IEEE Fellows—Class of 2007

Robert J. Marks
Baylor University, USA

Zeungnam Bien
Korea Advanced Institute of Science and Technology, KOREA

for contributions to development of assistive robots and human-robot interaction systems

Z. Zenn Bien received his B.S. degree in electronics engineering from Seoul National University, Seoul, Korea, in 1969 and the M.S. and Ph.D. degrees in electrical engineering from the University of Iowa, Iowa City, Iowa, U.S.A., in 1972 and 1975, respectively. During 1976–1977 academic years, he taught as assistant professor at the Department of Electrical Engineering, University of Iowa. Then Dr. Bien joined Korea Advanced Institute of Science and Technology, summer, 1977, and is now Professor of Department of Electrical Engineering & Computer Science, KAIST. He was a visiting faculty at the University of Iowa during his 1981–1982 sabbatical years and a visiting researcher at CASE Center of Syracuse University, New York, and a visiting professor at Department of Control Engineering, Tokyo Institute of Technology during 1987–1988. He had been in INT, France as a visiting professor from Sept. 1, 2006 till Feb. 28, 2007 and, has been now staying in TDU, Japan for his sabbatical year.

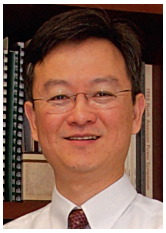
Prof. Bien has been serving for a number of professional societies, domestic and overseas. He was the founding president of the Korea Fuzzy Logic and Intelligent Systems Society during 1990–1995 and also, the general chairs for IFSA World Congress 1993,

and for FUZZ-IEEE99, respectively. Dr. Bien served as the President of the Institute of Electronics Engineers of Korea (IEEK) for the year 2001. He worked as a vice president for International Fuzzy Systems Association (IFSA) during 1997–2001, and then as the president of IFSA during 2003–2005. Since 2006, he is the Chairperson for IEEE CIS Korea Chapter. For the last 3 years, he has served as the chairman of Engineering Division of Korea Academy of Science and Technology and the president of Korea Robotics Society and the president of Intelligent Robot Cluster in Korea. At KAIST, Prof. Bien is a Chaired Professor (with endowment of Korea Electric Power Corporation). He served as Dean of Academic Affairs and later Dean of College of Engineering and has been the Director of Human-friendly Welfare Robot System Engineering Research Center since 1999. He has served as an editorial advisory board member for International Journal of Fuzzy Systems (IJFS), an editorial board member for IEEE Transactions on Fuzzy Systems, and an associate editor for Fuzzy Optimization and Decision Making (FODM). Prof. Bien is currently a Co-Editor-in-chief of International Journal of Assistive Robotics and Mechatronics. Prof. Bien has become an IEEE Fellow and also an IFSA FUZZY Fellow. His current research interests include Intelligent Control Theory and Learning Methodologies with particular attention to Fuzzy Logic-based Control, Service Robotics and Rehabilitation Systems. Prof. Bien has published more than 380 international journal/proceedings papers, and has authored/coauthored 5 technical books. He has obtained 17 patents registered and 10 pending.

Mo-Yuen Chow

North Carolina State University, USA

for contributions to diagnostics and control in mechatronics



Mo-Yuen Chow earned his degree in Electrical and Computer Engineering from the University of Wisconsin-Madison (B.S., 1982); and Cornell University (M. Eng., 1983; Ph.D., 1987). Dr. Chow joined the Department of Electrical and Computer Engineering at North Carolina State University as an Assistant Professor in 1997, became an Associate Professor in 1993, and a Professor since 1999. He worked in U.S. Army, TACOM TARDEC Division as a Senior Research Scientist during the summer of 2003. He spent his sabbatical leave as a Visiting Scientist in 1995 in ABB Automated Distribution Division.

Dr. Chow's research focuses on diagnosis, control, and computational intelligence. He has been applying his research to areas including mechatronics, motors, power distribution systems, network-based distributed control systems, and robotics. He has established the *Advanced Diagnosis, Automation and Control* Laboratory at NC State University. He has published one book, five book chapters, and over one hundred journal and conference articles. Dr. Chow is an IEEE Fellow, an Associate Editor of the *IEEE Transactions on Industrial Electronics*, and the Vice President for Publication of IEEE Industrial Electronics Society. He was the General Chair of IEEE-IECON05. Dr. Chow served as a guest editor for the *IEEE Transactions on Industrial Electronics* special sections on *Distributed Network-Based Control Systems and Applications* (2003), on *Motor Fault Detection and Diagnosis* (2000), and on *Application of Intelligent Systems to Industrial Electronics* (1993). He has received the IEEE Eastern North Carolina Section Outstanding Engineering Educator Award, and the IEEE Region-3 Joseph M. Biedenbach Outstanding Engineering Educator Award.

