duisburg, "A signal space interpretation of neural network associative memories and classifiers" at the University of Duisburg, W. Germany, May 31, 1988.
- Hungary**
28. Budapest - IEEE ISAP2001, Budapest, Hungary, June 18-21,2001
- Italy**
29. Capri - International Optical Computing Conference, Capri, Italy, September 1976
30. Como - 2000 Como , Italy IJCNN, July 24-27, 2000 .
31. Florence - 30th International Symposium on Automotive Technology and Automation, Dedicated Conference on Megatronics, Florence Italy, 16-19 June 1997
32. La Spezia - Impact of Environmental Variability on Acoustic Predictions and Sonar Performance (N. G. Pace and F. B. Jensen, eds.),16-20 September 2002, Lerici, La Spezia, Italy,Sept. 2002.
33. Sorrento - 1994 International Conference on Artificial Neural Networks May 26-29, 1994, Sorrento, Italy.
34. Tuscany - "Evolution Models Do Not Create Information," Great Expectations Conferences, Borgo Finocchieto, Tuscany, Italy, June 12-16, 2011
35. Venice - 1996 IEEE International Workshop on Neural Networks for Identification, Control, Robotics and Signal/Image Processing (NICROSP), September 21-23, 1996, Venice, Italy
- Japan**
36. Nagoya - Second International Forum on Applications of Neural Networks to Power Systems , Nagoya, Japan, 1993;
37. Tokyo - IEEE-IECEJ-ASJ International Conference on Acoustics, Speech and Signal Processing, Tokyo, Japan, March 1986.
38. Tsukuba - 1993 IEEE/Tsukuba International Workshop on Advanced Robotics, November 8-9, 1993, AIST Tsukuba, Japan
39. Yokohama - International Conference on Fuzzy Systems (FUZZ-IEEE), Yokohama, Japan, March 20-24, 1995.
- Latfia**
40. Jurmala - 1995 Workshop on Sampling Theory & Applications, September 20-22, 1995 , Jurmala (Riga), Latvia
- Mexico**
41. Cancun - IEEE Technical Activities Board (TAB) 1999
42. Mexico City - IEEE TAB Symposium
- Monaco**
43. Monaco - "Artificial Neural Networks in Electric Power Systems," Decisions Systems International, Monaco, July 1-3, 1991
- New Zealand**
44. Dunedin - New Zealand International Two-Stream Conference on Artificial Neural Networks and Expert Systems (ANNES) November 24-26, 1993, Otago University, Dunedin, New Zealand

Poland

45. Gliwice - Faculty Fellowship, March 31, 2003
"Scientists and God: The Myth of Incompatibility"
46. Krakow - Faculty Fellowship, April 1, 2003
"Fuzzy Union Rule Configuration: Avoiding Exponential Rule Explosion".
47. Szczyrk - Second Conference of Neurl Networks and Their Applications, 1996
48. Wroclaw - "Perceptron Inversion: Properties and Applications", Institute of Engineering Cybernetics, Wroclaw University of Technology, Wroclaw, Poland (April 3, 2003).

Russia

49. Moscow - "Moscow Airport Encounters," University of Washington EE News, March 1993, Volume 4, Number 2, p.8.
50. Rostov-on-Don - 1992 RNNS/IEEE Symposium on Neuroinformatics and Neurocomputing, Rostov-on-Don, Russia, October 7- 10, 1992.
51. Ulan-Ude - "Neural Networks: The Fundamentals," Buryat State University, Ulan-Ude, Russia, March 5, 2001.

Singapore

52. Singapore - 1991 International Joint Conference on Neural Networks, Singapore, November 18-21 (1991).

South Korea

53. Seoul - International Conference on Intelligent Systems Applications to Power Systems (ISAP), Seoul, Korea, July 6-10, 1997.

