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 two years since I assumed the role of Editor-in-Chief, on January 1, 2017. All in all, it's been another very good year. Our impact factor continues to climb, from 8.329 (2016) to 9.455 (2017), maintaining our rank as one of the top journals in computer vision and one of the top journals in all of computer science. Our submissions are up from the 917 we had last year, and as of Oct. 18, we had 923 submissions this year. However, our throughput metrics still need improvement. For papers accepted in 2018, the average time from submission to first decision is 3 months, average time from submission to final decision is 12 months, and average time from submission to publication on Xplore is just under 13 months. As I mentioned last year, 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.

Over the past two years, a big part of my strategy to reduce time to acceptance and publication 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. On top of the 26 new AEs that we added in 2017, I'm pleased to report that we've added another 22 new AEs this year, who I'll introduce shortly. I plan to add another 20-30 additional AEs over the coming year, as I continue to retire those that have exceeded their 2+2-year editorial board terms. I continue to work with Joyce Arnold on an evolving report generation strategy that flags papers that require urgent attention, as those papers contribute significantly to our average time to acceptance.

One challenge we face going forward is the IEEE Computer Society's (CS) decision last year to reduce the regular paper page limit from 14 down to 12 pages, a decision which the IEEE CS felt would help increase revenue, assuming that authors would continue to submit 14-page papers and be willing to pay for the extra two pages. While I am sympathetic to the IEEE CS's financial challenges, I strongly opposed this policy, and presented my case to the IEEE Computer Society Executive Committee, in October 2017, to no avail. I will monitor the impact of this new policy on our journal, and welcome your thoughts and reactions.

As always, the best part of my editorial is introducing our new editorial board members and thanking our retiring board members. After 5 years of outstanding service to our journal, Tinne Tuytelaars and Amir Globerson are stepping down as Associate Editors-in-Chief (AEICs). I can't thank them enough for their outstanding contributions to our journal. They both served with distinction in this challenging role, and I'm extremely grateful for their exceptional diligence, responsiveness, judgement, and support. I will sincerely miss working closely with them both.

I'm pleased to announce that Tinne and Amir will be replaced by two outstanding and highly qualified individuals: Jun Zhu and Bernt Schiele. Jun has been serving as Acting Associate Editor-in-Chief while Christoph Lampert has been on a brief leave, and I'd like to thank him for stepping up on Christoph's behalf. He's done an outstanding job, and I'm very pleased he can stay on in the role. Both Jun and Bernt bring leadership and broad expertise to the role, and I'm very grateful for their willingness to help us out. I'm really looking forward to working with them both!

I'm pleased to announce a new cohort of 22 Associate Editors that have joined since January, 2018: Octavia Camps, Gustavo Carneiro, Rogerio Feris, Charless Folwkes, Mario Fritz, Yuhong Guo, Abhinav Gupta, Bohyung Han, Tal Hassner, Vincent Lepetit, Nicolas Le Roux, Jia Li, Shua Li, Daniel Lowd, Konrad Schindler, Leonid Sigal, Jakob Verbeek, Jingdong Wang, Liang Wang, Liwei Wang, Song Wang, and Changshui Zhang. 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 this 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: Ryan Adams, Thomas Brox, Tim Cootes, Derek Hoiem, Gert Lanckriet, Hugo Larochelle, Greg Mori, Yael Moses, Ian Reid, Sudeep Sarkar, Silvio Savarese, Fei Sha, Cristian Sminchisescu, Rene Vidal, and Lihi Zelnik-Manor. 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!

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Finally, I'd like to once again express my thanks to the many individuals that have not only established *TPAMI* as an elite journal, but are instrumental in its day-to-day operations. First, I could not do this job without the help of my stellar Associate Editors-in-Chief (AEICs): Amir Globerson, Christoph Lampert, Dale Schuurmans, and Jun Zhu on the machine learning side, and Kristen Grauman, Kyoung Mu Lee, Bernt Schiele, 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. 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. Their collective experience continues to be a valuable resource to me. Finally, I'd like to offer a special thanks to Joyce Arnold who continues to be of enormous help to me, and has even found a way to provide additional support this year. 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 them all!

