

# Robert J. Marks II

Curriculum Vitae

October 19, 2014

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## 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)<sup>1</sup>
- ◇ Fellow of the Institute of Electrical & Electronic Engineers (IEEE)<sup>2</sup>
- ◇ 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)

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<sup>1</sup>“For contributions to image recovery and synthesis, optical processing, and eletro-optical neural networks.”

<sup>2</sup>“For leadership and contributions to the field of neural networks.”

- ◇ Pioneer in Neural Network Award (IJCNN) (2006)
- ◇ IEEE Dallas Section Volunteer of the Year Award (2007)

#### βListings

- ◇ *Access Research Network* top award for the “Top 10 Darwin and Design Science Stories” for 2009.<sup>3</sup>
- ◇ CollegeCrunch.org. “The 20 Most Brilliant Christian Professors,” April 4, 2010.<sup>4</sup>
- ◇ SuperScholar.org. “The 20 Most Influential Christian Scholars,” 2010.<sup>5</sup>
- ◇ TheBestSchools.org. “The 50 Smartest People of Faith.” 2012.<sup>6</sup>

<sup>3</sup>“*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.”

<sup>4</sup>“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.”

<sup>5</sup>“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.”

<sup>6</sup> The qualifications for inclusion on our list are twofold

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

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

It is presented in alphabetical order.

⋮

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

- ◇ L. A. Yahaya, “PERSONAL CHARACTERISTICS OF REPUTABLE SCHOLARS” 2013.<sup>7</sup>
- ◇ TheBestSchools.org. “The 50 Most Influential Scientists in the World Today.” 2014.<sup>8</sup>

## 4.2 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,

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<sup>7</sup>“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...

<sup>8</sup> From biotechnology and digital media to sustainable energy and cloud computing, almost everything today is somehow affected and sometimes entirely reshaped by scientific and technological advances.

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

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

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

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

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

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

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

⋮

### 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 Smoothing: 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.

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

## 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-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-present).
  - 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, April 4–5, 2013, Baylor University, Waco, Texas, 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

## 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).  
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## 6.5 Patents

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## 6.6 Abstracts

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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.

## 6.7 Videos

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  9. “Information. What is it?,” Intro. to Engineering Lecture, January 17, 2012.  
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  14. “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  
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## 6.8 Selected Talks (since 2003)

- ◇ “Perceptron Inversion: Properties and Applications”, Institute of Engineering Cybernetics, Wrocław University of Technology , Wrocław , Poland ( April 3, 2003 ).

- ◇ “Fundamentals of Swarm Intelligence”, APL Invited Colloquia, Applied Physics Laboratory, University of Washington ( April 10, 2003 ).
- ◇ “What Does Calculus Have to Do With Christianity?” San Jose State University, November 30, 2003.
- ◇ “Swarm Intelligence: The Method Behind the Mobs”, NASA Office of Biological and Physical Research Program Review, California Institute of Technology, December 17-18, 2003.
- ◇ “Time Scale Nonregressivity in Switched Linear Circuits” Special Session on Dynamic Equations on Time Scales: Theory and Applications, AMS Western Sectional Meeting, University of Southern California, Los Angeles, CA, April 3-4, 2004 (with Ian Gravagne, John M Davis, Jeffrey J DaCunha).
- ◇ “Added Information in Targeted Evolutionary Search”, Perry Conference, Hotel Pattee, Perry, Iowa, April 17-20, 2006.
- ◇ “Evolutionary Search: A Free Source of Design Information?” RAPIDS 2 Conference, BIOLA, May 11-13, 2006.
- ◇ “Science and the Bible: The Emerging Harmony,” CDIS (Chengdu International School), Chengdu, China (May 29, 2006) and CaiDa Southwest Economics University, Chengdu, China (May 30, 2006) .
- ◇ “Computational Intelligence: A Free Source of Information?” International Symposium on Neural Networks (ISNN), Chengdu, China (May 29, 2006) A Keynote Talk
- ◇ “The Need for Active Information in Evolutionary Search,” Wistar Retrospective Symposium, Boston, MA (June 3-6, 2007).
- ◇ “Gödel to Turing to Chaitin to the Edge of Naturalism: Some Things Computers Will Never Do,” B.E.A.R.S. Seminar, Baylor University, (September 28, 2007).
- ◇ “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.
- ◇ “Gödel to Turing to Chaitin to the Edge of Naturalism: Some Things Computers Will Never Do,” (April 2, 2008), SWBS, IEEE CIS Distinguished Lecture for Dallas Chapter of IEEE CIS Society.
- ◇ “Measuring the Cost of Success: Conservation of Information in Evolutionary Search Algorithms,” Southern Methodist University (SMU), Department of Electrical Engineering (September 25, 2008).

