State of the Journal

Sven Dickinson

I would like to take this opportunity to bring our readership up to date on the state of the journal. When this editorial appears, it will have been one year since I assumed the role of Editor-in-Chief, in January, 2017. It's been a very busy year coming up to speed, but also a very rewarding year. While we face some challenges, which I'll describe in more detail below, our journal is in great shape! Our impact factor rose dramatically from 6.077 (2015) to 8.329 (2016), maintaining our rank as the top journal in computer vision and machine learning and one of the top journals in all of computer science. This reflects not only the tremendous strength of the journal, but the explosive growth of our community and its transformational impact on the world. Our conferences are growing at an unprecedented rate, and the opportunities for students in both academia and industry have never been so abundant. Needless to say, it's a very exciting time to be a researcher in our community right now!

The major challenge facing the journal is reducing the average time from paper submission to paper acceptance (for those papers that are accepted), which is currently 12.08 months. Fully realizing the advantages of a *TPAMI* article over a conference paper, including a more thorough review process and additional length, is only possible in a field like ours, where things are moving so quickly, if papers appear in a timely manner. With the increasing emphasis that our community places on conference papers, I'd ideally like to get the time from submission to online publication down to 6-7 months, which is comparable to the time from conference submission to conference presentation.

How do we get there? One big part of our strategy is to appoint more Associate Editors (AEs), which will reduce the workload per AE, hopefully allowing our AEs to focus their energy on fewer papers and shepherd them more efficiently. I'm pleased to report that since January, we've already added 26 new AEs, who I'll introduce later in the editorial. We plan to add another 20-30 additional AEs over the coming year. A second part of our strategy is a new reporting system I've been working on with my colleagues, Joyce Arnold and Christine Kurzawa, at the IEEE. These reports will help me quickly identify those papers that need attention, which contribute significantly to our average time to acceptance. My sincerest thanks to Joyce and Christine for their help in setting this up!

While online publication of accepted papers happens very quickly following acceptance, I'd also like to see a reduction in the average time from submission to print publication, which is currently over 20 months, owing to a large backlog of online papers pending assignment to a volume. I'm very pleased to report that we've been successful in increasing our yearly print page budget by 500 pages, which should help alleviate the backlog. My sincerest thanks to Kathy Santa Maria at the IEEE for helping us secure this page budget increase!

Now the fun part—where I get to introduce our new crop of 26 Associate Editors that have joined since January, 2017: Ryan Adams, Tal Arbel, Nina Balcan, Kobus Barnard, Barbara Caputo, David Crandall, Kristin Dana, Jennifer Dy, Ali Farhadi, Steven Hoi, Samuel Kaski, Kristian Kersting, Marie-Francine Moens, Björn Ommer, Pradeep Ravikumar, Vikas Sindhwani, Le Song, Masashi Sugiyama, Zhuowen Tu, Manik Varma, Nuno Vasconcelos, Olga Veksler, Jianhong Wu, Tong Zhang, Jie Zhou, and Zhi-Hua Zhou. These individuals have been selected not only for their research excellence and leadership, but their good judgement and commitment to service. You'll find their pictures and brief bios at the end of my editorial. My sincerest thanks to all these new AEs for their commitment to our journal! I'm really looking forward to working closely with them.

TPAMI has always imposed term limits on its AEs and, as such, I'd like to take this opportunity to thank the following outgoing AEs for their service to our journal: Kalle Astrom, Shai Avidan, Robert Collins, Trevor Darrell, Fernando de la Torre, Andrew Fitzgibbon, David Forsyth, Fei-Fei Li, Yasuyuki Matsushita, Tomas Pajdla, Carsten Rother, Tobias Scheffer, Peter Sturm, Charles Sutton, Ben Taskar, Yee Whye Teh, Massimo Tistarelli, Eric P. Xing, and Xiaojin (Jerry) Zhu. While I thanked David Forsyth for his service as outgoing EIC in my editorial last January, David also served as AE on numerous papers following his stepping down. Tragically, we lost Ben Tasker in late 2013; for a moving tribute from his UW colleagues, please see: https://news.cs.washington.edu/2013/11/18/ben-taskar-1977-2013/. I'm really grateful to all the above AEs for their service to our journal; as a past AE myself, I know how time-consuming the role can be at the most inconvenient times. My sincerest thanks to them all!