Sven Dickinson *Editor-in-Chief*



Bernt Schiele received the PhD degree from INP Grenoble, France, in 1997 under the supervision of Prof. James L. Crowley in the field of computer vision. He is Max-Planck-director with MPI Informatics and professor with Saarland University, since 2010. He studied computer science at the University of Karlsruhe, Germany. He worked on his master thesis in the field of robotics in Grenoble, France, where he also obtained the "diplome d'etudes approfondies d'informatique". In 1994 he worked in the field of multi-modal human-computer interfaces at Carnegie Mellon University, Pittsburgh, PA, USA in the group of Alex Waibel. The title of his thesis was "Object Recognition using Multidimensional Receptive Field Histograms". Between 1997 and 2000 he was postdoctoral associate and visiting assistant professor with the group of Prof. Alex Pentland at the Media Laboratory of the Massachusetts Institute of Technology, Cambridge, MA, USA. From 1999 until 2004 he was assistant professor with the Swiss Federal Institute of Technology in Zurich (ETH Zurich). Between 2004 and 2010 he was Full professor at the computer science department of TU Darmstadt.



Jun Zhu received the BE and PhD degrees in computer science from Tsinghua, in 2005 and 2009, respectively. He is a professor at the Department of Computer Science and Technology in Tsinghua University. He was an adjunct faculty at the Machine Learning Department in Carnegie Mellon University from 2015 to 2018. Before joining Tsinghua in 2011, he did post-doctoral research in Carnegie Mellon University. His research interest lies in machine learning and applications in text and image analysis. He has published more than 100 papers in the prestigious conferences and journals. He is an associate editor-in-chief for IEEE Trans. on PAMI and editorial board member for Artificial Intelligence. He served as area chair/senior PC for ICML, NIPS, IJCAI, UAI, AAAI, and AISTATS. He was a local co-chair of ICML 2014. He is a recipient of several awards, including IEEE Intelligent Systems "AI's 10 to Watch" Award, MIT TR35 China, NSFC Excellent Young Scholar Award, CCF Young Scientist Award, and CCF first-class Natural Science Award. His work is supported by the National Youth Top-notch Talent Support program.



Octavia Camps received the BS degree in computer science, the BS degree in electrical engineering from the Universidad de la Republica (Uruguay), and the MS and the PhD degrees in electrical engineering from the University of Washington. She was a visiting researcher at the Computer Science Department at Boston University during Spring 2013. Since 2006, she is a professor in the Electrical and Computer Engineering Department at Northeastern University. From 1991 to 2006 she was a faculty of Electrical Engineering and of Computer Science and Engineering at The Pennsylvania State University. In 2000, she was a visiting faculty at the California Institute of Technology and at the University of Southern California. Her main research interests include dynamics-based computer vision, machine learning, and image processing. She is an associate editor of Computer Vision and Image Understanding. She is a member of the IEEE Society.



Gustavo Carneiro received the PhD degree in computer science from the University of Toronto (Canada), in 2004 is an associate professor of the School of Computer Science at the University of Adelaide, Australia. He joined the University of Adelaide as a senior lecturer in 2011, and has become an associate professor in 2015. In 2014, he spent 7 months at the Technical University of Munich (Germany) as a visiting professor and a Humboldt fellow. From 2008 to 2011 He was a Marie Curie International Incoming fellow and a visiting assistant professor at the Instituto Superior Tecnico (Lisbon, Portugal) within the Carnegie Mellon University-Portugal program (CMU-Portugal). From 2006 to 2008, he was a research scientist at Siemens Corporate Research in Princeton, USA. In 2005, he was a post-doctoral fellow at the University of British Columbia (Canada) and at the University of California San Diego (USA). His main research interests include computer vision, medical image analysis, and machine learning.