- ◇ “Knowing What is Unknowable: Things a Computer Can’t Do,” Baylor American Scientific Affiliation (ASA) Student Chapter. Also sponsored by the Baylor Society for Conversations in Religion, Ethics and Science, Baylor University (April 15, 2008).
- ◇ “What does Calculus have to do with Christianity?” Dallas Christian Leadership (DCL) at SMU for Faculty Commons (September 25, 2008).
- ◇ “Evolutionary Informatics: Measuring the Cost of Success,” American Scientific Affiliation (ASA) 64th Annual Meeting, Baylor University (Sunday, August 2, 2009) with William A. Dembski
- ◇ “Science & Christianity: Separate but Equal?” Covenant Presbyterian Church, Austin, TX (August 16, 2009)
- ◇ “Lessons from Gödel, Turing and Chaitin: Things Computational Intelligence Will Never Do,” IEEE MetroCon 2009, Innovating for Society, August 17th, 2009, Sheraton Arlington, Arlington, Texas. (IEEE CIS Distinguished Lecture.)
- ◇ “God Ever Geometrizes: Apologetics in Mathematics,” Baylor American Scientific Affiliation (ASA) Student Chapter. Also sponsored by the Baylor Society for Conversations in Religion, Ethics and Science, Baylor University (December 1, 2009).
- ◇ “Gödel to Turing to Chaitin to the Edge of Naturalism: Some Things Computational Intelligence Will Never Do,” IEEE CIS Distinguished Lecture for St. Louis Chapter of IEEE CIS Society presented at the Missouri University of Science and Technology, Rolla, Mo., April 13, 2010.
- ◇ “Gödel to Turing to Chaitin to the Edge of Naturalism: Some Things Computational Intelligence Will Never Do,” IEEE CIS Distinguished Lecture for St. Louis Chapter of IEEE CIS Society presented at the Missouri University of Science and Technology, Rolla, Mo., April 13, 2010.
- ◇ “Measuring the Cost of Success: Conservation of Information in Search,” IEEE CIS Distinguished Lecture for St. Louis Chapter of IEEE CIS Society presented at the Missouri University of Science and Technology, Rolla, Mo., April 13, 2010.
- ◇ “Time Scale Discrete Fourier Transforms,” Guest Lecture, Missouri University of Science and Technology, Rolla, Mo., April 14, 2010.
- ◇ “God Ever Geometrizes: Apologetics in Mathematics,” Probe Ministries, Plano, Texas, (June 28, 2010).