Finally, I'd like to express my thanks to the many individuals who have helped maintain *TPAMI* as an elite journal and who are instrumental in its day-to-day operations. First, I could not do this job without the help of my stellar Associate

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Editors-in-Chief (AEICs): Amir Globerson, Christoph Lampert, and Dale Schuurmans, on the machine learning side, and Kristen Grauman, Kyoung Mu Lee, and Tinne Tuytelaars, on the computer vision side. I'm very grateful to them all, and feel really lucky to be able to work with such an exceptionally talented team of individuals. Stan Sclaroff stepped down as AEIC before I started as EIC, and I'd like to take this opportunity to thank him for his outstanding service. Second, while I thanked our outgoing and incoming AEs, I'd like to also thank the bulk of our active AE cohort—the foundation of our editorial board. The heavy lifting behind selecting papers for our journal is done by our AEs, and I'm very grateful to them all for their outstanding service and commitment to our journal. Third, I'd like to thank the members of the *TPAMI* Advisory Board (including its newest member, David Forsyth) for their sage advice. Their collective experience is an incredibly valuable resource to me. Finally, I'd like to offer a special thanks to Joyce Arnold who has been of enormous help to me through my transition. I'm very grateful for Joyce's patience with me as I've slowly come up to speed. I'd also like to thank the many other very helpful individuals at the IEEE and the IEEE Computer Society who have been assisting me this past year, including Hilda Carman, Jennifer Carruth, Christine Kurzawa, Kathy Santa Maria, and Kimberly Sperka. My sincerest thanks to you all!

Sven Dickinson
Editor in Chief

Ryan Adams received the PhD degree in physics from Cambridge as a Gates Scholar under David J.C. MacKay before spending two years as a CIFAR Junior fellow with the University of Toronto. He is a professor of computer science with Princeton University and a research scientist with Google Brain. He was an assistant professor of computer science with Harvard from 2011 to 2016, before moving to Princeton in 2017. He has received the Alfred P. Sloan Fellowship, the DARPA Young Faculty Award, and paper awards at ICML, UAI, and AISTATS. He was a co-founder of Whetlab, a startup acquired by Twitter in 2015. He was also the co-host of the Talking Machines podcast.

Tal Arbel received the B Eng, MEng, and PhD degrees in electrical engineering from McGill University, in 1992, 1995, and 2000, respectively, and then completed a postdoctoral fellowship at the Montreal Neurological Institute (MNI). She is currently a full professor in the Department of Electrical and Computer Engineering at McGill University, a member of the Centre for Intelligent Machines (CIM), and director of the *Probabilistic Vision Group* and *Medical Imaging Lab*. Her interests lie in the development of probabilistic and machine learning techniques in computer vision and in medical image analysis, with particular focus on applications in neurology and neurosurgery. She is a member of the editorial board for CVIU and a member of the IEEE.

Maria-Florina Balcan is an associate professor in the School of Computer Science, Carnegie Mellon University. Her main research interests are machine learning, artificial intelligence, computational aspects in economics and game theory, and algorithms. Her honors include the CMU SCS Distinguished Dissertation Award, an NSF CAREER Award, a Microsoft Faculty Research Fellowship, a Sloan Research Fellowship, and several paper awards. She was a Program Committee co-chair for COLT 2014, a Program Committee co-chair for ICML 2016, a board member of the International Machine Learning Society, and is currently an editor for the Research Highlights section of Communications of the ACM.

