

2014 IEEE CIS Awards

Neural Networks Pioneer Award

Yann LeCun, New York University, USA

For significant contributions to convolutional neural networks and their application to pattern recognition and computer vision.



Yann LeCun is Director of AI Research at Facebook and Silver Professor of Computer Science, Neural Science, and Electrical Engineer-

ing at New York University. His primary affiliation is with NYU's Courant Institute of Mathematical Sciences, with positions with the Center for Neural Science, and the NYU-Poly Electrical and Computer Engineering Department. At the beginning of 2013, he became the Founding Director of NYU's Center for Data Science. In late 2013, he took the position of director of Facebook's new AI Research organization, while maintaining his position at NYU on a part-time basis.

He received the Electrical Engineer Diploma from Ecole Supérieure d'Ingénieurs en Electrotechnique et Electronique (ESIEE), Paris in 1983, during which he focused on VLSI design and automatic control. In 1987, he received a PhD in Computer Science from Université Pierre et Marie Curie

(Paris), for which he received the prize of the Fyssen Foundation. His thesis work focused on learning algorithms for neural networks and introduced early forms of the back-propagation algorithm, with application to DNA sequence analysis, medical diagnosis, and image recognition. After a postdoc at the University of Toronto with Prof. Geoffrey Hinton, he joined AT&T Bell Laboratories in Holmdel, NJ in 1988 as a Member of Technical Staff. While at Bell Labs in the late 1980s he developed a number of techniques for building, training, and regularizing neural networks. In particular, he proposed the convolutional neural network model for recognizing images, one of the first "deep learning" systems that could simultaneously learn to extract features and classify. With his AT&T colleagues in the early 1990s, he built handwriting recognition systems that combined convolutional nets and graphical models trained discriminatively. These systems were embedded in NCR's high-speed check scanning machines and ATMs, which were deployed by several banks to read checks automatically. By the late 1990s, these systems were reading between 10% and 20% of all the checks in the United States.

After the spin-off of Lucent Technologies from AT&T in 1996, and the partition of the research organization between the two companies, he joined AT&T Labs-Research as head of the Image Processing Research Department. His department included such

machine learning luminaries as Drs. Yoshua Bengio, Léon Bottou, Patrick Haffner, Patrice Simard and Vladimir Vapnik, with projects ranging from statistical learning theory to stochastic optimization, kernel machines and pattern recognition applications. His own research focused on the DjVu system, a technology for compressing, storing, and distributing scanned documents and high-resolution photos over the Internet. DjVu yields compression ratios sometimes 10 times higher than conventional image compression methods, and is used by hundreds of websites and millions of users to access scanned content.

Dr. LeCun left AT&T in 2002 for a brief tenure as Fellow of the NEC Research Institute in Princeton, NJ (now NEC Labs). He joined NYU as a Professor in 2003. In 2013, he became the founding director of NYU's Center for Data Science, a research and education organization focused on the science, methods, and tools for the automatic extraction of knowledge from data. He is the lead faculty for NYU's participation in the Data Science Environments initiative, a collaborative project between NYU, the University of Washington, and the University of California, Berkeley funded by the Gordon and Betty Moore Foundation and the Alfred P. Sloan Foundation. In December 2013, he joined Facebook as Director of AI Research, while maintaining his position at NYU on a part-time basis. The research organization he

directs at Facebook is spread across facilities in New York City, NY, Menlo Park, CA, and London, UK and focuses on bringing about major advances in Artificial Intelligence. His current interests include supervised and unsupervised methods for machine learning, computer perception, mobile robotics, computational neuroscience, and the application of machine learning, statistics and applied mathematics to the natural and social sciences. He has published 180 technical papers and book chapters on these topics as well as on neural networks, handwriting recognition, image processing and compression, and VLSI design.

