Editorial
A Successful Change from TNN to TNNLS and a Very Successful Year

THIS issue marks the first anniversary issue of IEEE TRANSACTIONS ON NEURAL NETWORKS AND LEARNING SYSTEMS after it changed its name from IEEE TRANSACTIONS ON NEURAL NETWORKS. I am happy to report that we had a great year! The number of new submissions in a year exceeded 1,000 for the first time in the history of TNN/TNNLS. IEEE TNN had a very successful development for 22 years from 1990 to 2011, and we have good reasons to believe that IEEE TNNLS will have many more years of successful growth.

I. SPECIAL ISSUES

A very successful special issue was organized by Cesare Alippi and Robi Polikar on learning in nonstationary and evolving environments. The special issue received more than 90 submissions, and review of these papers is well underway right now.

The call for papers has been out for the second special issue of TNNLS with a submission deadline of January 15, 2013, on complex- and hypercomplex-valued neural networks, to be organized by Akira Hirose, Igor Aizenberg, and Danilo P. Mandic. We expect it to be another successful special issue.

We welcome special issue proposals on timely and hot topics related to neural networks and learning systems. We recommend that the team of guest editors include some associate editors of TNNLS or former associate editors, so that the team has some insightful knowledge of the paper-review process of TNNLS. If needed, the EiC can help potential organizers to team up with some current associate editors before submitting a proposal. Proposals for special issues will be reviewed by relevant associate editors, and a final decision will be made by the EiC within one month of proposal submission.

II. CHANGES IN IEEE TNNLS PAGE CHARGE POLICY

Starting January 1, 2013, IEEE TNNLS will impose a mandatory over-length page charge of $200 for each page in excess of 13 pages for a full paper, six pages for a brief paper, and three pages for a comments paper. Authors who are concerned with these mandatory charges are encouraged to estimate the length of their manuscripts prior to submission. This new policy will apply to papers submitted on or after January 1, 2013. Papers submitted before January 1, 2013, are not subject to this policy.

III. EDITORIAL BOARD CHANGES

I would like to take this opportunity to thank the following 15 hard-working associate editors whose terms have ended in 2012. They are: Amit Bhaya, Luba Benovsky, Tianping Chen, Pablo Estevez, James Kwok, Aristidis Likas, Guoping Liu, Yunqian Ma, Malik Magdon-Ismail, Marcello Sanguineti, Allessandro Sperduti, Marc van Hulle, Zidong Wang, Zhang Yi, and Liang Zhao. I thank them all for their great service to TNNLS. I wish everyone much success in future endeavors.

I would like to take this opportunity to introduce the following 18 new TNNLS Associate Editors (Charles Anderson and Shengli Xie started in June 2012). All of them are established researchers in neural networks and learning systems. They are listed below in alphabetical order.

CHARLES ANDERSON
Colorado State University, USA

AHMAD TAHER AZAR
Misr University for Science and Technology, Egypt

GIORGIO BATTISTELLI
University of Florence, Italy

EDUARDO BAYRO-CORROCHANO
CINVESTAV Unidad Guadalajara, Mexico

CRISTIANO CERVELLERA
Institute of Intelligent Systems for Automation, NRC, Italy

DAVID ELIZONDO
De Montfort University, U.K.

MAURIZIO FILIPPONE
University of Glasgow, U.K.

GIORGIO GNECCO
University of Genoa, Italy

XIAOLIN HU
Tsinghua University, China

TINGWEN HUANG
Texas A&M University at Qatar, Qatar

WEIFENG LIU
Jump Trading, Chicago, USA

WENLIAN LU
Fudan University, China

ANA MARIA MADUREIRA
Polytechnic of Porto (ISEP/IPP), Portugal

IGOR SKRJANC
University of Ljubljana, Slovenia

THOMAS VILLMANN
University of Applied Sciences, Mittweida, Germany

JONATHAN WU
University of Windsor, Canada

SHENGLI XIE
Guangdong University of Technology, China

DONG XU
Nanyang Technological University, Singapore

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

DERONG LIU, *Editor-in-Chief*
State Key Laboratory of Management
and Control for Complex Systems
Institute of Automation, Chinese Academy of Sciences
Beijing 100190, China