Kobus Barnard received the PhD degree in computer science from Simon Fraser University (SFU) in the area of computational color constancy, in 2000, where his dissertation received the Governor General gold medal awarded across all disciplines. He is a professor in Computer Science, University of Arizona. He also has appointments in Statistics, Cognitive Science, Electrical and Computer Engineering (ECE), and the BIO5 Institute. He leads the Interdisciplinary Visual Intelligence Laboratory (IVILAB.org). He received PhD and spent two years at the University of California at Berkeley as a postdoctoral researcher working on modeling the joint statistics of images and associated text, followed by moving to the University of Arizona. His current research addresses problems in interdisciplinary computational intelligence by developing top-down statistical models that are predictive, semantic, and explanatory application domains include computer vision, multimedia data, biological structure and processes, astronomy, and human social interaction. His work has been funded by multiple grants from NSF including a CAREER award, DARPA, and ONR, ARBC (Arizona Biomedical Commission), and the University of Arizona BIO5 Institute. He enjoys a number of outdoor activities including climbing, mountain biking, and skiing.

Barbara Caputo received a Laurea in physics with a major in theoretical physics degree in 1998 from Sapienza Rome University. She received the master's degree in medical image processing from La Sapienza University, in 2000, while working as a junior researcher at the Italian National Research Council (CNR). She received the PhD degree in computer science from the Royal Institute of Technology of Stockholm, Sweden, in 2005. In 1999 she moved to Erlangen, Germany, to join the chair for Pattern Recognition led by Prof. H. Niemann to work on the PhD. She continued her PhD work at the Smith-Kettlewell Eye Research Institute in San Francisco, California (2002) and at the Royal Institute of Technology of Stockholm, Sweden. From 2006 until 2013 she was a senior researcher at the Idiap Research Institute in Martigny, Switzerland, where she started the Artificial Cognitive Systems group. Since summer 2013 she has been an associate professor in the Department of Computer, Control and Management Engineering of the University of Rome La Sapienza, where she started the Visual Learning and Multimodal Applications Laboratory (VANDAL). She also holds a senior researcher position in the Italian Institute of Technology since October 2017. Her research on life-long learning applied to visual and multimodal data in artificial cognitive systems like robots, wearable devices and sEMG controlled prostheses has been funded by the Swiss National Science Foundation (NinaPro, 2011-2014; vision@home, 2012-2015; Megane-Pro, 2016-2018), the Hasler foundation (EMMA, 2008-2011), the European Commission (FP6 DIRAC project, 2006-2010; FP7 SS2-Rob, 2010), the European Research Council (ERC StG RoboExNovo, 2015-2020) and the Italian Ministry for University and Research (CHIST-ERA ALOOF, 2015-2017).

David Crandall received the BS and MS degrees in computer science and engineering from the Pennsylvania State University, in 2001, and the PhD in computer science from Cornell University, in 2008. He is an associate professor in the School of Informatics and Computing at Indiana University Bloomington, where he is a member of the programs in Computer Science, Informatics, Cognitive Science, and Data Science, and of the Center for Complex Networks and Systems Research. He was a postdoctoral research associate at Cornell from 2008-2010, and a senior research scientist with Eastman Kodak Company from 2001-2003. He has received an NSF CAREER award in 2013, a Google Faculty Research Award in 2014, best paper awards or nominations at CVPR, CHI, ICDL, and WWW, and an Indiana University Trustees Teaching Award in 2017.

Kristin J. Dana received the BS degree from the Cooper Union, in New York, in 1990, the MS degree from Massachusetts Institute of Technology, in 1992, and the PhD degree from Columbia University, in New York, in 1999. She is a full professor in the Department of Electrical and Computer Engineering, Rutgers University. She is also a member of the graduate faculty of Rutgers Computer Science Department. Her research expertise is in computer vision including computational photography, machine learning, quantitative dermatology, illumination modeling, texture and reflectance models, optical devices, and applications of robotics. She received the National Science Foundation Career Award (2001) and a team recipient of the Charles Pankow Innovation Award in 2014 from the ASCE.