- ◇ “Spectrum Issues in Amplifier Design,” Fifth Annual Emerging Spectrum Technology (EST) Workshop on Advanced Radar Technologie to Improve Spectrum Use, Double Tree Hotel, Annapolis Maryland, September 13-14, 2010 (with Charles Baylis).
- ◇ “Power Amplifier Circuit and Waveform Optimization for Reduced Spectral Spreading in Radar Transmitters,” IDGA’s 4th Annual Military Radar Summit, Feb 8-10, 2011, Vienna, VA (with Charles Baylis).
- ◇ “Evolutionary Simulations and Sources of Active Information,” Discovery Retreat, Santa Barbara, CA (March 1-4, 2011)
- ◇ “Measuring Cross Harmonic Coupling in Nonlinear Systems,” WMCS Advisory Board, March 31, 2011, Baylor University.
- ◇ “Evolutionary Informatics. Why all the fuss?” Baylor Alumni Association, Lifelong Learning in Retirement, April 15, 2011, Great Hall of the Hughes-Dillard Alumni Center, Waco, Texas
- ◇ “Evolution Models Do Not Create Information,” Great Expectations Conferences, Borgo Finocchieto, Tuscany, Italy, June 12-16, 2011 (with Winston Ewert).
- ◇ “THE GOD DIALOGUES II: A Panel Discussion,” Texas A&M University, October 27, 2011, Sponsored by Ratio Christi (Debate between Muslim, Atheist and Christian views of God.)
- ◇ “Three Predominant Interpretations of Creation (Young Earth Creationism, Old Earth Creationism, and Theistic Evolution),” Live Oak Classical School, Waco, TX, May 24, 2012 (one of three panelists)
- ◇ “CHRISTIAN CALCULUS: The Impact of Christian Faith on Mathematics & Science Yesterday & Today,” Sept 27, 2012 (sponsored by Baylor’s ESC LLC and the Baylor Student Chapter of the American Scientific Affiliation)
- ◇ “Joint Optimization of Radar Power Amplifier and Waveforms for Reduced Spectral Spreading,” North Atlantic Treaty Organization (NATO) SET-182 Research Task Group Meeting, 2012 October 17-18, 2012 (with Charles Baylis. Remote Presentation.)
- ◇ “God Ever Geometrizes: Apologetics in Mathematics” November 6, 2012, Texas A&M University, (sponsored by TAMU’s Ratio Christi student group)
- ◇ “Information: Measuring Design & Understanding the Unknowable,” 2013 National Conference & Ratio Christi Symposium, Southern Evangelical Seminary, October 11-13 2013, Matthews, North Carolina

- ◇ “Love and Cookies,” Panel at Teal Residential College, February 13, 2014 (with Brian Thomas and Randall Jean)
- ◇ “Spectral Issues,” Spectrum Forum, Texas Symposium on Wireless and Microwave Circuits and Systems, Baylor University, Waco (April 4, 2014)
- ◇ “Electrical & Computer Engineering,” Lorena High School, Lorena, Texas (Career Day) May 30, 2014 (with Charles Baylis and Matthew Fellows)
- ◇ “Man Up,” Panel at Teal Residential College, May 1, 2014 (with Ian Gravagne and Ken Van Treuren)

## 6.9 Tutorials

- ◇ 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.

## 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.

## 8 Courses Taught

ßBaylor 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

βUniversity 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-present).
- ◇ Center for Evolutionary Informatics, Board of Directors, President (2008-present).
- ◇ American Institute for Technology and Science Education (AITSE), Advisory Council, (2009-2013).

### 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

## 10 Statistics

For the bean counters.

### 10.1 Publication Count

- ◇ 9 books. (List in Section 6.1 on page 16.)
- ◇ 149 journal publications. (List in Section 6.2 on page 17.)
- ◇ 185 conference papers. (List in Section 6.3 on page 30.)
- ◇ 31 book chapters. (List in Section 6.4 on page 50.)
- ◇ 3 patents. (List in Section 6.5 on page 54.)
- ◇ 43 abstracts. (List in Section 6.6 on page 54.)
- ◇ 14 videos. (List in Section 6.7 on page 59.)
- ◇ 64 supervised theses and dissertations. (List in Section 11.1.1 on page 75.)



- ◇ 50 cross disciplinary theses and dissertations. (List in Section 11.1.2 on page 77.)
- ◇ 52 grants. (List in Section 7 on page 65.)
- ◇ 210 coauthors. (List in Section 11.2 on page 78.)
- ◇ 25 different coauthor countries. (List in Section 11.2.1 on page 81.)
- ◇ 53 distinct journals. (List in Section 11.3 on page 82.)
- ◇ 133 different city venues. (List in Section 11.4 on page 83.)
- ◇ Number of different courses taught.
  - 6 at Baylor University. (List in Section 8 on page 69.)
  - 25 at the University of Washington. (List in Section 8 on page 70.)

#### βErdős and Bacon Numbers

- ◇ Erdős number<sup>9</sup> = 3
- ◇ Bacon number<sup>10</sup> = 2
- ◇ Erdős - Bacon number<sup>11</sup> = 5

#### βCitation Count Citation data<sup>12</sup> taken from Google Scholar.<sup>13</sup>

- ◇ h-index<sup>14</sup> = 45.
- ◇ i-10 index<sup>15</sup> = 142.

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<sup>9</sup> 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).