Department of Electrical and Computer Engineering
University of Illinois at Chicago
Chicago, IL 60607 USA

Derong Liu (S'91–M'94–SM'96–F'05) received the B.S. degree in mechanical engineering from the East China Institute of Technology (now Nanjing University of Science and Technology), Nanjing, China, the M.S. degree in automatic control theory and applications from the Institute of Automation, Chinese Academy of Sciences, Beijing, China, and the Ph.D. degree in electrical engineering from the University of Notre Dame, Notre Dame, IN, in 1982, 1987, and 1994, respectively.

He was an Instructor with the Graduate School of the Chinese Academy of Sciences, Beijing, from 1987 to 1990. He was a Staff Fellow with General Motors Research and Development Center, Warren, MI, from 1993 to 1995. He was an Assistant Professor with the Department of Electrical and Computer Engineering, Stevens Institute of Technology, Hoboken, NJ, from 1995 to 1999. He joined the University of Illinois at Chicago, Chicago, IL, in 1999, and he has been a Full Professor of electrical and computer engineering and of computer science since 2006. He has published 11 books.

Dr. Liu was a recipient of the Faculty Early Career Development (CAREER) Award from the National Science Foundation in 1999, the University Scholar Award from the University of Illinois for the period 2006 to 2009, and the Overseas Outstanding Young Scholar Award from the National Natural Science Foundation of China in 2008. He was selected for the 100 Talents Program by the Chinese Academy of Sciences in 2008. He is currently the Editor-in-Chief of the IEEE TRANSACTIONS ON NEURAL NETWORKS AND LEARNING SYSTEMS and an Associate Editor of the IEEE TRANSACTIONS ON CONTROL SYSTEMS TECHNOLOGY. He was an elected AdCom Member of the IEEE Computational Intelligence Society from 2006 to 2008.

Charles Anderson (SM'12) received the B.S. degree from the University of Nebraska, Lincoln, NE, in 1978, and the M.S. and Ph.D. degrees from the University of Massachusetts, Amherst, in 1982 and 1986, respectively, all in computer science.

He is currently a Professor with the Department of Computer Science, Colorado State University, Fort Collins, CO, where he is a Faculty Member with the Molecular, Cellular and Integrative Neurosciences Program and the School of Biomedical Engineering. His current research interests include machine learning, reinforcement learning, and brain-computer interfaces.

Ahmad Azar received the M.Sc. degree in system dynamics and the Ph.D. degree in adaptive neuro-fuzzy systems from the Faculty of Engineering, Cairo University, Cairo, Egypt, in 2006 and 2009, respectively.

He is involved in research on system dynamics, intelligent control, soft computing, and modeling in biomedicine. He has authored or co-authored more than 50 papers in journals and conferences. He is an editor of four books on fuzzy logic systems and biomedical engineering.

Dr. Azar is currently the Vice Chair of IEEE Computational Intelligence Society Egypt Chapter and the Vice President of Egypt System Dynamics Chapter. He is a member on the Technical Committee on Computational Collective Intelligence of the IEEE Systems, Man, and Cybernetics Society and also a member in the KES Focus Group on Agent and Multi-agent Systems. He is currently the Editor-in-Chief of the *International Journal of System Dynamics Applications* published by IGI Global, USA.

Giorgio Battistelli received the Laurea degree in electronic engineering and the Ph.D. degree in robotics from the University of Genoa, Genoa, Italy, in 2000 and 2004, respectively.

He is currently an Assistant Professor of automatic control with the Department of Information Engineering, University of Florence, Florence, Italy. From 2004 to 2006, he was a Research Associate with the Department of Communications, Computer, and Systems Science, University of Genoa. His current research interests include adaptive control, linear and nonlinear estimation, hybrid systems, data fusion, neural networks, and learning applications in automatic control.

Dr. Battistelli is an Editor of the IFAC Journal *Engineering Applications of Artificial Intelligence* and a member on the Editorial Board of the IEEE Control Systems Society Conference.