Jennifer G. Dy received the BS (Magna Cum Laude) degree from the Department of Electrical Engineering, University of the Philippines, in 1993 and the MS and PhD degrees from the School of Electrical and Computer Engineering, Purdue University, West Lafayette, Indiana, in 1997 and 2001, respectively. She is a professor in the Department of Electrical and Computer Engineering, Northeastern University, Boston, Massachusetts, where she first joined the faculty in 2002. Her research is in machine learning, data mining and their application to biomedical imaging, health, science and engineering, with a particular focus on clustering, multiple clusterings, dimensionality reduction, feature selection and sparse methods, large margin classifiers, learning from the crowds and Bayesian nonparametric models. She received an NSF Career award in 2004. She has served as an associate editor for Machine Learning and Data Mining and Knowledge Discovery, an editorial board member for JMLR, organizing/senior/program committee member for ICML, ACM SIGKDD, AAAI, IJCAI, AISTATS and SIAM SDM, and was program chair for SIAM SDM 2013.

Ali Farhadi received the PhD degree from the University of Illinois at Urbana-Champaign under the supervision of David Forsyth. He is an associate professor in the Department of Computer Science & Engineering, the University of Washington. Prior to this, he was a postdoctoral fellow at the Robotics Institute at Carnegie Mellon University. His research has been mainly focused on computer vision and machine learning. More specifically, he is interested in semantic scene understanding, visual knowledge extraction, object recognition, transfer learning, and attribute-based representations of objects. He has been awarded the Allen Distinguished Investigator Award, the inaugural Google fellowship in computer vision and image interpretation, the University of Illinois CS/AI 2009 award, C.W. Gear 2010 Outstanding Research Award, and CVPR2011 Best Student Paper Award, AAAI 2016 best student paper award, NSF 2017 CAREER award, Sloan Fellowship in 2017, and CVPR 2017 Best paper honorable mention award. He also leads the project Plato at the Allen Institute for Artificial Intelligence. His team at AI2 is mainly focused on fundamental problems at the intersection of AI and computer vision. He is also the CEO and co-founder of xnor.ai focusing on efficient and embedded deep learning with the goal of providing ubiquitous AI.

Steven Hoi received the bachelor degree from Tsinghua University, and the master's and PhD degrees from the Chinese University of Hong Kong. He is an associate professor in the School of Information Systems (SIS), Singapore Management University (SMU), Singapore. Prior to joining SMU, he was a tenured associate professor in the School of Computer Engineering of the Nanyang Technological University (NTU), Singapore. His research interests include large-scale machine learning (online learning and deep learning) with application to tackling big data analytics challenges across a wide range of real-world applications, including multimedia retrieval, computer vision and pattern recognition, social media, web search and information retrieval, computational finance, cyber security, mobile and software data mining, etc. He has published more than 180 papers in premier conferences and journals, and served as an organizer, area chair, senior PC, TPC member, editors, and referee for many top conferences and premier journals. He received the Lee Kong Chian Fellowship Award due to his research excellence. He is a senior member of the IEEE.

Samuel Kaski received the doctoral degree in Computer Science from Helsinki University of Technology, in 1997. He is currently a professor of Aalto University and an Academy Professor of the Academy of Finland. From 2010 to 2015, he was the director of the Helsinki Institute for Information Technology HIIT, and earlier a professor of computer science of the University of Helsinki. He is an action editor of the *Journal of Machine Learning Research*, and has chaired several conferences including AISTATS. His research interests include probabilistic machine learning, with applications in user interaction, data visualization, health and biology. He has published more than 200 papers on these topics.