His recent work on deep learning, particularly the latest incarnation of the convolutional net model, has become very popular over the last few years, and has been deployed in products and services by companies such as Microsoft, NEC, Google, IBM, Baidu and others. Applications range from document recognition, to image and video tagging, filtering, and indexing, to human-computer interaction, speech recognition, and time-series prediction.

Dr. LeCun has been on the editorial board of *IEEE PAMI*, *IEEE Trans. Neural Networks*, and *IJCV*. He was program chair of the IEEE Conference on Computer Vision and Pattern Recognition (CVPR) in 2006, general chair of the Learning Workshop from 1997 to 2012, and chair of the International Conference on Learning Representations (ICLR) 2013 and 2014. He is on the steering committee of the Courant Institute of Mathematical Sciences, the science advisory board of Institute for Pure and Applied Mathematics, and is the science advisory board chair of the Neural Computation and Adaptive Perception program of the Canadian Institute for Advanced Research. He is co-founder and advisor of a number of technology startups in the areas of data science, music technology, image analysis, and biometrics.

Neural Networks Pioneer Award

Jun Wang, Chinese University of Hong Kong, HONG KONG

For significant contributions to neurodynamic optimization and its engineering applications.



Jun Wang is a Professor and the Director of the Computational Intelligence Laboratory in the Department of Mechanical and Automation Engineering at the Chinese University of Hong Kong. Prior to this position, he held various academic positions at Dalian University of Technology, Case Western Reserve University, and University of North Dakota. He also held various short-term visiting positions at USAF Armstrong Laboratory (1995), RIKEN Brain Science Institute (2001), Chinese Academy of Sciences (2002), Huazhong University of Science and Technology (2006–2007), and Shanghai Jiao Tong University (2008–2011) as a Changjiang Chair Professor. Since 2011, he is a National Thousand-Talent Chair Professor at Dalian University of Technology on a part-time basis. He received a B.S. degree in electrical engineering and an M.S. degree in systems engineering from Dalian University of Technology, Dalian, China. He received his Ph.D. degree in systems engineering from Case Western Reserve University, Cleveland, Ohio, USA. His current research interests include neural networks and their applications. Leading his research team, he developed many neurodynamic optimization models based on several design principles and theoretically analyzed their properties. He also applied neurodynamic optimization in diversified areas such as control, robotics, and data processing and storage. The outcomes of his research resulted in about 170 journal papers (100 in various IEEE journals), 14 book chapters, 11 edited books, and numerous conference papers in these areas. Besides being a productive researcher, Prof. Wang is also active in his professional services. He has been an Associate Editor of the *IEEE Transactions on Cybernetics* and its predecessor since 2013 and a member of the editorial board or editorial advisory

board of *Neural Networks* since 2011 and *International Journal of Neural Systems* since 2006. He also served as an Associate Editor of the *IEEE Transactions on Neural Networks* (1999–2009) and *IEEE Transactions on Systems, Man, and Cybernetics—Part C* (2002–2005), as a guest editor of special issues of *European Journal of Operational Research* (1996), *International Journal of Neural Systems* (2007), *Neurocomputing* (2008), and *International Journal of Fuzzy Systems* (2010, 2011). He was an organizer of several international conferences such as the General Chair of the 13th International Conference on Neural Information Processing (2006) and the 2008 IEEE World Congress on Computational Intelligence. He was an IEEE Computational Intelligence Society Distinguished Lecturer (2010–2012) and served in many standing/technical committees such as the President of Asia Pacific Neural Network Assembly (APNNA), IEEE Fellow Committee and IEEE Computational Intelligence Society Fellow and Awards Committees, and currently is on the Board of Governors of the IEEE Systems, Man and Cybernetics Society. He is an IEEE Fellow, IAPR Fellow, and a recipient of an *IEEE Transactions on Neural Networks* Outstanding Paper Award and Outstanding Achievement Award from Asia Pacific Neural Network Assembly in 2011, among other distinctions.