Rogerio Schmidt Feris received the PhD degree in computer science from the University of California, Santa Barbara. He is the head of computer vision and multimedia research at IBM T. J. Watson Research Center, as part of IBM Research Al. He joined IBM in 2006. He has also worked as an Affiliate associate professor at the University of Washington and as an Adjunct associate professor at Columbia University, teaching courses on Visual Recognition and Search and Automatic Video Surveillance. He has authored more than 100 technical papers and has more than 40 issued patents in the areas of computer vision, multimedia, and machine learning. His work has been covered by ABC News, CBS 60 minutes, and the New York Times, among other media outlets. He has served as area chair of top premiere computer vision and machine learning conferences, such as CVPR, ICCV, and NIPS. See more at http://rogerioferis.com.



Charless Fowlkes received the PhD degree in computer science from UC Berkeley, in 2005 and the BS degree with honors from Caltech, in 2000. He is a professor in the Department of Computer Science and the director of the Computational Vision Lab at the University of California, Irvine. His research is in computer vision, machine learning and their application to the biological sciences. He is the recipient of the Helmholtz Prize in 2015 for fundamental contributions to computer vision in the area of image segmentation and grouping, the David Marr Prize in 2009 for his work on contextual models for object recognition, and a National Science Foundation CAREER award. He currently serves on the editorial board of Computer Vision and Image Understanding (CVIU) and IEEE Transactions on Pattern Analysis and Machine Intelligence (IEEE-TPAMI).



Mario Fritz received the PhD degree from Technische Universität Darmstadt. He holds a faculty position at the CISPA Helmholtz Center i.G. where he is working at the intersection of security and privacy with computer vision, machine learning – and more generally – intelligent systems. Before, he was heading a research group at the Max Planck Institute for Informatics, did his post-doc at ICSI and UC Berkeley. His recent work focuses on Deep Learning techniques that allow end-to-end training of complex and multi-modal approaches. He has coauthored more than 70 Publications – more than 40 in top journals and conferences. His key contributions include work on domain adaptation, latent factor models, the Visual Turing Test as well as his pioneering work on privacy in visual data.



Yuhong Guo received the PhD degree in computing science from the University of Alberta. She is an associate professor in the School of Computer Science at Carleton University and a Canada research chair in Machine Learning. She is also a faculty affiliate of the Vector Institute. She worked as a research fellow at the Australian National University and as an associate professor at Temple University. She has served on the Senior Program Committees of AAAI 2016-18, IJCAI 2015-17 and ACML 2017-18, and served as an area chair for IJCAI-18 and AAAI-19. She was a program co-chair for the Output Representation Learning workshops at NIPS-13 and NIPS-14, and the Heterogeneous Learning workshops at SDM-14 and SDM-15. Her research interests include machine learning, artificial intelligence, natural language processing, and computer vision. She has received a distinguished paper award from IJCAI and an outstanding paper award from AAAI.



Abhinav Gupta is an associate professor at the Robotics Institute, Carnegie Mellon University, and Research Manager at Facebook Al Research (FAIR). His research focuses on scaling up learning by building self-supervised, lifelong and interactive learning systems. Specifically, he is interested in how self-supervised systems can effectively use data to learn visual representation, common sense and representation for actions in robots. He is a recipient of several awards including ONR Young Investigator Award, PAMI Young Research Award, Sloan Research Fellowship, Okawa Foundation Grant, Bosch Young Faculty Fellowship, YPO Fellowship, IJCAI Early Career Spotlight, ICRA Best Student Paper award, and the ECCV Best Paper Runner-up Award. His research has also been featured in Newsweek, BBC, Wall Street Journal, Wired and Slashdot.

