Curriculum Vitae

Dacheng Tao

BEng (USTC) MPhil (CUHK) PhD (London) FIEEE FIAPR FOSA FSPIE EMISI FBCS FIET/IEE MAE

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1. Personal Information

NAME Dacheng TAO

WORK ADDRESS

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QUALIFICATIONS

BEng.	Department of Electronic Engineering and Information Science, University of Science and Technology of China.
MPhil.	Department of Information Engineering, Chinese University of Hong Kong.
PhD.	Department of Computer Science and Information Systems, Birkbeck, University of London.

2. Short Biography

Dacheng Tao is Professor of Computer Science in the School of Information Technologies and the Faculty of Engineering and Information Technologies (FEIT) at the University of Sydney. He takes/took a visiting professorship at many top universities and research institutes, e.g. Birkbeck - University of London, Shanghai Jiaotong University, National University of Defense Technology, Huazhong University of Science & Technology, Wuhan University, Northwestern Polytechnic University, Chinese Academy of Sciences, and Xidian University. Previously, he worked as a Nanyang Assistant Professor in the Nanyang Technological University and an Assistant Professor in the Hong Kong Polytechnic University. He received his BEng degree from the University of Science and Technology of China (USTC), his MPhil degree from the Chinese University of Hong Kong (CUHK), and his PhD from the University of London (London).

He mainly applies statistics and mathematics to data analytics problems and his research interests spread across computer vision, computational neuroscience, data science, geoinformatics, image processing, machine learning, medical informatics, multimedia, neural networks and video surveillance. His research results have expounded in one monograph and 500+ publications at prestigious journals and prominent conferences, such as IEEE T-PAMI, T-NNLS, T-IP, T-SP, T-MI, T-KDE, T-CYB, JMLR, IJCV, NC, NIPS, ICML, CVPR, ICCV, ECCV, AISTATS, ICDM, SDM; ACM SIGKDD and Multimedia, with several best paper awards, such as the best theory/algorithm paper runner up award in IEEE ICDM'07, the best student paper award in IEEE ICDM'13, the 2014 ICDM 10-year highest-impact paper award, and the 2017 IEEE signal processing society best paper award. He is a Highly Cited Researcher ranked by Thomson Reuters since 2014 for the categories of Computer Science and Engineering. His publications have been cited in Google Scholar 21K+ times, his H-Index in Google Scholar is 75 and his Erdös number is 3.

He received the 2015 Australian Scopus-Eureka Prize, the 2015 ACS Gold Disruptor Award, the 2015 UTS Vice-Chancellor's Medal for Exceptional Research, the 2009 K.C. WONG Education Foundation Award through the Chinese Academy of Sciences, and an honorable mention for the Outstanding Young Researcher in Image & Vision Computing from Elsevier IVC at 2012. He led a team to win two major tasks (object detection from images with additional training data, and object detection from videos with additional training data) in the Large Scale Visual Recognition Challenge 2015 (ILSVRC2015, known as the world cup in computer vision and machine learning, a first time for Australia); and win the detection task and receive the runner-up of the classification task in the Large-Scale Activity Recognition Challenge 2016 (ActivityNet). The face recognition system developed by his group ranked 1st and 2nd on the NIST Point-and-Shoot Face Recognition Challenge Problem (PaSC) in 2016 (BTAS) and 2015 (FG), respectively.

He has made notable contributions to universities by providing excellent research student supervision. His PhD students won the Chancellor's Award for the most outstanding PhD thesis across the university in 2012 and 2014, respectively, UTS Chancellor Postdoctoral Fellowship in 2012, the Extraordinary Potential Prize of 2011 Chinese Government Award for Outstanding Self-Financed Students Abroad. His co-supervised PhD students won Microsoft Fellowship Award, Baidu Fellowship, Beihang "Zhuoyue" Program, the PLA Best PhD Dissertation Award, the Chinese Computer Federation (CCF) Outstanding Dissertation Award, the Chinese Association for Artificial Intelligence (CAAI) Outstanding Dissertation Award, the Award for the Excellent Doctoral Dissertation of Shanghai, the Award for the Excellent Doctoral Dissertation of Beijing, and Excellent PhD Dissertation Award from the National University of Defense Technology.

He is/was a guest editor of 10+ special issues, an editor of 10+ journals, including ACM Trans. on Knowledge Discovery from DATA (TKDD), ACM Trans. on Intelligent Systems and Technology (TIST), IEEE Trans. on Big Data (TBD), IEEE Trans. on Neural Networks and Learning Systems (T-NNLS), IEEE Trans. on Image Processing (TIP), IEEE Trans. on Cybernetics (TCYB), IEEE Trans. on Systems, Man and Cybernetics: Part B (T-SMCB), IEEE Trans. on Circuits and Systems for Video Technology (T-CSVT), IEEE Trans. on Knowledge and Data Engineering (TKDE), Pattern Recognition (Elsevier), Information Sciences (Elsevier), Signal Processing (Elsevier), and Computational Statistics & Data Analysis (Elsevier). He has edited five books on several topics of optical pattern recognition and its applications. He has chaired for conferences, special sessions, invited sessions, workshops, and panels for 60+ times. He has served for 200+ major conferences including CVPR, ICCV, ECCV, AAAI, IJCAI, NIPS, ICML, ICDM, AISTATS, ACM SIGKDD and Multimedia, and nearly 100 prestigious international journals including T-PAMI, Neural Computation, IJCV, JMLR, NC, AIJ, and MLJ.