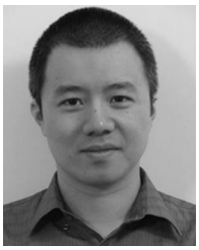
Kristian Kersting received the PhD degree from the University in Freiburg, in 2006 He is a professor (W3) for Machine Learning at the CS Department of the TU Darmstadt, Germany, where he heads the machine learning lab. After receiving the PhD, he was with MIT, Fraunhofer IAIS, the University of Bonn, and the TU Dortmund University. His main research interests are statistical relational AI, machine learning, and data mining, as well as their applications. He has published more than 150 peer-reviewed technical papers and co-authored a book on statistical relational AI. He received the European Association for Artificial Intelligence (EurAI, formerly ECCAI) Dissertation Award 2006 for the best AI dissertation in Europe as well as two best paper awards. He regularly serves on the PC (often at senior level) for several top conference and co-chaired ECML PKDD 2013 and UAI 2017.

Marie-Francine Moens received the MSc and PhD degree in computer science from the Department of Computer Science at KU Leuven, Belgium. She is full professor in the Department of Computer Science at KU Leuven, Belgium, where she is the director of the Language Intelligence and Information Retrieval (LIIR) research lab and head of the Informatics section. Her main research topic regards automated content recognition in text and multimedia using statistical machine learning. She has a special interest in learning with limited supervision, in probabilistic graphical models, in deep learning and in the application of these methods in language understanding and in the translation of language to other languages or to the visual medium. Currently, she is the scientific manager of the EU COST action V&L Net (The European Network on Integrating Vision and Language).

Björn Ommer received the diploma in computer science from the University of Bonn, Germany, and the PhD degree in computer science from ETH Zurich, Switzerland, in 2007. Thereafter, he held a postdoctoral position in the computer vision group at the University of California, Berkeley. In 2009, he joined Heidelberg University, Germany, where he is a full professor for scientific computing in the Department of Mathematics and Computer Science and he is also on the faculty of the Department of Philosophy. He is heading the computer vision group, which is affiliated with the Heidelberg Collaboratory for Image Processing, and is a co-director of the Interdisciplinary Center for Scientific Computing. His research in computer vision and machine learning focuses on visual detection and recognition of objects and actions with a particular interest in weakly supervised approaches. Moreover, he pursues interdisciplinary applications of this research in the digital humanities and neuroscience. He served as an associate editor for the *Pattern Recognition Letters*.

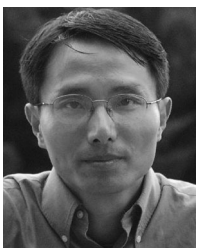
Pradeep Ravikumar is an associate professor in the Machine Learning Department, School of Computer Science, Carnegie Mellon University. His thesis has received honorable mentions in the ACM SIGKDD Dissertation award and the CMU School of Computer Science Distinguished Dissertation award. He is a sloan fellow, a siebel scholar, a recipient of the NSF CAREER Award, and was program chair for the International Conference on Artificial Intelligence and Statistics (AISTATS) in 2013. His research interests are at the intersection of the statistical imperative of inferring reliable conclusions from limited observations or data, with the computational imperative of doing so with limited computation. His research has been on the foundations of statistical machine learning, with particular emphasis on graphical models, optimization and high-dimensional statistical inference.

Vikas Sindhwani received the BTech degree in engineering physics from the Indian Institute of Technology (IIT) Mumbai and the PhD degree in computer science from the University of Chicago. He is research scientist in the Google Brain team in New York, where he leads a research group focused on solving a range of perception, learning and control problems arising in Robotics. He is broadly interested in core mathematical foundations of statistical learning, and in end-to-end design aspects of building large-scale, robust machine intelligence systems. He received the best paper award at Uncertainty in Artificial Intelligence (UAI) 2013, the IBM Pat Goldberg Memorial Award in 2014, and was co-winner of the Knowledge Discovery and Data Mining (KDD) Cup in 2009. He previously led a team of researchers in the Machine Learning group at IBM Research, New York. His publications are available at: http://vikas.sindhwani.org/.