Fuzzy Systems Pioneer Award

Masaharu Mizumoto, Osaka Electro-Communication University, and Fuzzy Logic Systems Institute, JAPAN

For significant contributions to the foundations of fuzzy set theory.



Dr. Mizumoto received B.Eng., M.Eng. and Dr.Eng. degrees in Electrical Engineering from Osaka University in 1966, 1968 and 1971, respectively. Also he studied as an Alexander von Humboldt Foundation Fellow

under Prof. H.-J. Zimmermann at Technical University of Aachen, Germany from 1980 to 1981. He is a professor of Dept. of Engineering Informatics, Osaka Electro-Communication University since 1978, and now appointed as a special researcher at Fuzzy Logic Systems Institute from 2013.

His researches on fuzzy theory started in 1968 and he received his doctoral degree in 1971 with the thesis entitled of “Fuzzy Automata and Fuzzy Grammars”. He has performed his pioneering research in fuzzy sets and their important characteristics, properties of fuzzy numbers, characteristics of type 2 fuzzy sets, various kinds of fuzzy reasoning methods, and fuzzy control. His pioneering research, enthusiastic reviews and educational works to spread the new concept of fuzzy theory and its applications, contributed significantly for the fuzzy research in Japan and led to successful industrial applications of fuzzy systems in Japan. In fact, he is the first researcher introducing fuzzy theory to Japanese researchers. From 1970 to 1973, he published 25 reviews in serial form titled “Fuzzy Mathematics and its Applications” in the popular science and technology magazine “Mathematical Sciences” by Science-sha Co. Ltd. Also, in China, his reviews were translated into Chinese twice and it is acknowledged that his works contributed significantly to the research of fuzzy theory in China after the Great Cultural Revolution. Meanwhile, he held the first Sino-Japanese international conference of fuzzy theory named “Sino-Japan Joint Meeting on Fuzzy Sets and Systems” (Oct. 15–18, 1990, Beijing, China) with Prof. Liu Xi-hui. He has been also an Adviser of Lab. of Automatic Control at Shanghai Jiao Tong University since 1992 and a visiting professor of Dalian Maritime University since 1994.

He has been studying enthusiastically characteristics of fuzzy reasoning and proposing various fuzzy reasoning methods. Especially, he proposed product-sum-gravity method, fuzzy singleton type reasoning method, additive type fuzzy reasoning method, weighted TS

reasoning method, and fuzzy reasoning method with compatibility function. The fuzzy controller based on the proposed fuzzy singleton type reasoning method was taken to the industrial market by Yamamoto Electronics Co. Ltd. and has received good evaluation from customers. Furthermore, he performed many lectures and technical guidance of fuzzy reasoning and fuzzy control to research engineers in many respectable technological leading companies such as SANYO Electric Ltd., SHARP Corp., CKD Corp., HITACHI, Ltd., TAKUMA Co. Ltd., HITACHI Zosen Corp., NORITSU Corp., DAIKIN INDUSTRIES Ltd., SCSK Corp., KUBOTA Corp., KANEBO Ltd., and KAJIMA Corp., from 1987 to 1995. His great efforts established an indispensable role in epoch-making fuzzy applications called “Fuzzy Boom” in Japan.

Dr. Mizumoto contributed as an editor to various international journals including *Int. J. of Fuzzy Sets and Systems*, *Bulletin for Studies and Exchanges on Fuzziness and its Applications*, *Int. J. of Fuzzy Information and Engineering*, *J. of Fuzzy Mathematics*, *J. of Biomedical Fuzzy Systems Association*, *Biomedical Soft Computing and Human Sciences*, and *Int. J. of Innovative Computing, Information & Control*. Especially, he served as the first editor-in-chief for the *Journal of Fuzzy Systems Society in Japan (SOFT)* from 1989 to 1997.