<sup>10</sup>Marks was in *Expelled: No Intelligence Allowed* with Ben Stein who was in *Planes, Trains and Automobiles* with Kevin Bacon. IMDb data: <http://www.imdb.com/name/nm2990293/>

<sup>11</sup>The sum of one's Erdős and Bacon number

<sup>12</sup>The publications and their citations are listed in the Appendix in Section 11.4 on page 88.

<sup>13</sup>Google Scholar gives the most liberal citation counts. Counts include self citations.

<sup>14</sup>This means that 45 papers have been cited 45 or more times.

<sup>15</sup>The number of papers cited 10 or more times.

◇ 7935 citations

βWebsite Rankings

Rankings from [www.alexa.com](http://www.alexa.com).

Website	Sept. 5, 2014
EvoInfo.org	11,179,950
GunsmokeNet.com	2,411,319
HandbookOfFourierAnalysis.com	18,729,747
RobertMarks.org	16,286,062
TheChortle.com	17,265,954
TimeScales.org	11,620,006

## 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].

### 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 16.

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].
22. J. Xing, Shorted field rotors, (2000) [Mohamed El-Sharkawi].
23. L.S. Moulin, Support Vector Machines in Power Engineering, (2002) [A.P.A. da Silva].
24. Ioannis N Kassabalidis, Swarm Intelligence, (2002) [Mohamed El-Sharkawi].
25. J. Schreiber, Biomagnetic imaging, (2002) [Ceon Ramon].
26. Jens Haueisen, Biomagnetic imaging, (2002) [Ceon Ramon].
27. Paul Schimpf, Biomagnetic imaging, (2002) [Ceon Ramon].
28. Seongwon Cho, Iris recognition (2004) [Jaemin Kim]
29. Jinsu Choi, Iris recognition (2004) [Jaemin Kim]
30. Paul Reynolds, "Algorithm Implementation in FPGAs Demonstrated Through Neural Network Inversion on the SRC-6e," Thesis (2005) [Russ Duren].
31. Eric Green, "Design of a microwave sensor for non-invasive determination of blood-glucose concentration," Thesis (2005) [Randall Jean].
32. Jeffrey DaCunha, "Lyapunov Stability and Floquet Theory for Nonautonomous Linear Dynamic Systems on Time Scales," Dissertation (Mathematics) (2004) [John Davis].
33. Billy Jackson, "A General Linear Systems Theory on Time Scales: Transforms, Stability and Control," Dissertation (Mathematics) (2007) [John Davis].

34. Alice Ramos, "The Dynamic Lyapunov Equation on Time Scales," Dissertation (Mathematics) (2009) [John Davis].
35. John Miller, "Stability of Simultaneously Triangularizable Switched Linear Systems on Time Scales" Thesis (ECE) 2009.
36. Ben Van Ruitenbeek, "Image Compression and Recovery Using Compressive Sampling and Particle Swarm Optimization," Thesis (Computer Science) (2009) [David Sturgill].
37. Joseph Perry, Thermal Transient Modeling in Power MOSFETs, (2009) [Charles Baylis]
38. Dylan R. Poulsen, Time Scales, (2011) [John Davis].
39. Matthew Moldovan, "Piecewise Linear Approach for Optimizing Radar Chirps," (2012) [Charles Baylis].
40. Josh Martin, "Adaptive Load Impedance Optimization for Power Amplifiers in Reconfigurable Radar Transmitters," Thesis, (2012) [Charles Baylis].
41. Oby Akinbule, Microwave optimization, (2012) [Charles Baylis].
42. Loria Wang, "Side Lobe Modulation of Radar Antenna Pattern Utilizing an Auxiliary Array," Thesis, (2012) [Charles Baylis].
43. Yanqing Liu, Wireless Communication, (2013) [Liang Dong].
44. Stuart Gibbs "Estimation of Multi-Component Mixture Proportions using Regression Machine Analysis of Ultra-Wideband Spectroscopic Measurements" (2013) [Randall Jean]
45. Matthew Gardner "Estimation of Multi-Component Mixture Proportions using Regression Machine Analysis of Ultra-Wideband Spectroscopic Measurements" (2013) [Randall Jean]
46. Brandon Herrera "Estimation of Multi-Component Mixture Proportions using Regression Machine Analysis of Ultra-Wideband Spectroscopic Measurements" (2013) [Randall Jean]
47. Chris Faulkner "Estimation of Multi-Component Mixture Proportions using Regression Machine Analysis of Ultra-Wideband Spectroscopic Measurements" (2013) [Randall Jean]
48. Adam Parks "Estimation of Multi-Component Mixture Proportions using Regression Machine Analysis of Ultra-Wideband Spectroscopic Measurements" (2013) [Randall Jean]
49. Josh Daniliuc "Estimation of Multi-Component Mixture Proportions using Regression Machine Analysis of Ultra-Wideband Spectroscopic Measurements" (2013) [Randall Jean]
50. Paul Hodge "Estimation of Multi-Component Mixture Proportions using Regression Machine Analysis of Ultra-Wideband Spectroscopic Measurements" (2013) [Randall Jean]