Le Song received the PhD degree in machine learning from University of Sydney and NICTA in 2008, and then conducted his post-doctoral research in the Department of Machine Learning, Carnegie Mellon University, between 2008 and 2011. He is an associate professor in the Department of Computational Science and Engineering, College of Computing, and an associate director of the Center for Machine Learning, Georgia Institute of Technology. He is also working with Ant Financial AI Department on risk management and security related problems. Before he joined Georgia Institute of Technology in 2011, he was a research scientist at Google briefly. His principal research direction is machine learning, especially nonlinear models, such as kernel methods and deep learning, and probabilistic graphical models for large scale and complex problems, arising from artificial intelligence, network analysis and other interdisciplinary domains. He is the recipient of the Recsys'16 Deep Learning Workshop Best Paper Award, AISTATS'16 Best Student Paper Award, IPDPS'15 Best Paper Award, NSF CAREER Award'14, NIPS'13 Outstanding Paper Award, and ICML'10 Best Paper Award. He has also served as the area chair or senior program committee for many leading machine learning and AI conferences such as ICML, NIPS, AISTATS, AAAI and IJCAI. He is also the action editor for JMLR.

Masashi Sugiyama received the bachelor of engineering, master of engineering, and doctor of engineering degrees in computer science from Tokyo Institute of Technology, Japan, in 1997, 1999, and 2001, respectively. In 2001, he was appointed assistant professor in the Tokyo Institute of Technology, Japan, and he was promoted to associate professor in 2003. He moved to the University of Tokyo as professor in 2014. From 2016, he concurrently serves as director of the RIKEN Center for Advanced Intelligence Project. He received an Alexander von Humboldt Foundation Research Fellowship and researched at Fraunhofer Institute, Berlin, Germany, from 2003 to 2004. In 2006, he received European Commission Program Erasmus Mundus Scholarship and researched at the University of Edinburgh, Edinburgh, United Kingdom. He received the Faculty Award from IBM in 2007 for his contribution to machine learning under non-stationarity, the Nagao Special Researcher Award from the Information Processing Society of Japan in 2011 and the Young Scientists' Prize for the Commendation for Science and Technology by the Minister of Education, Culture, Sports, Science and Technology Japan in 2014 for his contribution to the density-ratio paradigm of machine learning, and the Japan Society for the Promotion of Science Award and the Japan Academy Medal in 2017 for his series of machine learning research. His research interests include theories and algorithms of machine learning and data mining, and a wide range of applications such as signal processing, image processing, and robot control.



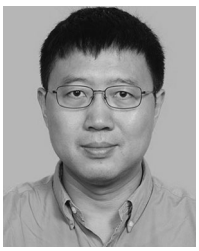
Zhuowen Tu received the BE degree from Beijing Information Technology Institute and the ME degree from Tsinghua University, and the PhD degree in computer science from the Ohio State University. He is an associate professor of cognitive science at University of California, San Diego (UCSD). His main research interests include computer vision, machine learning, and neural computation. He has been developing statistical frameworks for representation, learning, and inference for image and large-scale high-dimensional data. His research has been particularly focused on studying the top-down and bottom-up representation, discriminative and generative modeling, structured data prediction, and neural networks learning/computing.

Manik Varma is a researcher with Microsoft Research India and an adjunct professor of computer science with the Indian Institute of Technology (IIT) Delhi. His research interests lie in the areas of machine learning, computational advertising and computer vision. Classifiers that he has developed have been deployed on millions of devices around the world and have protected them from viruses and malware. His algorithms are also generating millions of dollars on the Bing search engine (up to sign ambiguity). In 2013, he and John Langford coined the term extreme classification and found that they had inadvertently started a new area in machine learning. Today, by happenstance, extreme classification is thriving in both academia and industry with his classifiers being used in various Microsoft products as well as in the wider tech sector. He recently proclaimed "2 KB (RAM) ought to be enough for everybody" prompting the media in the US, India, China, France, Belgium and Singapore to cover his research and compare him to Bill Gates (unfair, he's more handsome!). He has been awarded the Microsoft Gold Star award, the Microsoft Achievement award, won the PASCAL VOC Object Detection Challenge and stood first in chicken chess tournaments and Pepsi drinking competitions. He has served as an area chair/senior PC member for machine learning, artificial intelligence and computer vision conferences such as AAAI, CVPR, ICCV, ICML, IJCAI and NIPS. He is also a failed physicist (BSc St. Stephen's College, David Raja Ram Prize), theoretician (BA Oxford, Rhodes Scholar), engineer (DPhil Oxford, University Scholar) and mathematician (MSRI Berkeley, Post-doctoral Fellow)

