## Editorial

## TNNLS Special Issues and Editorial Board Changes

THIS issue (January 2014) is devoted to the special issue organized by Robi Polikar and Cesare Alippi. It contains 17 papers on learning in nonstationary and evolving environments, accepted after the standard review process from more than 90 submissions. Congratulations to Robi and Cesare for the job well done!

The review of papers submitted to our next special issue, which is on complex- and hypercomplex-valued neural networks, organized by Akira Hirose, Igor Aizenberg, and Danilo P. Mandic, is progressing very well.

I would like to express my sincere gratitude to all special issue organizers for their hard work and contributions and to all authors and reviewers for their effort in submitting papers and reviewing papers. Special issue proposals are always welcome on timely and hot topics related to neural networks and learning systems. We have standardized the submission and review process of special issue proposals in the last year. Please follow the instructions posted on the web at cis.ieee.org/tnnls if you are interested in organizing a special issue.

As in the past few years, some changes have been made to the editorial board of TNNLS. I would like to take this opportunity to thank the following 16 hard-working associate editors whose terms have ended in 2013. They are: Hojjat Adeli, Ivo Bukovsky, Carlotta Domeniconi, Amir Hussain, Hossein Javaherian, Yaochu Jin, Fakhry Karray, Frank L. Lewis, Danilo Mandic, Mike Paulin, V. Sree Hari Rao, Dipti Srinivansan, Draguna Vrabie, Cong Wang, Huaguang Zhang, and Nanning Zheng. I thank them all for their great service to TNNLS. I wish everyone much success in future endeavors.

It is my great pleasure to welcome the following 16 new Associate Editors, whose term officially starts on January 1, 2014. They are listed below in alphabetical order.

Murad Abu-Khalaf, MIT, USA

Aluizio Fausto Ribeiro Araujo, Federal University of Pernambuco, Brazil

Sander Bohte, Centrum Wiskunde & Informatica, The Netherlands

Antonio de Padua Braga, Federal University of Minas Gerais, Brazil

Yiu-Ming Cheung, Hong Kong Baptist University, Hong Kong

Shuiwang Ji, Old Dominion University, USA Preben Kidmose, Aarhus University, Denmark Yew-Soon Ong, Nanyang Technological University, Singapore

Massimo Panella, University of Rome "La Sapienza," Italy Madhusudana Shashanka, United Technologies Research Center, CT, USA

Clive Cheong Took, University of Surrey, U.K. Laurens van der Maaten, Delft University of Technology, The Netherlands

Dianhui Wang, La Trobe University, Australia Zhanshan Wang, Northeastern University, China Qinglai Wei, Chinese Academy of Sciences, China Zhi-Hua Zhou, Nanjing University, China

In addition, the following nine new Associate Editors started their service on June 1, 2013.

Badong Chen, Xi'an Jiaotong University, China Hung-Yuan Chung, National Central University, Taiwan Yun Raymond Fu, Northeastern University, USA Jinling Liang, Southeast University, China Juwei Lu, Center for Imaging Technology Commercialization, Toronto, Canada Manuel Roveri, Politecnico di Milano, Italy Suresh Sundaram, Nanyang Technological University, Singapore

Peter Tino, University of Birmingham, U.K. Yunong Zhang, Sun Yat-sen University, China

All these new AEs are established authorities in their respective fields and have been carefully selected on the basis of their achievements, their geographical diversity, and our needs for expertise on various subject areas of TNNLS. I look forward to working with them to make TNNLS an even better journal.

A more detailed introduction of these associate editors is listed at the end of this editorial.

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**Derong Liu** (S'91–M'94–SM'96–F'05) received the Ph.D. degree in electrical engineering from the University of Notre Dame, Notre Dame, IN, USA, in 1994.

He was a Staff Fellow with the General Motors Research and Development Center, Warren, MI, USA, from 1993 to 1995. He was an Assistant Professor with the Department of Electrical and Computer Engineering, Stevens Institute of Technology, Hoboken, NJ, USA, from 1995 to 1999. He joined the University of Illinois at Chicago, Chicago, IL, USA, in 1999, and became a Full Professor of electrical and computer engineering and of computer science in 2006. He was selected for the 100 Talents Program by the Chinese Academy of Sciences in 2008. He has published 14 books (six research monographs and eight edited volumes).