He is a founding member and helped launch the Fuzzy Systems Society in Japan (SOFT) and was selected as the President of SOFT from 1997 to 1999 and as the President of Biomedical Fuzzy Systems Association (BMFSA) from 1997 to 1999. Also he contributed as a vice president of International Fuzzy Systems Association (IFSA) from 1989 to 1991. He served also as a founding advisor for LIFE (Laboratory for International Fuzzy Engineering Research). He is a recipient of the SOFT Achievement Award in 2005 and Life Fellow Awards of IFSA in 2001, SOFT in 2003, and BMFSA in 2000. He also received Distinguished Service Awards of BMFSA in 2000 and 2009, respectively.

Evolutionary Computation Pioneer Award

George Burgin, Natural Selection, Inc., USA

For pioneering applications of evolutionary programming in aerospace engineering.



George H. Burgin received his PhD in electrical engineering from the Swiss Federal Institute of Technology in 1960.

For his PhD, he studied the dynamics of railway cars, performing all computations on analog computers. Burgin immigrated in 1962 to the US, where he worked at General Dynamics-Convair, developing computer algorithms for the solution of flight dynamics problems. At Convair, he met three coworkers whose work is often considered as the birth of computational intelligence: Dr. Lawrence Fogel, Dr. Alvin Owens and Dr. Jack Walsh. Their book “Artificial Intelligence Through Simulated Evolution” became the basis of evolutionary programming. In 1965, Dr. Fogel started the company “Decision Science, Inc.” (DSI) and Burgin joined this young company the same year. His first assignment was to proofread the galley proofs of the above-mentioned book.

As a colleague of the late Dr. Lawrence J. Fogel, the inventor of evolutionary programming, Dr. Burgin made pioneering achievements at Decision Science, Inc. in the area of evolutionary algorithms for competitive gaming. In his work from 1969–1974, he studied two-player non-zero-sum games, often involving pursuit-evasion models of combat aircraft using finite state machines. This work was later extended under Burgin’s leadership to fully operational air combat simulation software that ran on the NASA Langley Research Center simulator. This simulator used two cockpits, two projection systems, and associated image generators. Burgin’s software, called the Adaptive Maneuvering Logic, could invent

maneuvers that were not preconceived by human pilots. Navy pilots praised its performance and its use was extended at the Naval Air Systems Command, the Naval Weapons Center, and the Air Force Human Resources Laboratory from 1973–1981. Burgin also conducted some of the first research in evolutionary game on coordination, trust, bargaining, and prisoner's dilemma games in the late 1960s. Burgin also applied evolutionary programming in a novel application of system identification of the then experimental X-15 aircraft. The aircraft, which was operated by the U.S. Air Force and NASA, was capable of flying out of the Earth's atmosphere and return to landing. Burgin's evolutionary algorithm modeled the roll rate, yaw rate, and other aircraft dynamics and provided a reliable model of the X-15 for closed-loop dynamics. Results were published in 1971. George Burgin continued his engineering career at Titan Systems after it acquired Decision Science, Inc. and later rejoined working with Larry Fogel at Natural Selection, Inc. on applications of evolutionary optimization.

Burgin's real pioneering accomplishments lie in his basic teachings (dating back to the 1960s and 70s) that digital algorithms are far superior to analog computer simulations (and real life implementations) of control systems, something which at that time was controversial.

After the acquisition of DSI by the Titan Corporation in 1982, Burgin's interests shifted gradually to applications of numerical algorithms and computational intelligence methods in communication systems. Burgin contributed significantly to the solution of communication problems, some of this work culminated in the US Patent "Method and Apparatus for Determination of Predistortion Parameters for a Quadrature Modulator", granted in 2001. The company rewarded Burgin with Titan's "Most Valuable Performer" award in 1985, 1995 and 1998 for his contributions to the design of telecommunication systems with improved capacity, greater speed and higher reliability

while at the same time reducing the cost of these systems.