Nuno Vasconcelos (S'92-M'00-SM'08-F'17) received the bachelor's degree in electrical engineering and computer science from the Universidade do Porto, Porto, Portugal, and the MS and PhD degrees from the Massachusetts Institute of Technology, Cambridge, Massachusetts. He is currently a professor in the Department of Electrical and Computer Engineering, University of California at San Diego, San Diego, California, where he heads the Statistical Visual Computing Laboratory. His research interests span the fields of computer vision, machine learning, and multimedia. He has pioneered the use of probabilistic models in image retrieval, the use of semantic image representations in computer vision, the decision-theoretical formulation of the visual saliency problem, and the study of various problems in the understanding of crowded environments, such as automatic crowd counting and anomaly detection. He is a fellow of the IEEE, and has held several editorial positions in his areas of research interest. Recently, he has been senior associate editor of the *IEEE Signal Processing Letters*, program chair of the *ACM International Conference in Multimedia Retrieval*, and area chair of major computer vision (CVPR, ECCV, ICCV) and machine learning (NIPS, ICML) conferences. He has authored more than 150 peer-reviewed publications, received the National Science Foundation CAREER Award and the Hellman Fellowship Award.

Olga Veksler received the BS degree summa cum laude with honors in mathematics and computer science from New York University, in 1995, and the Msc and PhD degrees from the Computer Science Department, Cornell University, in 1999. She was a postdoctoral research associate with NEC Research Institute. She is currently a full professor in Computer Science Department, University of Western Ontario. Her broad research interests are in computer vision. In particular, she is interested in energy minimization methods, graph algorithms, stereo correspondence, motion, and segmentation. She was a co-organizer of IEEE Computer Society Workshop on Perceptual Organization in Computer Vision (POCV) in 2008. She is a member of the organising committee of ICERM (Brown University) Semester Program on Computer Vision, 2019. She has served multiple times as an area chair for CVPR and ICCV. She is an associate editor for the *International Journal of Computer Vision* (*IJCV*) and *Computer Vision and Image Understanding* (*CVIU*). She is a recipient of the Early Researcher Award (ERA) from the Canadian Ministry of Research and Innovation, the NSERC Discovery Accelerator Supplement (DAS) Award, and a "Test-of-Time Award" at the International Conference on Computer Vision (ICCV 2011).

Jianhong Wu is a distinguished research professor and a Canada Research Chair in industrial and applied mathematics, York University, Canada. His research interest includes nonlinear dynamical systems, neural networks, data clustering, pattern recognition, and mathematical biology. He is the co-inventor of PART, a projective adaptive resonance neural network architecture for projective clustering of high dimensional data. His h-index is 55 and total citation since 2012 exceeds 8269. He has served on the editorial boards of influential international journals and is the co-editor for Infectious Disease Modelling. He is a founding member and co-leader of the international journal and conference series on big data and information analytics. Awards he received include the Queen's Diamond Jubilee medal from the Government of Canada, the Canadian Applied and Industrial Mathematics Research Prize, the Cheung Kong Visiting Professorship, the Paul Erdos Visiting Professorship, and the Alexander von Humboldt Fellowship. He became a fellow of the Fields Institute in 2011, and he was the president of the Canadian Applied and Industrial Mathematical Society during 2011-2013. He was awarded the doctor Honoris Causa by the University of Szeged in 2016.