Dr. Liu is a Distinguished Lecturer of the IEEE Computational Intelligence Society and he is the Editor-in-Chief of the IEEE TRANSACTIONS ON NEURAL NETWORKS AND LEARNING SYSTEMS. He is the General Chair of the 2014 IEEE World Congress on Computational Intelligence, Beijing, China. He received the Faculty Early Career Development CAREER Award

from the National Science Foundation in 1999, the University Scholar Award from University of Illinois from 2006 to 2009, and the Overseas Outstanding Young Scholar Award from the National Natural Science Foundation of China in 2008. He is a fellow of the INNS.

## THE FOLLOWING INTRODUCES THE 25 NEW ASSOCIATE EDITORS



**Murad Abu-Khalaf** received the B.Sc. degree from Boğaziçi University, Istanbul, Turkey, and the M.Sc. and Ph.D. degrees from the University of Texas at Arlington, Arlington, TX, USA, all in electrical engineering.

He was a Senior Software Engineer with MathWorks, Natick, MA, USA, where he was developing computer-aided control system design tools. He is currently the Executive Director of the Kuwait-MIT Center for Natural Resources and the Environment, Massachusetts Institute of Technology, Cambridge, MA, USA, promoting clean environment and water, renewable energy, smart grids, and sustainable development research. He is the author or co-author of numerous publications, including the book *Nonlinear H2/H* $\infty$  *Constrained Control, A Practical Approach Using Neural Networks* (Springer Verlag). His current research interests include reinforcement learning and neural networks, adaptive and intelligent systems, energy grids, optimal and robust control theory, and robotics.



Aluizio Fausto Ribeiro Araujo received the B.S. degree in electrical engineering from the Federal University of Pernambuco, Cidade Universitária, Brazil, in 1980, the M.S. degree in electrical engineering from the State University of Campinas, Cidade Universitária, in 1988, and the D.Phil. degree in computer science and artificial intelligence from the University of Sussex, Brighton, U.K., in 1994.

He has been with the Federal University of Pernambuco, since 2002, where he is currently a Full Professor. His current research interests include self-organizing maps, recurrent neural networks, dynamic multiobjective optimization problems, intelligent robotics and robotics, and dynamic behavior of neural networks.



**Sander Bohte** received the B.S. and M.Sc. degrees in experimental physics from the University of Amsterdam, Amsterdam, The Netherlands, in 1997, and the Ph.D. degree in computer science from the University of Leiden, Leiden, The Netherlands, in 2003.

He is currently a Principal Investigator with the Department of Life Sciences, The Netherlands' Centre for Computer Science and Mathematics, Amsterdam, and he is a part-time Senior Research Fellow with Swarmlab, Maastricht University, Maastricht, The Netherlands. His current research interests include dynamical computation in spiking neural networks, neural reinforcement learning, neural control in robotics, and neural encoding/decoding.



**Antonio de Padua Braga** received the B.S. degree in electrical engineering and the M.Sc. degree in computer science from Federal University Minas Gerais, Belo Horizonte, Brazil, in 1987 and 1991, respectively, and the Ph.D. degree in electrical engineering from the Imperial College, University of London, London, U.K., in 1995.

He is currently a Professor with the Electronics Engineering Department, Federal University of Minas Gerais. He was a Visiting Professor with the University of Paris, Paris, France, and the University of Alberta, Edmonton, AB, Canada. His current research interests include multiobjective and semi-supervised learning, large margin classifiers, and kernel machines.

Dr. Braga served as an Editor-in-Chief of the *International Journal of Computational Intelligence and Applications*.



**Yiu-Ming Cheung** (SM'06) received the Ph.D. degree from the Department of Computer Science and Engineering, The Chinese University of Hong Kong, Hong Kong, in 2000.

He is currently a Professor with the Department of Computer Science, Hong Kong Baptist University, Hong Kong. His current research interests include machine learning, pattern recognition, watermarking, nonlinear optimization, and image and video processing.