Burgin was on the editorial board of the journal "Simulation". He himself contributed numerous papers to that journal, some of which were subsequently published in McGraw Hill's book: "Simulation: The modeling of systems and ideas with computers".

Throughout his career, Burgin enjoyed teaching operations research and management science. He was one of the original instructors in the UCSD "Executive Program for Scientists and Engineers (EPSE)" in 1982. This program celebrated its 30th anniversary this year.

Dr. Burgin is "Duly Registered as a Professional Engineer in control system engineering in the state of California" and he is a Life Senior Member of the IEEE.

Outstanding Early Career Award

Haibo He, University of Rhode Island, USA

For contributions to adaptive learning and control, intelligent systems, and smart grid.



directs the Computational Intelligence and Self-Adaptive Systems (CISA) Laboratory and actively pursues research in the field of computational intelligence and wide applications to learning and control, optimization, smart grid, cyber-physical system, cyber security, and smart grid.

Dr. He has published 2 research books including "Self-Adaptive Systems for Machine Intelligence" (Wiley, 2011) and "Imbalanced Learning: Foundations, Algorithms, and Applications" (Edited, Wiley-IEEE, 2013), edited 6 conference proceedings (Springer), and authored/co-authored over 120 peer-reviewed journal and conference papers. Many of his publications have created broader impacts in the society, including Cover Page High-

lighted paper in the *IEEE Transactions on Information Forensics and Security*, and highly cited papers in the *IEEE Transactions on Knowledge and Data Engineering*, *IEEE Transactions on Neural Networks*, and *IEEE Transactions on Power Delivery*. His research has been covered and interviewed by national and international medias such as *IEEE Smart Grid Newsletter*, Providence Business News, University of Rhode Island (URI) Big Thinkers, URI Innovation, among others.

Dr. He has served regularly on the Organizing Committees and Program Committees of the international conferences in his field, ranging from the Program Chair for the International Symposium on Neural Networks (ISNN 2009), Industry Liaison (U.S. & Canada) Chair for the IJCNN 2011, Tutorial Chair of WCCI-IJCNN 2012, to the most recently as the Program Co-Chair of the IEEE WCCI-IJCNN 2014 and General Chair of the IEEE Symposium Series on Computer Intelligence (IEEE SSCI 2014). He also served at various capacities to the society ranging from the past IEEE CIS E-letter Manger, IEEE CIS Webmaster, to the current Chair of the IEEE CIS Neural Network Technical Committee (NNTC), Vice-Chair of the IEEE CIS Smart Grid Task Force, member of the IEEE-USA Energy Policy Committee, among others.

Dr. He has delivered numerous Keynotes and Invited Talks at various universities and organizations around the world. He served as the Co Founding-Editor-in-Chief of the *Journal of Intelligent Learning Systems and Applications*, a Guest Editor for more than 10 international journals, and currently serves on the Editorial Board for numerous journals, including an Associate Editor of the *IEEE Transactions on Neural Networks and Learning Systems* and *IEEE Transactions on Smart Grid*.

He was a recipient of the K. C. Wong Research Award, Chinese Academy of Sciences (2012), National Science Foundation (NSF) CAREER Award (2011), Providence Business News (PBN) "Rising Star Innovator" Award (2011), and Best Master Thesis Award of Hubei Province, China (2002).

Outstanding Organization Award

Honda Research Institute Europe,
GERMANY

For contributions to the field of computational intelligence in science and innovation.



The Honda Research Institute Europe (HRI-EU) has been founded in 2003 with the mission to conduct fundamental and applied research in intelligent systems.

Together with sister institutes in Japan and in the United States the aim was to explore the future of computer science.

Almost ten years later, the importance of information and communication technology in the automotive industry is growing rapidly.

At HRI ideas are the products; ideas that lead to innovations. Science without innovation neglects opportunities and innovation without science remains shallow and superficial. Innovation Through Science is part of the HRI philosophy and enables HRI to remain focused on its role in Honda and in the society at large.