Bohyung Han received the BS and MS degrees from the Department of Computer Engineering, Seoul National University, Korea, in 1997 and 2000, respectively, and the PhD degree from the Department of Computer Science, the University of Maryland, College Park, MD, USA, in 2005. He is currently an associate professor in the Department of Electrical and Computer Engineering at Seoul National University, Korea. Prior to the current position, he was an associate professor in the Department of Computer Science and Engineering at POSTECH and a visiting research scientist in Machine Intelligence Group at Google, Venice, CA, USA. He served or will be serving as an area chair or Senior Program Committee member of numerous major conferences in computer vision and machine learning, a tutorial chair in ICCV 2019, and a demo chair in ACCV 2014. He is also serving as area editor in Computer Vision and Image Understanding and associate editor in Machine Vision Applications. He is interested in various problems in computer vision and machine learning with emphasis on deep learning. His research group won Visual Object Tracking (VOT) Challenge in 2015 and 2016.



Tal Hassner received the MSc and PhD degrees in applied mathematics and computer science from the Weizmann Institute of Science in 2002 and 2006, respectively. In 2008 he joined the faculty of the Department of Mathematics and Computer Science, the Open University of Israel, where he is currently an associate professor. From 2015 to 2018, he was a senior computer scientist at the Information Sciences Institute and a Visiting Research associate professor at the Institute for Robotics and Intelligent Systems, Viterbi School of Engineering, both at USC, CA, USA. From 2018, he is a principle applied scientist at AWS. In recent years, his work focused on processing and understanding face images and videos, with a particular emphasis on face recognition and 3D reconstruction. He served in numerous community roles including organizing international workshops and conferences. In particular, he was program co-chair for the 2018 IEEE Winter Conf. on Applications of Computer Vision (WACV) and is the program co-chair for the IEEE / CVF International Conference on Computer Vision (ICCV) in 2021.



Vincent Lepetit is a full professor at the LaBRI, University of Bordeaux, France since 2017, and also supervizes a research group in Computer Vision for Augmented Reality at the Institute for Computer Graphics and Vision, TU Graz, Austria, since 2014. Before that, he was a research and teaching associate at the Computer Vision Laboratory at EPFL, Switzerland. His research is at the interface between *Machine Learning and 3D Computer Vision*, with application to 3D hand pose estimation, feature point detection and description, and 3D object or camera registration from images. He often serves as area chair and program committee member of major vision conferences.



Nicolas Le Roux received the PhD degree from the University of Montreal, in 2008, where he worked with Yoshua Bengio on neural networks in general and their optimisation in particular. He then moved to Microsoft Research Cambridge to work on generative models of images with John Winn. In 2010, he joined Inria in Francis Bach's team to work on large-scale convex optimisation. From 2012 to 2017, he created and managed the research team at Criteo in Paris. He joined Google Brain Montreal in 2017 where he now works on large-scale optimization and reinforcement learning. In 2018, he won the Lagrange prize in continuous optimization for his work on stochastic variance reduction methods, along with co-authors Mark Schmidt and Francis Bach.



Jia Li received the PhD degree from the Computer Science Department at Stanford University. She is the head of R&D of Google Cloud AI and an adjunct professor at Stanford University in the School of Medicine. In Healthcare, she is interested in how AI could improve the outcomes of individual patients as well as hospitals. At Google Cloud AI, our mission is to democratize AI and advance AI. Her org focus on both research innovation to solve real world problems and developing the full stack of AI products on Google Cloud to power solutions for diverse industries. Before joining Google, she was the head of research at Snap, leading the research innovation effort. Before Snap, she led the Visual Computing and Learning Group at Yahoo! Labs. In 2014, she was selected to receive the Super Star award at Yahoo!, the highest award at the company. She was also awarded the Master Inventor Award for his innovations in AI/ML. She was the leader of the OPTIMOL team, which won the first prize in the Semantic Robotics Vision Challenge sponsored by NSF and AAAI in 2007. She served as the program chair of ACM Multimedia 2017, area chair of ICCV 2017 and CVPR 2019, Industry relationship chair of CVPR 2016 and volunteers chair of CVPR 2010. She is on The Computer Vision Foundation Industrial Advisory Board. She is serving as associate editor

of IEEE Transactions on Pattern Analysis and Machine Intelligence (TPAMI) and associate editor of the Visual Computer: International Journal of Computer Graphics by Springer. She selected as a Young Global Leader by the World Economic Forum in 2018. Her work has been reported in the media including: Forbes, TechCrunch, CNBC, New Scientist, MIT Technology Review and more in recent years.