Dr. Cheung was the Founding Chair of the IEEE Hong Kong Chapter of Computational Intelligence Society. He is an Associate Editor of *Knowledge and Information Systems* and the *International Journal of Pattern Recognition and Artificial Intelligence*.



**Shuiwang Ji** received the Ph.D. degree in computer science from Arizona State University (ASU), Phoenix, AZ, USA, in 2010.

He is currently an Assistant Professor of computer science with Old Dominion University (ODU), Norfolk, VA, USA. His current research interests include machine learning, data mining, computational neuroscience, and bioinformatics.

Dr. Ji received the Outstanding Ph.D. Student Award from ASU in 2010 and the Early Career Distinguished Research Award from ODU's College of Sciences in 2012. He is currently an Associate Editor for *BMC Bioinformatics* and for *Neurocomputing*.



**Preben Kidmose** received the B.Sc. degree in electrical engineering from the Engineering College, University of Southern Denmark, Odense M, Denmark, in 1995, and the M.Sc. degree in engineering and the Ph.D. degree in signal processing from the Technical University of Denmark, Lyngby, Denmark, in 1998 and 2001, respectively.

He was with Widex A/S, Lynge, Denmark, from 2001 to 2011, as a Research and Development Engineer of hearing aids and medical devices. He is currently a Professor of biomedical technology with the Department of Engineering, Aarhus University, Aarhus, Denmark. His current research interests include signal processing and machine learning in medical device sand for audio processing, medical instrumentation and sensors, and system engineering/design of medical devices.



**Yew-Soon Ong** received the Ph.D. degree in artificial intelligence for complex design from the Computational Engineering and Design Center, University of Southampton, Southampton, U.K., in 2003.

He is currently an Associate Professor and the Director of the Center for Computational Intelligence, School of Computer Engineering, Nanyang Technological University, Singapore. His current research interests include memetic computing, evolutionary optimization, machine learning, co-evolutionary multiagent modeling and simulation, and artificial intelligence in games.

Dr. Ong is a Founding Technical Editor-in-Chief of the *Memetic Computing Journal*, a Chief Editor of the Springer book series on studies in Adaptation, Learning, and Optimization, and an Associate Editor of the IEEE COMPUTATIONAL INTELLIGENCE MAGAZINE and the IEEE TRANSACTIONS ON CYBERNETICS, INFORMATION SCIENCES, SOFT COMPUTING.



**Massimo Panella** received the 5-year Laurea (Hons.) degree in electronic engineering and the Ph.D. degree in information and communication engineering from the University of Rome La Sapienza, Rome, Italy, in 1998 and 2002, respectively.

He joined the Department of Information Engineering, Electronics and Telecommunications, University of Rome La Sapienza, in 2001, where he is currently an Assistant Professor of circuit theory and learning systems for pervasive computing. His current research interests include neural networks, fuzzy logic, evolutionary algorithms, quantum circuits and pervasive computing, with application to ICT, multimedia, sensor networks, energy efficiency, financial engineering, intelligent transportation systems, and e-health.



**Madhusudana Shashanka** received the B.E. (Hons.) degree in computer science from the Birla Institute of Technology and Science, Pilani, India, in 2003, and the Ph.D. degree in computational neuroscience from Boston University, Boston, MA, USA, in 2007.

He is currently a Staff Scientist with the Decision Support and Machine Intelligence Group, United Technologies Research Center (UTRC), East Hartford, CT, USA. Before joining UTRC, he was a Research Scientist with Mars, Inc., McLean, VA, USA, from 2007 to 2010. He is interested in all aspects of machine learning and he has involved in applications in a variety of domains and data sets. His current research interests include machine learning applications for health monitoring of complex engineered systems, such as helicopters, jet engines, HVAC systems, and elevators.



**Clive Cheong Took** received the B.S. degree in telecommunication engineering from the King's College of London, London, U.K., in 2004, and the Doctoral degree in signal processing from Cardiff University, Cardiff, U.K., in 2007.