Research in Intelligent Systems is at the center of the Honda Research Institute Europe. Intelligent systems will shape the future in a variety of forms, ranging from accident-free mobility to cognitive robotics and from smart process management to the efficient use of resources. Intelligence is necessary to handle complexity in products and in processes.

Currently, the researchers at HRI-EU are organized in four competence groups with the topics: “Cognitive Systems and Representation”, “System Architecture and Embodiment”, “Sensory Processing and Learning” and “Complex System Optimization and Analysis”. Among others, the institute has contributed to neural computation, visual scene analysis, humanoid robotics, artificial life, systems engineering, evolutionary optimization and learning, natural computation and speech and signal processing. In these areas,

researchers at HRI-EU have published more than 700 scientific papers with more than 7300 citations. For additional information, see <http://www.honda-ri.de>.

HRI-EU has filed 118 patent families in eight countries all focusing on using new insights from computational intelligence for improving technical processes.

The Honda Research Institute Europe has been engaged in academic teaching and in the education of students in particular PhD students since its foundation. PhD projects are carried out as collaboration projects with Universities on research subjects of mutual interest. The students that are supported by HRI-EU are part of the HRI European Graduate Network, which fosters communication between “HRI” students during their time at HRI-EU and beyond.

Outstanding Ph.D. Dissertation Award



Jing Liang (J.J. Liang) for her thesis entitled “Novel Particle Swarm Optimizers with Hybrid, Dynamic and Adaptive Neighborhood Structures” presented for the degree of Doctor of Philosophy in the Nanyang Technological University, Singapore, March 2009.

Supervisor: P.N. Suganthan, Nanyang Technological University, SINGAPORE

Abstract—Many real world problems can be formulated as optimization problems with various parameters to be optimized. Some problems only have one objective to be optimized, some may have multiple objectives to be optimized at the same time and some need to be optimized subjecting to one or more constraints. Thus numerous optimization algorithms have been proposed to solve these problems. Particle Swarm Optimizer (PSO) is a relatively new optimization algorithm which has shown its strength in the optimization

world. This thesis presents two PSO variants, Comprehensive Learning Particle Swarm Optimizer (CLPSO) and Dynamic Multi-Swarm Particle Swarm Optimizer (DMS-PSO), which have good global search ability and can solve complex multi-modal problems for single objective optimization. The latter one is extended to solve constrained optimization and multi-objective optimization problems successfully with a novel constraint-handling mechanism and a novel updating criterion respectively. Subsequently, DMS-PSO is applied to determine the Bragg wavelengths of the sensors in an FBG sensor network and a tree search structure is designed to improve the accuracy and reduce the computation cost.

Outstanding Chapter Award

IEEE CIS UKRI Chapter, UK

For promoting and supporting the dissemination of computational intelligence within the UKRI Section.

IEEE Transactions on Neural Networks Outstanding Paper Award

Long Cheng, Zeng-Guang Hou, Yingzi Lin, Min Tan, Wenjun Chris Zhang, Fang-Xiang Wu for their paper entitled “Recurrent Neural Network for Non-Smooth Convex Optimization Problems with Application to the Identification of Genetic Regulatory Networks”, vol. 22, no. 5, pp. 714–726, May 2011.

Digital Object Identifier: 10.1109/TNN.2011.2109735

Abstract—A recurrent neural network is proposed for solving the non-smooth convex optimization problem with the convex inequality and linear equality constraints. Since the objective function and inequality constraints may not be smooth, the Clarke’s generalized gradients of the objective function and inequality constraints are employed to describe the dynamics of the proposed neural network. It is proved that the equilibrium point set of the proposed neural network is equivalent to the optimal solution of the original optimization problem by using the Lagrangian saddle-point theorem.