Shuai Li received the PhD degree from the Department of Theoretical and Applied Sciences, University of Insubria. He is a researcher at the Department of Engineering, University of Cambridge. His main area of research lies in machine learning, information retrieval, and data science. He is an associate editor of the *IEEE Transactions on Pattern Analysis and Machine Intelligence*, and he is on the Programme Committee of the ICML, NIPS, SIGIR, ICDM, SDM, SIGKDD, UAI, AISTATS, WWW, WSDM, etc. He has 8+ years professional experience across Europe, North America, Middle East, and Asia Pacific; and 20+ years project experience in Computer and Information Engineering, Hardware and Software R&D, etc.



Daniel Lowd received the PhD degree from the University of Washington, in 2010. He is an associate professor in the Department of Computer and Information Science at the University of Oregon. His research interests include adversarial machine learning, tractable probabilistic models, and statistical relational artificial intelligence. He co-authored the book "Markov Logic: An Interface Layer for Artificial Intelligence," published by Morgan & Claypool. He maintains Libra, an open-source toolkit for Learning and Inference in Bayesian networks, Random fields, and Arithmetic circuits. He has received a Google Faculty Award, an ARO Young Investigator Award, and the best paper award at DEXA 2015.



Konrad Schindler received the MTech (Diplomingenieur) degree in photogrammetry and geo-information from the Vienna University of Technology, Vienna, Austria, in 1999, and the PhD degree from the Graz University of Technology, Graz, Austria, in 2003. He worked as a photogrammetric engineer in the private industry and held researcher positions at the Computer Graphics and Vision Department at Graz University of Technology, the Digital Perception Laboratory at Monash University, and the Computer Vision Laboratory at ETH Zürich. He was an assistant professor of Image Understanding with TU Darmstadt, Darmstadt, Germany, in 2009. Since 2010, he has been a Tenured professor of Photogrammetry and Remote Sensing with ETH Zürich. His research interests include computer vision, photogrammetry, and remote sensing, with a focus on image understanding and information extraction. He has been serving as an associate editor of the *Journal of Photogrammetry and Remote Sensing* of the International Society for Photogrammetry and Remote Sensing (ISPRS) since 2011, and previously served as an associate editor of the *Image and Vision Computing Journal* from 2011 to 2016. He was the Technical Commission president of the ISPRS from 2012 to 2016.

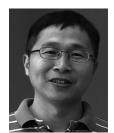


Leonid Sigal received the BSc degrees in computer science and mathematics from Boston University, in 1999, the MA degree from Boston University, in 1999, and the MS degree from Brown University, in 2003, he received the PhD degree from Brown University. He is an associate professor in the Department of Computer Science at the University of British Columbia. Prior to this, from 2009 to 2017, he was a senior research scientist at Disney Research, Pittsburgh and an Adjunct faculty of Carnegie Mellon University. Earlier he was a postdoctoral fellow in the Department of Computer Science at University of Toronto. From 1999 to 2001, he worked as a senior vision engineer at Cognex Corporation, where he developed industrial vision applications for pattern analysis and verification. His work received the Best Paper Awards at the IEEE Winter Conference on Applications of Computer Vision in 2015 and Articulate Motion and Deformable Objects Conference in 2006 and in 2012. His research interests mainly lie in the areas of computer vision, machine learning, and computer graphics, but also borderline fields ofpsychology and humanoid robotics. He is particularly interested in statistical and machine learning models for problems of visual inference, understanding and reasoning; including language+vision, human motion analysis, activity rec-

ognition, object detection, scene understanding, representation learning, graphical models, probabilistic and hierarchical inference. He also enjoys cross disciplinary research that lays on the intersection of computer vision, machine learning and computer graphics.