He was a Research Associate with the Department of Electronic Engineering, Imperial College London, London, U.K., from 2007 to 2012. He is currently a Lecturer with the Department of Computing, University of Surrey, Surrey, U.K. His current research interests include machine learning, adaptive and blind signal processing, and neural networks.



**Laurens van der Maaten** received the M.Sc. degree in computer science from Maastricht University, Maastricht, The Netherlands, and the Ph.D. degree from Tilburg University, Tilburg, The Netherlands, in 2005 and 2009, respectively.

He was a Post-Doctoral Researcher with the University of California, San Diego, CA, USA, and a Visiting Researcher with the University of Toronto, Toronto, ON, Canada, and Imperial College London, London, U.K. He is currently an Assistant Professor with the Department of Intelligent Systems, Delft University of Technology, Delft, The Netherlands. His current research interests include machine learning and computer vision, with a particular focus on dimensionality reduction, structured prediction, regularization, and object tracking.



**Dianhui Wang** received the Ph.D. degree from Northeastern University, Shenyang, China, in 1995.

He was a Post-Doctoral Fellow with Nanyang Technological University, Singapore, from 1995 to 1997. Before joining the Department of Computer Science and Computer Engineering, La Trobe University, Melbourne, Australia, in 2001, he was a Research Staff with the Department of Computing, The Hong Kong Polytechnic University, Hong Kong. He is currently a Reader and Associate Professor of computer science with La Trobe University. Since 2010, he has been an Adjunct Professor with the State Key Laboratory of Synthetical Automation of Process Industries, Northeastern University. His current research interests include subtle pattern recognition and discovery from biological sequences using data mining and computational intelligence techniques, learning systems for big data regression, and classification with applications in engineering systems.



**Zhanshan Wang** received the B.S. degree in industrial electrical automation from the Inner Mongolia University of Science and Technology, Baotou, China, in 1994, the M.S. degree in control theory and control engineering from Liaoning Shihua University, Fushun, China, in 2001, and the Ph.D. degree in control theory and control engineering from Northeastern University, Shenyang, China, in 2006.

He was a Technician with Fushun Plant, Fushun, from 1994 to 1998. He is currently a Professor with the College of Information Science and Engineering, Northeastern University. His current research interests include stability analysis of dynamical systems, neural networks, complex networks, multiagent systems, computational intelligence, fault diagnosis, adaptive control, and their applications.



**Qinglai Wei** received the B.S. and Ph.D. degrees in control theory and control engineering, from Northeastern University, Shenyang, China, in 2002 and 2008, respectively.

He was a Post-Doctoral Fellow with the Institute of Automation, Chinese Academy of Sciences, Beijing, China, from 2009 to 2011, where he is currently an Associate Professor with the State Key Laboratory of Management and Control for Complex Systems. His current research interests include neural networks-based control, adaptive dynamic programming, optimal control, nonlinear system, and their industrial applications.



**Zhi-Hua Zhou** (S'00–M'02–SM'05–F'13) received the B.S., M.S., and Ph.D. degrees in computer science from Nanjing University, Nanjing, China, in 1996, 1998, and 2000, respectively, all with the highest honors.

He is currently a Professor with the National Key Laboratory for Novel Software Technology, and the Department of Computer Science and Technology, Nanjing University. His current research interests include machine learning, data mining, pattern recognition, and multimedia information retrieval.

Prof. Zhou is a fellow of the International Association for Pattern Recognition and the Institution of Engineering and Technology/Institution of Electrical Engineers.



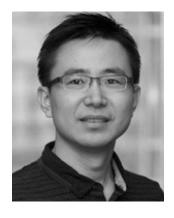
**Badong Chen** received the B.S. and M.S. degrees in control theory and engineering from Chongqing University, Chongqing, China, in 1997 and 2003, respectively, and the Ph.D. degree in computer science and technology from Tsinghua University, Beijing, China, in 2008.

He was a Post-Doctoral Researcher with Tsinghua University from 2008 to 2010, and a Post-Doctoral Associate with the Computational NeuroEngineering Laboratory, University of Florida, Gainesville, FL, USA, from 2010 to 2012. He is currently a Professor with the Institute of Artificial Intelligence and Robotics, Xi'an Jiaotong University, Xi'an, China. His current research interests include adaptive signal processing, information theory, machine learning, and their applications in cognitive science and engineering.