Grace Clark

Lawrence Livermore National Laboratory, USA

for contributions in block adaptive filtering

Grace A. Clark earned the BSEE and MSEE degrees from the Purdue University Electrical Engineering Honors Program, West Lafayette, IN, in 1972 and 1974, respectively; and the PhD ECE degree in electrical and computer engineering from the University of California Santa Barbara in 1981. Her research activities are in the theory and application of signal/image processing, estimation/detection, pattern recognition and control. Application areas include acoustics, electromagnetics and particle physics. She served as a teaching assistant at Purdue and worked in the Mariner Telecommunications Group of the Caltech Jet Propulsion Laboratory. Since 1974, Grace has been with the University of California Lawrence Livermore National Laboratory (LLNL), where she is currently a research engineer in the National Security Engineering Division. She has served on the technical/thesis committees of three MS and two PhD students at the University of California Davis. She has contributed more than 150 technical publications and serves as a reviewer for a variety of technical journals. She is a Member of the Acoustical Society of America, the Society of Exploration Geophysicists (SEG), Sigma Xi and Eta Kappa Nu. She is a Fellow of the Institute of Electrical and Electronics Engineers (IEEE).

Loi Lei Lai

City University London, UK

for contributions to development of computational intelligence techniques to power system applications

Professor Lai graduated from the University of Aston in Birmingham, UK with a B.Sc. (First Class Honors, the only one) and a Ph.D. degree. He was awarded a

higher doctorate, D.Sc. by City University London. He is Chair in Electrical Engineering and an Honorary Graduate at City University. Professor Lai is also a Visiting Professor at Southeast University Nanjing and Guest Professor at Fudan University, Shanghai, China. In 1998, Professor Lai authored a Wiley book entitled 'Intelligent System Applications in Power Engineering—Evolutionary Programming and Neural Networks'. In 2001, he edited a Wiley book entitled 'Power System Restructuring and Deregulation —Trading, Performance and Information Technology'. He was awarded an IEEE Third Millennium Medal and IEEE Power Engineering Society (IEEE/ PES), United Kingdom and Republic of Ireland (UKRI) Chapter Outstanding Engineer Award in 2000. In 1995, he received a high quality paper prize from the International Association of Desalination, USA and in 2006, he was awarded a Prize Paper by the IEEE/PES Development and Power Generation Committee. He is also an IET Fellow.

Professor Lai was a member of the Policy Committee of Genetic and Evolutionary Computation Conference (GECCO-2000) of American Association for Artificial Intelligence (AAAI); a Student Recruitment Officer of the IEEE UKRI Section Executive Committee and is a member of the Intelligent Systems Subcommittee, IEEE/PES. In 2005, he was a Vice Program Chair of the IEEE International Conference on Machine Learning and Cybernetics. Since 2005, Professor Lai was invited as a judge for the Power/Energy Category in the IET Innovation in Engineering Awards. He is a Member of the Executive Team of the Power Trading and Control Technical and Professional Network, IET; an Editor of the IET Generation, Distribution and Generation; and an International Advisor, Hong Kong Institution of Engineers Transactions. He has been invited to deliver Keynote address and Plenary speech to several major international conferences sponsored by the IET and IEEE. His research interests are in computational intelligence applications in power engineering and electricity deregulation.