Ukraine

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

Spain

55. Barcelona - International Workshop on Artificial Neural Networks (IWANN ' 93), June 9-11, 1993, Barcelona
56. Madrid "Artificial Neural Networks in Electric Power Systems," Decisions Systems International, Madrid, Spain , September 7-11, 1992

United States*Alabama*

57. Auburn - First Workshop on Neural Networks: Academic/Industrial/NASA/Defense, Auburn University and Conference Center, 4-6 February, 1990, Auburn, Alabama
58. Huntsville - SPIE Symposium/Workshop on the Effective Utilization of Optics in Radar Systems, Huntsville, Alabama, September 1977.

Alaska

59. Anchorage - 1998 IEEE International Conference on Evolutionary Computation (ICEC) at the 1998 IEEE World Congress on Computational Intelligence, Anchorage, Alaska, May 5-9, 1998

Arizona

60. Scottsdale - IEEE International Symposium on Circuits and Systems, Scottsdale, Arizona, May 26-29, 2002
61. Tempe - Microwave Measurement Symposium (ARFTG). Tempe, Arizona. 2011 78th ARFTG 1-2 Dec. 2011.
62. Tucson - Optical Society of America, Annual Meeting, Tucson, Ariz ., Oct. 19-22, 1976.
63. Phoenix - International Microwave Symposium, May 22, 2015

California

64. Los Angeles - O-E/LASE '88 Conference on Neural Network Models for Optical Computing, Los Angeles, January 1988
65. Monterey - Proceedings of the Twenty Fourth Asimomar Conference on Signals, Systems and Computers, 5-7 November, 1990, Asilomar Conference Grounds, Monterey, California.
66. Napa Valley - Pacific Gas & Electric R&D Electric Distribution Program External Advisory Goup Meeting, Silverado Country Club, Napa Valley , California , (August 22-23, 1991).
67. Pasadena - IEEE CAS Workshop on Wireless Communications and Networking, Pasadena, CA, Sept. 5-6, 2002.
68. Santa Barbara - "Evolutionary Simulations and Sources of Active Information," Discovery Retreat, Santa Barbara, CA (March 1-4, 2011)
69. San Diego - IEEE First International Conference on Neural Networks, San Diego, June 1987

70. San Francisco - Second IEEE International Conference on Fuzzy Systems (FUZZ-IEEE '93), San Francisco, March 1993
71. San Jose - "What Does Calculus Have to Do With Christianity?" San Jose State University, November 30, 2003.
72. San Mateo - International Conference on Acoustics, Speech and Signal Processing, San Mateo, CA, 1987.
- Colorado*
73. Boulder - 74th ARFTG (Automatic RF Techniques Group) Microwave Measurement Symposium, December 1st - 4th, 2009, Broomfield/Boulder, Colorado
74. Denver - IEEE International Joint Conference on Neural Networks, San Diego, July 24-27, 1988
75. Gold Lake - Workshop on Optical Artificial Intelligence, Gold Lake, Colorado (3-5 August, 1987),
- Florida*
76. Jacksonville - 2012 44th Southeastern Symposium on System Theory (SSST), Jacksonville, Fla pp.18-23, 11-13 March 2012.
77. Miami - INFOCOM 2005. 24th Annual Joint Conference of the IEEE Computer and Communications Societies. March 2005 Miami, Fla
78. Orlando - IEEE World Congress on Computational Intelligence, June 26 - July 2, 1994 Walt Disney World Dolphin Hotel, Orlando, Florida.
79. Tampa - IEEE 15th Annual Wireless and Microwave Technology Conference (WAMICON)
- Georgia*
80. Atlanta - Symposium on Diagnostics for Electric Machines, Power Electronics and Drives, Atlanta, GA 24-26 August 2003
- Hawaii*
81. Honolulu - 2002 International Joint Conference on Neural Networks, 2002 IEEE World Congress on Computational Intelligence, May 12-17, 2002, Honolulu
82. Kauai - 2012 International Waveform Diversity & Design Conference
- Indiana*
83. Terre Haute - Rose-Hulman Institute of Technology Outstanding Young Alumni Award Ceremony
84. West Lafayette, Purdue University, ARL Joint Research Review, October 2016.
- Illinois*
85. Chicago - Faculty leadership conference, Campus Crusade for Christ, June 1997.
- Iowa*
86. Perry - "Added Information in Targeted Evolutionary Search", Perry Conference, Hotel Pattee, Perry, Iowa, April 17-20, 2006.
- Louisiana*
87. New Orleans - 113th Annual Meeting of the American Mathematical Society (AMS), New Orleans, January 5-7, 2007.
- Maryland*
88. Annapolis - "Spectrum Issues in Amplifier Design," Fifth Annual Emerging Spectrum Technology (EST) Workshop on Advanced Radar Technologie to Improve Spectrum Use, Double Tree Hotel, Annapolis Maryland, September 13-14, 2010
89. Baltimore - International Conference on Neural Networks, Baltimore, June 1992.
90. College Park - 2012 ONR University/Laboratory Initiative Program Review, University of Maryland University, College Park, June 5-7, 2012
91. Hyattsville - 2012 University Laboratory Initiative Program Review, 5-7 June
- Massachusetts*
92. Boston - 1995 Design Engineering Technical Conferences, American Society of Mechanical Engineers (ASME), Boston Massachusetts, September 17-20, 1995.
93. Cambridge - 1989 IEEE International Conference on Systems, Man and Cybernetics, (Hyatt Regency, Cambridge, Massachusetts, 14-17 Nov. 1989),
- Michigan*
94. Mackinac Island - Limits of Passive Imaging Workshop, Mackinac Island, MI, pp.45-55, May 24-26, 1983