Jakob Verbeek received "Cum Laude" MSc degrees in artificial intelligence and MSc degrees in Logic both from the University of Amsterdam, in 1998 and 2000, he received the PhD degree in computer science from the same university, in 2004. He is a senior research scientist at INRIA Grenoble. He joined INRIA in 2006 for a PostDoc, was appointment as a permanent research scientist in 2007, and appointed as a senior research scientist in 2017. His research interests are on deep and probabilistic machine learning approaches and their applications in computer vision. He is an associate editor of the *International Journal of Computer Vision (IJCV)* since 2014, and formerly for the *Image and Vision Computing Journal* (2011-2018). He has served as an area chair for conferences including ECCV, CVPR, and BMVC.



Jingdong Wang is a senior researcher with the Visual Computing Group, Microsoft Research, Beijing, China. His areas of current interest include efficient CNN architecture design, person re-identification, human pose estimation, semantic segmentation, large-scale indexing, and salient object detection. He has authored one book and 100+ papers in top conferences and prestigious International Journals in Computer Vision, Multimedia, and Machine Learning. His paper was selected into the Best Paper Finalist at the ACM MM 2015. He has shipped a dozen of technologies to Microsoft products, including Bing search, Cognitive service, and Xiaolce Chatbot. He is an associate editor of the IEEE Transactions on Multimedia and the IEEE Transactions on Circuits and Systems for Video Technology. He was an area chair or a Senior Program Committee Member of top conferences, such as CVPR, ICCV, ECCV, AAAI, IJCAI, and ACM Multimedia. He is a fellow of the IAPR.



Liang Wang received the BEng and MEng degrees both from Anhui University, in 1997 and 2000 respectively, and the PhD degree from the Institute of Automation, Chinese Academy of Sciences (CAS), in 2004. From 2004 to 2010, he worked as a research assistant at Imperial College London, UK and Monash University, Australia, a research fellow at the University of Melbourne, Australia, and a lecturer at the University of Bath, UK, respectively. Currently, he is a full professor of Hundred Talents Program at the National Lab of Pattern Recognition, Institute of Automation, Chinese Academy of Sciences, P. R. China. His major research interests include machine learning, pattern recognition and computer vision. He has widely published at highly-ranked international journals such as IEEE Transactions on Pattern Analysis and Machine Intelligence and IEEE Transactions on Image Processing, and leading international conferences such as CVPR and ICCV. He is currently a senior member of the IEEE and a fellow of IAPR. He was/is an associate editor of IEEE Transactions on Image Processing, IEEE Transactions on Cybernetics, IEEE Transactions on Information Forensics and Security, Pattern Recognition, and Neurocomputing. Http://www.cripac.ia.ac.cn/lwang/.



Liwei Wang is a professor of School of Electronics Engineering and Computer Sciences of Peking University. He is also an adjuct professor of Institute for Interdiscipline Information Sciences of Tsinghua University. His main research interest include machine learning theory. He has published more than 100 papers on top conferences and journals. He was named among "Al's 10 to Watch". He served as the area chair of NIPS and ICML.



Song Wang received the PhD degree from the Department of Electrical and Computer Engineering, University of Illinois at Urbana—Champaign in 2002. He is a professor in the Department of Computer Science and Engineering, University of South Carolina, where he first joined the faculty in 2002. His main research interests include computer vision, image processing, and machine learning and their applications to materials science, medical imaging and cultural heritage preservation. He has published more than 100 papers on these topics. He served as an associate editor for the *Pattern Recognition Letters* and the Publicity/Web Portal chair of the *Technical Committee of Pattern Analysis and Machine Intelligence* of the IEEE Computer Society.



Changshui Zhang received the BS degree in mathematics from Peking University, Beijing, China, in 1986, and the PhD degree from the Department of Automation, Tsinghua University, Beijing, China, in 1992. He joined the Department of Automation of Tsinghua University in 1992. Now he is a professor in Tsinghua University. He is a fellow of the IEEE. His currently research interests include machine learning, artificial intelligence, pattern recognition, computer vision, He authored one book, two book chapters, about 110 journal papers and 190 conference papers published/in-press. Homepage: http://bigeye.au.tsinghua.edu.cn/english/Introduction.html.