Tong Zhang received the BA degree in mathematics and computer science from Cornell University, and the PhD degree in computer science from Stanford University. He is the executive director of Tencent AI Lab, which develops advanced AI technologies in computer vision, speech recognition, natural language processing, and machine learning, and builds AI applications for different Tencent products. Before joining Tencent, he was a professor at Rutgers University, and worked previously at IBM, Yahoo, and Baidu. He was an ASA fellow and IMS fellow, and has served as chair or area-chair in major machine learning conferences and journals.

Jie Zhou received the BS and MS degrees both from the Department of Mathematics, Nankai University, Tianjin, China, in 1990 and 1992, respectively, and the PhD degree from the Institute of Pattern Recognition and Artificial Intelligence, Huazhong University of Science and Technology (HUST), Wuhan, China, in 1995. From then to 1997, he served as a postdoctoral fellow in the Department of Automation, Tsinghua University, Beijing, China. Since 2003, he has been a full professor in the Department of Automation, Tsinghua University. From 2015 to now, he is the head of Department of Automation, Tsinghua University. His research interests include pattern recognition, computer vision, and image processing. In recent years, he has authored more than 200 papers in peer-reviewed journals and conferences. Among them, more than 50 papers have been published in top journals and conferences (the *IEEE Transactions on Pattern Analysis and Machine Intelligence*, the *IEEE Transactions on Image Processing*, CVPR and ICCV. He received the National Outstanding Youth Foundation of China Award in 2012. He is a fellow of IAPR.

Zhi-Hua Zhou received the BSc, MSc, and PhD degrees in computer science from Nanjing University, China, in 1996, 1998 and 2000, respectively, all with the highest honors. He joined the Department of Computer Science & Technology at Nanjing University as an assistant professor in 2001, and is currently professor and standing deputy director of the National Key Laboratory for Novel Software Technology; he is also the founding director of the LAMDA group. His research interests are mainly in artificial intelligence, machine learning, and data mining. He has authored the books *Ensemble Methods: Foundations and Algorithms* and} (in Chinese), and published more than 100 papers in top-tier international journals or conference proceedings. He also holds 18 patents. He is an executive editor-in-chief of the *Frontiers of Computer Science*, associate editor-in-chief of the *Science China Information Sciences*, action editor or associate editor of the *Machine Learning* and *Statistical Analysis and Data Mining*, etc. He served as associate editor-in-chief for *Chinese Science Bulletin* (2008-2014), associate editor for the *IEEE Transactions on Knowledge and Data Engineering* (2008-2012), the *IEEE Transactions on Neural Networks and Learning Systems* (2014-2017), the *ACM Transactions on Intelligent Systems and Technology* (2009-2017), the *Neural Networks* (2014-2016), the *Knowledge and Information Systems* (2003-2008), etc. He founded ACML (Asian Conference on Machine Learning), served as Advisory Committee member for IJCAI (2015-2016), Steering Committee member for ICDM, PAKDD and PRICAI, and Chair of various conferences such as General chair of PAKDD 2014 and ICDM 2016, Program chair of SDM 2013 and IJCAI 2015 Machine Learning Track, and Area chair of NIPS, ICML, AAAI, IJCAI, KDD, etc. He is/was the chair of the IEEE CIS Data Mining Technical Committee (2015-2016), the chair of the CCF-AI (2012-), and the chair of the Machine Learning Technical Committee of CAAI (2006-2015). He has received various awards/honors including the National Natural Science Award of China, the PAKDD Distinguished Contribution Award, the IEEE ICDM Outstanding Service Award, the IEEE CIS Outstanding Early Career Award, the Microsoft Professorship Award, etc. He is a foreign member of the Academy of Europe, and a fellow of the ACM, AAAI, AAAS, IEEE, IAPR, IET/IEE and CCF.