Eduardo Jose Bayro-Corrochano received the Ph.D. degree in systems engineering and computer science from the University of Wales, Cardiff, U.K., in 1993, under the supervision of Prof. D. T. Pham.

From 1995 to 1999, he was a Researcher and a Lecturer with the Institute for Computer Science, Christian Albrechts University, Kiel, Germany. He is currently a Full Professor of geometric cybernetics with the Department of Electrical Engineering and Computer Science, CINVESTAV Unidad Guadalajara, Jalisco, Mexico. He has authored or co-authored over 130 refereed papers in journal and conferences, and many book chapters. He has edited and authored five books. His current research interests include geometric methods for artificial perception and action systems, particularly geometric neural networks, visually guided robotics, humanoids, color image processing, Lie bivector algebras for early vision, neural computing, and robot maneuvering.

He is a member on the Editorial Board of the *Journal of Pattern Recognition*, the *Journal of Mathematical Imaging*, and *Journal Robotica*. He is the General Chair of the ICPR'2012 conference. He is an IAPR Fellow.

Cristiano Cervellera received the M.Sc. degree in electronic engineering and the Ph.D. degree in electronic engineering and computer science from the University of Genoa, Genoa, Italy, in 1998 and 2002, respectively.

He is currently a Researcher with the Genoa Branch of the Institute of Intelligent Systems for Automation, Italian National Research Council, Genoa. He has authored or co-authored more than 70 papers in various journals and conferences. His current research interests include approximate dynamic programming, machine learning for optimal control, number-theoretic methods for optimization and learning, local learning models.

David Elizondo (M'13) received the B.Sc. degree in computer science from Knox College, Galesbourg, IL, the M.Sc. degree in artificial intelligence from the University of Georgia, Athens, and the Ph.D. degree in computer science from the Universite Louis Pasteur, Strasbourg, France, and the Institut Dalle Molle d'Intelligence Artificielle Perceptive, Martigny, Switzerland, in 1986, 1992, and 1996, respectively.

He is currently a Principal Lecturer with the School of Computing and Informatics, Faculty of Technology, De Montfort University, Leicester, U.K., where he is the Co-Founder and the Co-Director of the DIGITS Research Group, Intelligent Transport Systems. His current research interests include applied neural network research, computational geometry approaches toward neural networks, knowledge extraction from neural networks, and constructive neural networks.

Maurizio Filippone received the Master's degree in physics and the Ph.D. degree in computer science from the University of Genova, Genova, Italy, in 2004 and 2008, respectively.

He is currently a Lecturer with the University of Glasgow, Glasgow, U.K. He was a Research Scholar with George Mason University, Fairfax, VA, in 2007. He was a Research Associate with the University of Sheffield, Sheffield, U.K., from 2008 to 2009, with the University of Glasgow, Glasgow, U.K., in 2010, and with University College London, London, U.K., in 2011. His current research interests include statistical methods for pattern recognition.

Giorgio Gnecco was born in Genova, Italy, in 1979. He received the Laurea (M.Sc.) degree (*cum laude*) in telecommunications engineering and the Ph.D. degree in mathematics and applications from the University of Genoa, Genova, Italy, in 2004 and 2009, respectively.

He is currently a Research Associate with the Department of Computer Science, Bioengineering, Robotics, and Systems Engineering, University of Genoa. His current research interests include mathematical foundations of neurocomputing, learning from data, infinite-dimensional programming, network optimization, and team optimization.

Xiaolin Hu (S'01–M'09) received the B.E. and M.E. degrees in automotive engineering from the Wuhan University of Technology, Wuhan, China, and the Ph.D. degree in automation and computer-aided engineering from the Chinese University of Hong Kong, New Territories, Hong Kong, in 2001, 2004, and 2007, respectively.

He is currently an Assistant Professor with the Department of Computer Science and Technology, Tsinghua University, Beijing, China. His current research interests include recurrent neural networks for optimization, deep learning, sparse coding, supervised learning, unsupervised learning, and their applications to pattern recognition and neuroscience.