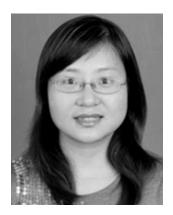
**Hung-Yuan Chung** was born in Taiwan. He received the Ph.D. degree in electrical engineering from National Cheng Kung University, Tainan, Taiwan, in 1987.

He has authored or co-authored over 280 technical publications in refereed journals and conference proceedings. His current research interests include systems theory and control, adaptive control, fuzzy control, neural network applications, bio-informatics, and bio-control applications.



Yun Raymond Fu received the B.Eng. degree in information engineering and the M.Eng. degree in pattern recognition and intelligence systems from Xi'an Jiaotong University, Xi'an, China, and the M.S. degree in statistics and the Ph.D. degree in electrical and computer engineering from the University of Illinois at Urbana-Champaign, Urbana, IL, USA.

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**Jinling Liang** received the B.Sc. and M.Sc. degrees in mathematics from Northwest University, Xi'an, China, in 1997 and 1999, respectively, and the Ph.D. degree in applied mathematics from Southeast University, Nanjing, China, in 2006.

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Dr. Liang serves as an Editorial Board Member for the *IET Control Theory and Applications* and the *International Journal of Computer Mathematics*.



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He was a Senior Scientist with the Canon USA Innovation Center, Irvine, CA, USA, from 2011 to 2013. He is currently a Senior Research Staff with the Centre for Imaging Technology Commercialization, Toronto. His current research interests include big data, image/video analytics, biometrics, intelligent video surveillance, face recognition, and digital pathology.

Dr. Lu received the 2006 IEEE Transactions on Neural Networks Outstanding Paper Award and the 2007 IEEE Computational Intelligence Society Outstanding Ph.D. Dissertation Award.



**Manuel Roveri** received the Laurea degree in computer science and engineering from Politecnico di Milano, Milano, Italy, in 2003, the M.S. degree in computer science from the University of Illinois at Chicago, Chicago, IL, USA, in 2003, and the Ph.D. degree in computer engineering from Politecnico di Milano in 2007.

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**Suresh Sundaram** received the M.E. and Ph.D. degrees from the Department of Aerospace Engineering, Indian Institute of Science Bangalore, Bangalore, India, in 2001 and 2005, respectively.

He was a Post-Doctoral Researcher with the School of Electrical Engineering, Nanyang Technological University, Singapore, from 2005 to 2007. He was an ERCIM Research Fellow from 2007 to 2008 and was with Project Team PULSAR, INRIA Sophia-Antipolis, Sophia-Antipolis, France. He was with IIT Delhi, Delhi, India, from 2008 to 2009, as an Assistant Professor of electrical engineering. Since 2010, he has been an Assistant Professor with the School of Computer Engineering, Nanyang Technological University. His current research interests include cognitive computing, neural networks, adaptive flight control, optimization, and medical informatics.



**Peter Tino** received the M.S. and Ph.D. degrees from the Slovak University of Technology and Slovak Academy of Sciences, Bratislava, Slovakia.

He was a Fulbright Fellow with the NEC Research Institute, Princeton, NJ, USA, and is currently a Reader of complex and adaptive systems with the School of Computer Science, University of Birmingham, Birmingham, U.K. His current research interests include dynamical systems, machine learning, probabilistic modeling of structured data, evolutionary computation, and fractal analysis.



**Yunong Zhang** received the B.S. degree from the Huazhong University of Science and Technology, Wuhan, China, in 1996, the M.S. degree from the South China University of Technology, Guangzhou, China, in 1999, and the Ph.D. degree from the Chinese University of Hong Kong, Hong Kong, in 2003.

He is currently a Professor with the School of Information Science and Technology, Sun Yat-Sen University (SYSU), Guangzhou. Before joining SYSU in 2006, he has been with the National University of Ireland, Maynooth, Ireland, the University of Strathclyde, Glasgow, U.K., and the National University of Singapore, Singapore, since 2003. His current research interests include neural networks, computation, and robotics.