95. Dearborn - "Homogeneous and layered alternating projection neural networks," The International Symposium on Optical Engineering and Industrial Sensing for Advanced Manufacturing Technologies held at the Dearborn Hyatt, Michigan, June 26-30, 1988.
Minnesota
96. Minneapolis - IEEE Power Engineering Systems 1990 Summer Meeting, Minneapolis, Minnesota, 15-19 July 1990.
Mississippi
97. Biloxi - Oceans '02 MTS/IEEE, Biloxi, Mississippi
Missouri
98. Columbia - "Conservation of Information in Evolutionary Search Algorithms: Measuring the Cost of Success," University of Missouri, Columbia, (November 12, 2007). IEEE CIS Distinguished Lecture for Columbia Chapter of IEEE CIS Society.
99. Rolla - "Time Scale Discrete Fourier Transforms," Guest Lecture, Missouri University of Science and Technology, Rolla, Mo., April 14, 2010.
100. St. Louis - Artificial Neural Networks in Engineering, (ANNIE 95), Artificial Neural Networks, Fuzzy Logic and Evolutionary Programming for Designing Smart Engineering Systems, November 12 - 15, 1995, Marriott Pavilion Hotel, St. Louis, Missouri
Nebraska
101. Lincoln - University of Nebraska-Lincoln Math Symposium, December 7, 2007
New York
102. Ithaca, Information & Biology, Cornell, University, Spring 2011
103. New York - IEEE Conference on Computational Intelligence for Financial Engineering & Economics (CIFER) April 9-11, 1995
104. Rochester - 1977 Optical Society of America Annual Meeting, Rochester, NY
North Carolina
105. Research Triangle Park - IEEE Virtual Reality Annual International Symposium (VRAIS) 1995 Research Triangle Park, NC
106. Indian Trail, North Carolina. 30th Annual National Conference on Christian Apologetics, October 11-12 2013 First Baptist Church Indian Trail.
107. Matthews, North Carolina. 2013 Ratio Christi Symposium, Southern Evangelical Seminary, October 12-13 2013
Oklahoma
108. Winston Ewert, William A. Dembski, Robert J. Marks II, Algorithmic Specified Complexity, in Engineering and Metaphysics, Tulsa, OK, 2012.
Oregon
109. Portland - 1989 IEEE International Symposium on Circuits and Systems, 9-11 May 1989, Portland
Pennsylvania
110. Philadelphia - International Symposium on Circuits and Systems, pp.370-376, Philadelphia, May 1987.
Rhode Island
111. Newport - ONR University/Laboratory Initiative in Undersea Weapons Technology at the Naval Undersea Warfare Center (NUWC), Newport, RI (June 2-4, 2009).
South Carolina
112. Clemson - NSF Workshop on Applications of Artificial Neural Network Methodology in Power Systems Engineering, April 8-10, 1990, Clemson University
Tennessee
113. Nashville - IEEE/IAFE [International Association of Financial Engineers] Computational Intelligence in Financial Engineering, (CIFER). Nashville, TN, March 30-April 2, 2009,
Texas
114. Arlington - "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.
115. Austin - "Science & Christianity: Separate but Equal?" Covenant Presbyterian Church, Austin, TX (August 16, 2009)
116. El Paso - 2014 Expert Witness, Ysleta del Sur Pueblo (Federal Court)