Alan Murray

University of Edinburgh, UK

for contributions to neural and neuromorphic very large scale integrated implementations, algorithms and applications

Alan Murray was born in 1953 in Edinburgh, where he also went to school. In 1975 he received a BSc Hons in Physics at the University of Edinburgh, and a Ph.D. in Solid State Physics in 1978. He worked for 3 years as a Research Physicist (2 in Canada), and for 3 years as an Integrated Circuit Design Engineer. In 1984 he was appointed a lecturer in Electrical Engineering at Edinburgh University, became a Reader in 1991 and Professor of Neural Electronics in 1994. He is interested in all aspects of neural computation and hardware issues and applications have been his primary research interest since 1985. In 1986, he developed the "pulse stream" method for neural integration. His interests have since widened to include all aspects of neural computation, particularly hardware-compatible learning schemes, probabilistic neural computation and neural forms that utilize the temporal- and noisy characteristics of analogue VLSI—as well as applications of hardware neural networks. He is also developing a new interest in the interface between silicon and neurobiology, along with colleagues in Biomedical Sciences and in Glasgow University. Alan Murray has over 200 publications, including an undergraduate textbook and research texts on neural VLSI, applications of neural networks and noise in neural training (with Peter Edwards). He is a Fellow of IEE, Fellow of IEEE, a member of INNS and a Fellow of the Royal Society of Edinburgh.

Hans-Paul Schwefel

University of Dortmund, GERMANY

for contributions to evolutionary computation

Hans-Paul Schwefel, born in December 1940 at Berlin, studied Aero- and Space-Technology at the Technical University of Berlin (TUB). Before and after receiving his engineer diploma in 1965 he worked at the Hermann-Foettinger-Institute of Hydrodynamics, from 1967 to 1970 at the industrial AEG research institute, and from 1971 to 1975 again at the TUB, from where he got his Dr.-Ing. degree in 1975. Coherent during that period at Berlin was the development of a new experimental and later on also numerical optimization method called Evolutionsstrategie. From 1976 to 1985 he acted as senior research fellow at the Research Centre (KFA) Jülich, where he was head of a computer aided planning tools group. Since 1985 until he was pensioned in 2006 he was holder of a Chair for Systems Analysis at the University of Dortmund, Department of Computer Science. From 1990 to 1992 he acted as dean of the faculty, from 1997 to 2004 as spokesman of the collaborative research center on computational intelligence (SFB 531), and from 1998 to 2000 as pro-rector for research and junior scientists at the university. He is member of the editorial boards of the journals Evolutionary Computation (MIT press), IEEE Transactions on Evolutionary Computation, and Natural Computing (Kluwer/Springer), advisory board member of the Springer book series on Natural Computation as well as the World Scientific Publ. Co. book series on Advances in Natural Computation. In 1990 he was co-founder of the international conference series on Parallel Problem Solving from Nature (PPSN), which has been held biennially ever since. E-mail hps@udo.edu, homepage: http://Ls11-www.cs.uni-dortmund.de/people/schwefel/WelcomeE.html.

Kiyohiro Shikano
Nara Institute of Science and Technology, JAPAN

for contributions to speech recognition, dialog systems, voice conversion, and acoustic field realization

Kiyohiro Shikano received the B.S., M.S., and Ph.D. degrees in electrical engineering from Nagoya University in 1970, 1972, and 1980, respectively. He is currently a professor of Nara Institute of Science and Technology (NAIST), where he is directing speech and acoustics laboratory. From 1972 to 1993, he had been working at NTT Laboratories. During 1986–1990, he was the Head of Speech Processing Department at ATR Interpreting Telephony Research Laboratories. During 1984–1986, he was a visiting scientist in Carnegie Mellon University. He received the Yonezawa Prize from IEICE in 1975, the Signal Processing Society 1990 Senior Award from IEEE in 1991, the Technical Development Award from ASJ in 1994, IPSJ Yamashita SIG Research Award in 2000, and Paper Award from the Virtual Reality Society of Japan in 2001, IEICE paper award in 2005 and 2006, and Inose award in 2005. He is a fellow of the Institute of Electrical and Electronics, Engineers (IEEE), the Institute of Electronics, Information and Communication Engineers of Japan (IEICE), and Information Processing Society of Japan, and a member of the Acoustical Society of Japan (ASJ), Japan VR Society, and International Speech Communication Society (ISCA).

Annamária Várkonyi-Kóczy
Budapest University of Technology and Economics, HUNGARY

for contributions to digital signal processing in measurement and control

Annamária R. Várkonyi-Kóczy received her M.Sc. E.E., M.Sc.M.E.-T., and Ph.D. in informatics from the Technical University of Budapest in 1981, 1983, and 1996, respectively. Since 1991 she is with the Department of Measurement and Information