## 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. Jennifer Barlow
10. Charles Baylis
11. Christophe F. Bas
12. Michael Behe
13. S.V. Bell
14. Matthew A. Beauregard
15. Stephen Berger
16. C.M. Brace
17. Walter Bradley
18. C Bunje
19. C. David Capps

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

- 
- |                             |                            |
|-----------------------------|----------------------------|
| 86. T. Homma                | 119. Michael Lexa          |
| 87. M.Y. Huang              | 120. Zhi Li                |
| 88. Steven Shyh-Jier Huang  | 121. C.S. Lim              |
| 89. Pieter J. van Heerden   | 122. Yanqing Liu           |
| 90. Jenq-Neng Hwang         | 123. Shinhak Lee           |
| 91. C.A. Irby               | 124. Alan Lippman          |
| 92. Akira Ishimaru          | 125. C.G. Looney           |
| 93. Billy J. Jackson        | 126. T. P. Mann            |
| 94. B. Randall Jean         | 127. Kirk Marquard         |
| 95. Craig A. Jensen         | 128. Josh Martin           |
| 96. Daniel Jepson           | 129. J.G. McDonnell        |
| 97. Michael I. Jones        | 130. M.G. Meyer            |
| 98. Robert Jonk             | 131. John E. Miller        |
| 99. Jae-Byung Jung          | 132. Hunter Miller         |
| 100. Dmitry Kaplan          | 133. Robert T. Miyamoto    |
| 101. Ioannis N Kassabalidis | 134. Osama Mohammed        |
| 102. Isidor Kerszenbaum     | 135. Matthew Moldovan      |
| 103. Jaemin Kim             | 136. George Montañez       |
| 104. Mingoo Kim             | 137. David Moon            |
| 105. S. Kitamura            | 138. L. S. Moulin          |
| 106. E. Lee Kral            | 139. Yeshwant Muthusamy    |
| 107. Thomas F. Krile        | 140. Sreeram Narayanan     |
| 108. Ramasamy Krishnan      | 141. D. Nguyen             |
| 109. David Krout            | 142. V. Bogdan Neculaes    |
| 110. Amol S. Kulkarni       | 143. Aghogho Obi           |
| 111. H. Görkem Kuterdem     | 144. Seho Oh               |
| 112. Richard Ladner         | 145. Marimuthu Palaniswami |
| 113. H.C. Lai               | 146. Dong Chul Park        |
| 114. Chi M. Lam             | 147. Jiho Park             |
| 115. Steve T Lam            | 148. Adam Parks            |
| 116. J.N. Larson            | 149. Homayoon Parsaei      |
| 117. Steven Lardizabal      | 150. Joseph Perry          |
| 118. Loren Laybourn         | 151. Hal Philipp           |