117. College Station - "THE GOD DIALOGUES II: A Panel Discussion," Texas A&M University, College Station, TX. October 27, 2011, Sponsored by Ratio Christi (Debate between Muslim, Atheist and Christian views of God.)
118. Dallas - 1990 IEEE Ap-S International Symposium and URSI Radio Science Meeting, 7-11 May, 1990, Dallas, Texas.
119. El Paso - 2014 U.S. District Court, Western District of Texas (Expert Witness)
120. Lubbock - 1977 Midwest Symposium on Circuits and Systems, Texas Tech University, Lubbock, August 1977.
121. Houston - INTERNATIONAL CONFERENCE ON NEURAL NETWORKS (ICNN'97) Westin Galleria Hotel, Houston, Texas, USA, June 9-12, 1997, "Neural Networks: Reduction to Practice"
122. Leakey, "2013 Communio: A Retreat for Faculty (Baylor University)" Laity Lodge, May 20-24, 2013
123. Plano - "God Ever Geometrizes: Apologetics in Mathematics," Probe Ministries, Plano, Texas, (June 28, 2010).
124. San Antonio - IEEE Globecom 2001, Nov. 25-29, 2001, San Antonio, Texas.
125. Tyler - 42nd Meeting of the Southeastern Symposium on System Theory, University of Texas at Tyler, March 7-9, 2010
126. Waco - 2013 Texas Symposium on Wireless & Microwave Circuits & Systems, Waco, Texas, April 4-5, 2013.
131. Morgantown - WVU Neural Network Symposium, West Virginia University, Morgantown, (15-16 June, 1989).
132. Davis - Origin of Biological Information, Canaan Valley Resort Aug 19-21, 2016

Utah

133. Salt Lake City - XII International Conference on the Use of Computers in Radiation Therapy, May, 1997, Salt Lake City .

Washington DC

134. Washington DC - 1980 International Computing Conference, Washington D.C., April 1980

Washington

135. Ballard - American Pioneer Corporation, Ballard (consulting)
136. Bellevue - Fuzzy Logic & Intelligent Systems Seminar, Boeing Computer Services, Red Lion Inn, Bellevue, WA, December 2, 1991,
137. Everett - John Fluke Manufacturing Company Inc., Everett, WA (consulting)
138. Kirkland - Financial Neural Networks, Inc., Kirkland, WA (consulting)
139. Redmond - Microsoft Corporation, Redmond, WA (consulting)
140. Richland - Workshop on Environmental and Energy Applications of Neural Networks, Richland, Washington, 30-31 March 1995
141. Seattle - IEEE International Joint Conference on Neural Networks, San Diego, July 24-27, 1988

Virginia

127. Arlington, Virginia. 2015 IEEE International Radar Conference (RadarCon), Crystal City, May 10, 2015
128. Crystal City, Virginia. DARPA Radar/ Communications Co-Design Challenge, DARPA, (April 27, 2015)
129. Vienna, Virginia. "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
130. Crystal City, Virginia. NSF Review Panel.

West Virginia