Tingwen Huang (M'12) received the B.S. degree from Southwest University, Chongqing, China, the M.S. degree from Sichuan University, Chengdu, China, and the Ph.D. degree from Texas A&M University, College Station, in 1990, 1993, and 2002, respectively.

He was an Assistant Professor with the Science Program, Texas A&M University at Qatar, Doha, Qatar, from 2003 to 2009, where he is currently an Associate Professor. His current research interests include chaotic dynamical systems, neural networks, optimization, and control. He has authored or co-authored more than 70 peer reviewed journal papers.
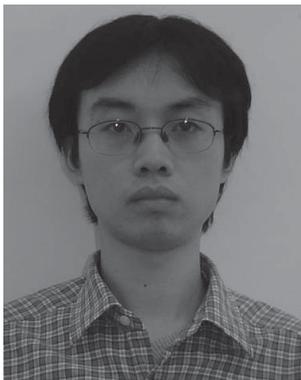
Dr. Huang was a recipient of the Qatar National Priority Research Project Support from Qatar Research Fund, Qatar. He is currently an Editorial Board Member of *Cognitive Computation* and *Advances in Artificial Neural Systems*. He is currently the President of Asia Pacific Neural Networks Assembly and the General Chair of the 19th International Conference on Neural Information Processing, Doha, Qatar, in 2012.

Weifeng Liu (M'08) received the Ph.D. degree in electrical and computer engineering from the University of Florida, Gainesville, in 2008.

He was a Senior Scientist with Amazon.com, Seattle, WA, from 2008 to 2012. He is currently a Senior Researcher with Jump Trading, Chicago, IL. He has authored or co-authored over 20 papers in journals and conference proceedings, and one book. He holds four U.S. patents. His current research interests include machine learning, adaptive signal processing and their applications to e-commence, business, and finance.

Dr. Liu was a recipient of the INNS Young Investigator Award in 2011. He is on the Editorial Board of *Neurocomputing*, *Neural Processing Letters*, and *IEEE Signal Processing Letters*. He is a member on the Signal Processing Technical Committee of the IEEE Signal Processing Society Machine Learning. He was the Program Committee Chair or a member for several international conferences.

Wenlian Lu (M'09) received the B.S. degree in mathematics and the Ph.D. degree in applied mathematics from Fudan University, Shanghai, China, in 2000 and 2005, respectively.

He is currently a Professor with the Centre for Computational Systems Biology and the School of Mathematical Sciences, Fudan University, and a Marie Curie International Incoming Fellow with the Department of Computer Science, University of Warwick, Coventry, U.K. He was a Post-Doctoral Researcher with the MaxPlanck Institute for Mathematics in the Sciences, Leipzig, Germany, from 2005 to 2007, and was an Associate Professor with the School of Mathematical Sciences, Fudan University, from 2007 to 2011. His current research interests include neural networks, nonlinear dynamical systems, and computational systems biology.

Ana Madureira (S'10) was born in Mozambique in 1969. She received the B.S. degree in computer science engineering, the M.S. degree in electrical and computers engineering, and the Ph.D. degree in production and systems in 1993, 1996, and 2003, respectively.

She is currently a Coordinator Professor with the School of Engineering–Polytechnic of Porto (ISEP/IPP), Porto, Portugal, where he is a Ph.D. Researcher of the GECAD Research Group. She is the Vice-Chair of IEEE Portugal Section and the IEEE-CIS Portuguese Chapter. She has authored or co-authored over 60 papers in scientific journals and conference proceedings, and two books. Her current research interests include machine learning, case-based reasoning, learning in multiagent systems, case-based reasoning, observational learning, learning by experience, user modeling, self-organized systems, and swarm intelligence.

Igor Škrjanc (M'10) received the B.S., M.S., and Ph.D. degrees in electrical engineering, in 1988, 1991, and 1996, respectively, from the Faculty of Electrical and Computer Engineering, University of Ljubljana, Ljubljana, Slovenia.