Under weak conditions, the proposed neural network is proved to be stable, and the state of the neural network is convergent to one of its equilibrium points. Compared with the existing neural network models for non-smooth optimization problems, the proposed neural network can deal with a larger class of constraints and is not based on the penalty method. Finally, the proposed neural network is used to solve the identification problem of genetic regulatory networks, which can be transformed into a non-smooth convex optimization problem. The simulation results show the satisfactory identification accuracy, which demonstrates the effectiveness and efficiency of the proposed approach.

IEEE Transactions on Fuzzy Systems Outstanding Paper Award

Dongrui Wu and Jerry M. Mendel for their paper entitled “On the Continuity of Type-1 and Interval Type-2 Fuzzy Logic Systems”, vol. 19, no. 1, pp. 179–192, 2011.

Digital Object Identifier: 10.1109/TFUZZ.2010.2091962

Abstract—This paper studies the continuity of the input-output mappings of fuzzy logic systems (FLSs), including both type-1 (T1) and interval type-2 (IT2) FLSs. We show that a T1 FLS being an universal approximator is equivalent to saying that a T1 FLS has a continuous input-output mapping. We also derive the condition under which a T1 FLS is discontinuous. For IT2 FLSs,

we consider six type-reduction and defuzzification methods (the Karnik-Mendel method, the uncertainty bound method, the Wu-Tan method, the Nie-Tan method, the Du-Ying method, and the Begian-Melek-Mendel method) and derive the conditions under which continuous and discontinuous input-output mappings can be obtained. Guidelines for designing continuous IT2 FLSs are also given. This paper is to date the most comprehensive study on the continuity of FLSs. Our results will be very useful in the selection of the parameters of the membership functions to achieve a desired continuity (e.g., for most traditional modeling and control applications) or discontinuity (e.g., for hybrid and switched systems modeling and control).

Yaochu Jin
University of Surrey, UK

IEEE CIS VP-Technical Activities Vision Statement

It is my great pleasure to serve as Vice President for Technical Activities of the IEEE Computational Intelligence Society (IEEE CIS). It is a great honor to me, and a great responsibility as well.

I made my first experience with fuzzy systems during my MSc study, which were used to deal with uncertainties in control systems. Like many other researchers in the early 1990s, I was quickly attracted by the research on neurofuzzy systems thanks to their ability to learn the parameters in the fuzzy rules and fuzzy membership functions based on data. Due to limited and delayed access to international journals and conference proceedings at that time in China, I was not aware of the research on evolutionary algorithms before I accidentally came across a

genetic algorithm described in a book on robot trajectory planning in 1993. I was immediately fascinated by the idea of using a genetic algorithm to optimize both the structure and parameters of neurofuzzy systems. My first paper on neurofuzzy systems was published in 1992 that employed a neural network as the membership functions of fuzzy systems, and my first paper on genetic fuzzy systems appeared in 1995, both in Chinese. Even today, I am still very proud of being able to publish two papers in the IEEE Transactions in the mid-1990s during my PhD study at Zhejiang University, one on neurofuzzy systems and the other on genetic fuzzy systems, both for dynamic control of robot manipulators.

The terminology of *Computational Intelligence* (CI) came to my attention sometime in 1995 when I read the Call for Papers of the First World Congress

on Computational Intelligence (WCCI) held in June 1994, Orlando, Florida, USA, published in a journal in 1993. In 1998, I was so lucky to be able to attend the second WCCI held in May 1998 in Anchorage, Alaska, during which I became a member of IEEE. Since then, I have been increasingly involved in activities of the IEEE. In 2004, I established a new Task Force on “Evolutionary Computation in Dynamic and Uncertain Environments” within the Evolutionary Computation Technical Committee (ECTC). I was appointed by Prof. Gary Yen, the founding Editor-in-Chief of the IEEE Computational Intelligence Magazine to be an Associate Editor of the new journal in 2006. I was invited to be a member of both the ECTC and the Emerging Technology Technical Committee (ETTC) in 2007, and became Chair of the Continuing Education