152. Mark H. Phillips  
 153. James W. Pitton  
 154. William Platt  
 155. M.C. Poon  
 156. H.Vincent Poor  
 157. D.R. Poulsen  
 158. Dmitry Radbel  
 159. Ceon Ramon  
 160. Alice A. Ramos  
 161. Russell D. Reed  
 162. Tonya Reightley  
 163. A.J. Rocha Reis  
 164. Grant Richter  
 165. James C. Ritcey  
 166. Jon Roach  
 167. C.J. Robinson  
 168. Alberto Rodriguez  
 169. Alonso Rodriguez  
 170. Benjamin Van Ruitenbeek  
 171. Fariborz Salamat  
 172. Joan E. Sanders  
 173. Frank Sanders  
 174. Iwan Njoto Sandjaja  
 175. Edgar Sánchez-Sinencio  
 176. John Sanford  
 177. Dennis P. Sarr  
 178. Paul Schimpf  
 179. J. Schreiber  
 180. David K. Smith  
 181. Michael J. Smith  
 182. Wesley E. Snyder  
 183. Mani Soma  
 184. Arun Somani  
 185. B.G. Song  
 186. Michael Z. Spivey  
 187. David Sturgill  
 188. Robert J. Streifel  
 189. J.W. Taylor  
 190. J.A. Thomas  
 191. Benjamin B. Thompson  
 192. Leung Tsang  
 193. Shiao-Min Tseng  
 194. Matthew L. Trumbo  
 195. Pieter J. van Heerden  
 196. S. Verdu  
 197. John L. Vian  
 198. John F. Walkup  
 199. Jack M. Webster  
 200. S.Weerasooriya  
 201. Jeffrey J. Weinschenk  
 202. John L. Whited  
 203. Wen-Chung Stewart Wu  
 204. Michael Wicks  
 205. Donald C. Wunsch II  
 206. Jian Xing  
 207. H.J. Youn  
 208. Albert R. Yu  
 209. Yunxin Zhao  
 210. 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. Greece (Georgios Chrysanthakopoulos)
11. Iceland (Sigurdur E. Guttormsson)
12. Hong Kong (Kwang F. Cheung)
13. Indonesia (Iwan Njoto Sandjaja)
14. Japan (Toshio Fukuda)
15. Korea (Seho Oh)
16. Lebanon (M.E. Aggoune)
17. Mexico (Edgar Sánchez-Sinencio)
18. Nigeria (Oby Akinbule)
19. Poland (Jacek Zurada)
20. Romania (Josh Daniliuc)
21. Russia (Witali L. Dunin-Barkowski)
22. Taiwan (Wen-Chung Stewart Wu)
23. Turkey (H. Görkem Kuterdem)
24. Ukraine (Dmitry Radbel)
25. Vietnam(Steve T. Lam)
9. Engineering Intelligent Systems
10. IEEE Circuits and Devices Magazine
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 Radar, Sonar & Navigation
34. International Journal of Dynamical Systems and Differential Equations
35. International Journal of Information Technology and Intelligent Computing

### 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

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

#### Hungary

27. Budapest - IEEE ISAP2001, Budapest, Hungary, June 18-21,2001

#### Italy

28. Capri - International Optical Computing Conference, Capri, Italy, September 1976
29. Como - 2000 Como , Italy IJCNN, July 24-27, 2000 .
30. Florence - 30th International Symposium on Automotive Technology and Automation, Dedicated Conference on Megatronics, Florence Italy, 16-19 June 1997

31. 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.

32. Sorrento - 1994 International Conference on Artificial Neural Networks May 26-29, 1994, Sorrento, Italy.

33. Tuscany - "Evolution Models Do Not Create Information," Great Expectations Conferences, Borgo Finocchieto, Tuscany, Italy, June 12-16, 2011

34. Venice - 1996 IEEE International Workshop on Neural Networks for Identification, Control, Robotics and Signal/Image Processing (NICROSP), September 21-23, 1996, Venice, Italy

#### Japan

35. Nagoya - Second International Forum on Applications of Neural Networks to Power Systems , Nagoya, Japan, 1993;
36. Tokyo - IEEE-IECEJ-ASJ International Conference on Acoustics, Speech and Signal Processing, Tokyo, Japan, March 1986.
37. Tsukuba - 1993 IEEE/Tsukuba International Workshop on Advanced Robotics, November 8-9, 1993, AIST Tsukuba, Japan
38. Yokohama - International Conference on Fuzzy Systems (FUZZ-IEEE), Yokohama, Japan, March 20-24, 1995.