He is currently a Full Professor with the Faculty of Electrical and Computer Engineering, University of Ljubljana. His current research interests include adaptive, predictive, neuro-fuzzy, and fuzzy adaptive control systems. His current research interests include localization, direct visual control, and trajectory-tracking control of autonomous mobile systems. He has authored or co-authored over 60 SCI papers, and has co-authored 8 chapters in international books and one scientific monograph.

Dr. Škrjanc was a recipient of the Zois Award in 2008 and the Humboldt Research Award from the University of Siegen in 2009. He is a member on the Standards Committee of the IEEE Computational Intelligence Society and Slovenian Modeling and Simulation Society. He is an Associate Editor of *Evolving Systems*.

Thomas Villmann received the Diploma degree in mathematics, and the Ph.D. and Venia Legendi degrees in computer science in 1996 and 2005, respectively, from the University of Leipzig, Leipzig, Germany.

He has been a Full Professor of technomathematics/computational intelligence with the University of Applied Sciences Mittweida, Mittweida, Germany, since 2009. From 1997 to 2009, he led the Computational Intelligence Group, Clinic for Psychotherapy, Leipzig University. He has authored or co-authored more than 75 articles in scientific journals and more than 200 contributions in books and reviewed conference proceedings. His current research interests include theory of prototype-based clustering and classification, nonstandard metrics and relevance learning, information theory and their applications in pattern recognition for use in medicine, bioinformatics, remote sensing, and hyperspectral analysis.

Dr. Villmann is a Founding Member of the German Chapter of the European Neural Network Society, for which he is the President since 2011. He is an Associate Editor of *Neural Processing Letters*.

Q. M. Jonathan Wu (M'92–SM'09) received the Ph.D. degree in electrical engineering from the University of Wales, Wales, U.K., in 1990.

He is currently a Full Professor with the Department of Electrical and Computer Engineering, University of Windsor, Windsor, ON. He is the Tier 1 Canada Research Chair in Automotive Sensors and Information Systems. He has authored or co-authored over 250 peer-reviewed papers, including 100 international journal articles, and one book. His current research interests include machine learning, pattern recognition, computer vision, and image and video processing and analysis.

Dr. Wu was an Associate Editor of the IEEE TRANSACTIONS ON SYSTEMS, MAN, AND CYBERNETICS, PART A and a Program Committee Member for many prestigious international conferences.

Shengli Xie (M'01–SM'02) received the M.S. degree in mathematics from Central China Normal University, Wuhan, China, and the Ph.D. degree in automatic control from the South China University of Technology, Guangzhou, China, in 1992 and 1997.

He is currently the Director of the Institute of Intelligent Information Processing and the Guangdong Key Laboratory of Information Technology for the Internet of Things, and a Professor with the Faculty of Automation, Guangdong University of Technology, Guangzhou. He was the Vice Dean with the School of Electronics and Information Engineering, South China University of Technology, from 2006 to 2010. He has authored or co-authored more than 100 scientific papers in journals and conference proceedings, and four monographs. He holds more than 30 patents. His current research interests include statistical signal processing and wireless communications, with an emphasis on blind signal processing and internet of things.

Dong Xu (M'07) received the B.E. and Ph.D. degrees from the University of Science and Technology of China, Hefei, China, in 2001 and 2005, respectively.

He was with Microsoft Research Asia, Beijing, China, and the Chinese University of Hong Kong, Shatin, Hong Kong, for more than two years. He was a Post-Doctoral Research Scientist with Columbia University, New York, for one year. In 2007, he joined Nanyang Technological University, Singapore, where he is currently an Associate Professor. His current research interests include computer vision and machine learning. He has authored or co-authored more than 70 papers in top venues including T-PAMI, T-NN/T-NNLS, T-IP, T-CSVT, T-MM, T-SMC, T-BME, CVPR, ICCV, ECCV, ICML, ACM MM, ICDM, MICCAI, and IJCAI.

Dr. Xu was a recipient of the Best Student Paper Award at the IEEE International Conference on Computer Vision and Pattern Recognition in 2010 for a co-authored paper.