#### Latfia

39. Jurmala - 1995 Workshop on Sampling Theory & Applications, September 20-22, 1995 , Jurmala (Riga), Latvia

#### Mexico

40. Cancun - IEEE Technical Activities Board (TAB) 1999
41. Mexico City - IEEE TAB Symposium

#### Monaco

42. Monaco - "Artificial Neural Networks in Electric Power Systems," Decisions Systems International, Monaco, July 1-3, 1991

#### New Zealand

43. 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**

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

**Russia**

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

**Singapore**

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

**South Korea**

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

**Ukraine**

53. 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 Science

**Spain**

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

**United States**

*Alabama*

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

*Alaska*

58. 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*

59. Scottsdale - IEEE International Symposium on Circuits and Systems, Scottsdale, Arizona, May 26-29, 2002
60. Tempe - Microwave Measurement Symposium (ARFTG). Tempe, Arizona. 2011 78th ARFTG 1-2 Dec. 2011.

61. Tucson - Optical Society of America, Annual Meeting, Tucson, Ariz ., Oct. 19-22, 1976.

*California*

62. Los Angeles - O-E/LASE '88 Conference on Neural Network Models for Optical Computing, Los Angeles, January 1988
63. Monterey - Proceedings of the Twenty Fourth Asilomar Conference on Signals, Systems and Computers, 5-7 November, 1990, Asilomar Conference Grounds, Monterey, California.
64. Napa Valley - Pacific Gas & Electric R&D Electric Distribution Program External Advisory Group Meeting, Silverado Country Club, Napa Valley , California , (August 22-23, 1991).

65. Pasadena - IEEE CAS Workshop on Wireless Communications and Networking, Pasadena, CA, Sept. 5-6, 2002.
66. Santa Barbara - "Evolutionary Simulations and Sources of Active Information," Discovery Retreat, Santa Barbara, CA (March 1-4, 2011)
67. San Diego - IEEE First International Conference on Neural Networks, San Diego, June 1987
68. San Francisco - Second IEEE International Conference on Fuzzy Systems (FUZZ-IEEE '93), San Francisco, March 1993
69. San Jose - "What Does Calculus Have to Do With Christianity?" San Jose State University, November 30, 2003.
70. San Mateo - International Conference on Acoustics, Speech and Signal Processing, San Mateo, CA, 1987.
- Colorado*
71. Boulder - 74th ARFTG (Automatic RF Techniques Group) Microwave Measurement Symposium, December 1st - 4th, 2009, Broomfield/Boulder, Colorado
72. Denver - IEEE International Joint Conference on Neural Networks, San Diego, July 24-27, 1988
73. Gold Lake - Workshop on Optical Artificial Intelligence, Gold Lake, Colorado (3-5 August, 1987),
- Florida*
74. Jacksonville - 2012 44th Southeastern Symposium on System Theory (SSST), Jacksonville, Florida pp.18-23, 11-13 March 2012.
75. Miami - INFOCOM 2005. 24th Annual Joint Conference of the IEEE Computer and Communications Societies. March 2005 Miami, Florida
76. Orlando - IEEE World Congress on Computational Intelligence, June 26 - July 2, 1994 Walt Disney World Dolphin Hotel, Orlando, Florida.
77. Tampa - IEEE 15th Annual Wireless and Microwave Technology Conference (WAMICON)
- Georgia*
78. Atlanta - Symposium on Diagnostics for Electric Machines, Power Electronics and Drives, Atlanta, GA 24-26 August 2003
- Hawaii*
79. Honolulu - 2002 International Joint Conference on Neural Networks, 2002 IEEE World Congress on Computational Intelligence, May 12-17, 2002, Honolulu
80. Kauai - 2012 International Waveform Diversity & Design Conference
- Indiana*
81. Terre Haute - Rose-Hulman Institute of Technology Outstanding Young Alumni Award Ceremony
- Illinois*
82. Chicago - Faculty leadership conference, Campus Crusade for Christ, June 1997.
- Iowa*
83. Perry - "Added Information in Targeted Evolutionary Search", Perry Conference, Hotel Pattee, Perry, Iowa, April 17-20, 2006.
- Louisiana*
84. New Orleans - 113th Annual Meeting of the American Mathematical Society (AMS), New Orleans, January 5-7, 2007.
- Maryland*
85. Annapolis - "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
86. Baltimore - International Conference on Neural Networks, Baltimore, June 1992.
87. College Park - 2012 ONR University/Laboratory Initiative Program Review, University of Maryland University, College Park, June 5-7, 2012
88. Hyattsville - 2012 University Laboratory Initiative Program Review, 5-7 June
- Massachusetts*
89. Boston - 1995 Design Engineering Technical Conferences, American Society of Mechanical Engineers (ASME), Boston Massachusetts, September 17-20, 1995.

90. Cambridge - 1989 IEEE International Conference on Systems, Man and Cybernetics, (Hyatt Regancy, Cambridge, Massachusetts, 14-17 Nov. 1989),  
*Michigan*
91. Mackinac Island - Limits of Passive Imaging Workshop, Mackinac Island, MI, pp.45-55, May 24-26, 1983  
*Minnesota*
92. Minneapolis - IEEE Power Engineering Systems 1990 Summer Meeting, Minneapolis, Minnesota, 15-19 July 1990.  
*Mississippi*
93. Biloxi - Oceans '02 MTS/IEEE, Biloxi, Mississippi  
*Missouri*
94. 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.
95. Rolla - "Time Scale Discrete Fourier Transforms," Guest Lecture, Missouri University of Science and Technology, Rolla, Mo., April 14, 2010.
96. 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*
97. Lincoln - University of Nebraska-Lincoln Math Symposium, December 7, 2007  
*New York*
98. Ithaca, Information & Biology, Cornell, University, Spring 2011
99. New York - IEEE Conference on Computational Intelligence for Financial Engineering & Economics (CIFEr) April 9-11, 1995
100. Rochester - 1977 Optical Society of America Annual Meeting, Rochester, NY  
*North Carolina*
101. Research Triangle Park - IEEE Virtual Reality Annual International Symposium (VRAIS) 1995 Research Triangle Park, NC
102. Indian Trail, North Carolina. 30th Annual National Conference on Christian Apologetics, October 11-12 2013 First Baptist Church Indian Trail.
103. Matthews, North Carolina. 2013 Ratio Christi Symposium, Southern Evangelical Seminary, October 12-13 2013  
*Oklahoma*
104. Winston Ewert, William A. Dembski, Robert J. Marks II, Algorithmic Specified Complexity, in Engineering and Metaphysics, Tulsa, OK, 2012.  
*Oregon*
105. Portland - 1989 IEEE International Symposium on Circuits and Systems, 9-11 May 1989, Portland  
*Pennsylvania*
106. Philadelphia - International Symposium on Circuits and Systems, pp.370-376, Philadelphia, May 1987.  
*Rhode Island*
107. Newport - ONR University/Laboratory Initiative in Undersea Weapons Technology at the Naval Undersea Warfare Center (NUWC), Newport, RI (June 2-4, 2009).  
*South Carolina*
108. Clemson - NSF Workshop on Applications of Artificial Neural Network Methodology in Power Systems Engineering, April 8-10, 1990, Clemson University  
*Tennessee*
109. Nashville - IEEE/IAFE [International Association of Financial Engineers] Computational Intelligence in Financial Engineering, (CIFEr). Nashville, TN, March 30-April 2, 2009,  
*Texas*
110. 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.

111. Austin - "Science & Christianity: Separate but Equal?"  
Covenant Presbyterian Church, Austin, TX (August 16, 2009)
112. El Paso - 2014 Expert Witness, Ysleta del Sur Pueblo (Federal Court)
113. 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.)
114. Dallas - 1990 IEEE Ap-S International Symposium and URSI Radio Science Meeting, 7-11 May, 1990, Dallas, Texas.
115. El Paso - 2014 U.S. District Court, Western District of Texas (Expert Witness)
116. Lubbock - 1977 Midwest Symposium on Circuits and Systems, Texas Tech University, Lubbock, August 1977.
117. Houston - INTERNATIONAL CONFERENCE ON NEURAL NETWORKS (ICNN'97) Westin Galleria Hotel, Houston, Texas, USA, June 9-12, 1997, "Neural Networks: Reduction to Practice"
118. Leakey, "2013 Commuio: A Retreat for Faculty (Baylor University)" Laity Lodge, May 20-24, 2013
119. Plano - "God Ever Geometrizes: Apologetics in Mathematics," Probe Ministries, Plano, Texas, (June 28, 2010).
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