He is a Fellow of the Institute of Electrical and Electronics Engineers (IEEE), a Fellow of the Optical Society of America (OSA), a Fellow of the International Association of Pattern Recognition (IAPR), a Fellow of the International Society for Optical Engineering (SPIE), an Elected Member (an equivalent recognition to the Fellow class in other institutions) of the International Statistical Institute (ISI), a Fellow of the British Computer Society (BCS), and a Fellow of the Institution of Engineering and Technology (IET/IEE). He is an Academician of the Academia Europaea (the Academy of Europe). He chaired the IEEE SMC Technical Committee on Cognitive Computing and the IEEE SMC New South Wales Section.

3. Summary of Working Experience

- December/2016–Present, Professor of Computer Science and ARC Future Fellow (level 3), School of Information Technologies, Faculty of Engineering and Information Technologies, University Sydney, Australia.
- December/2016–Present, Adjunct Professor, Faculty of Engineering and Information Technology, University Technology Sydney, Australia.
- September/2016–December/2016, Director, Centre for Artificial Intelligence, Faculty of Engineering and Information Technology, University Technology Sydney, Australia.
- August/2013–December/2016, Professor of Computer Science and ARC Future Fellow (level 3), Faculty of Engineering and Information Technology, University Technology Sydney, Australia.
- November/2010–Present, Professor of Computer Science, Faculty of Engineering and Information Technology, University Technology Sydney, Australia.
- November/2011–October/2014, Visiting Professor, Department of Computer Science and Information Systems, Birkbeck, University of London, U.K.
- January/2011–January/2014, Guest Professor, Shanghai Jiaotong University, Shanghai, China.
- March/2011–March/2014, Guest Professor, Huazhong University of Science and Technology, Wuhan, China.
- May/2011-Present, Guest Professor, Xiamen University, Xiamen, China.
- November/2008–December/2010, Nanyang A/Professor, School of Computer Engineering, Nanyang Technological University, Singapore.
- January/2007–December/2008, A/Professor, Department of Computing, Hong Kong Polytechnic University, Hong Kong, China.
- December/2010–December/2011, Guest Professor, Shenzhen Institutes of Advanced Technology, Chinese Academy of Sciences, Shenzhen, China.
- September/2008–September/2010, Guest Professor, Wuhan University, Wuhan, China.
- June/2008–June/2011, Visiting Professor, Xidian University, Xi'an, China.
- April/2009–April/2011, Research Associate Fellow, Department of Computer Science and Information Systems, Birkbeck, University of London, London, U.K.
- June/2007–June/2009, Visiting Research Fellow, Department of Computer Science and Information Systems, Birkbeck, University of London, London, U.K.
- September/2007–June/2008, Visiting Lecturer (part-time), Department of Computing, Hong Kong Polytechnic University, Hong Kong, China.
- June/1999–January/2007, Research Assistant (Teaching Assistant), University of Science and Technology of China; The Chinese University of Hong Kong; and Birkbeck, University of London.

4. Awards

- March 2017, the IEEE Signal Processing Society Best Paper Award
- January 2017, ranked 241 worldwide and 3 in Australia on "Top Scientists by H-Index" for the category of "Computer Science and Electronics" by Guide2Research.com
- September 2016, Being named as one of the World's Top Researchers in Science according to Thomson Reuters report in the categories of Engineering and Computer Science, "The World's Most Influential Scientific Minds 2016". (http://hcr.stateofinnovation.thomsonreuters.com/)

- June 2016, received the second prize of the National Natural Science Award from Ministry of Science and Technology of the People's Republic of China
- June 2016, win the detection task in the Large Scale Activity Recognition Challenge 2016 (ActivityNet).
- June 2016, receive the runner-up for the classification task in the Large Scale Activity Recognition Challenge 2016 (ActivityNet).
- May 2016, win the BTAS 2016 Video Person Recognition Evaluation (NIST PaSC). Especially, the organizers pointed out that our results closed the challenge.
- December 2015, Amax-UTS is a winner in the Large Scale Visual Recognition Challenge 2015 (ILSVRC2015) on two object detection tasks (object detection with additional training data, and object detection from video with additional training data).
- December 2015, Being named as one of the World's Top Researchers in Science according to Thomson Reuters report in the categories of Engineering and Computer Science, "The World's Most Influential Scientific Minds 2015". (<u>http://highlycited.com/</u>)
- November 2015, ACS Digital Disruptors Award ICT researcher of the year, Gold Disruptor 2015
- October 2015, the UTS Vice-Chancellor's Medal for Exceptional Research
- July 2015, the Scopus Eureka Prize for Excellence in International Scientific Collaboration
- May 2015, Runner-up in the FG 2015 Video Person Recognition Evaluation (NIST PaSC)
- December 2014, The ICDM 10 Year Highest Paper Award for "Supervised Tensor Learning, Dacheng Tao, Xuelong Li, Weiming Hu, Stephen J. Maybank, and Xindong Wu", at the IEEE International Conference on Data Mining (ICDM), December 14-17, Shenzhen, Guangdong, China.
- July 2014, Best Paper Award Candidate for "Learning Relative Features Through Adaptive Pooling for Image Classification" at the IEEE International Conference on Multimedia and Expo (ICME), 2014, Chengdu, China. (Rate: 8/716)
- March 2014, Being named as one of the World's Top Researchers in Science according to Thomson Reuters report in the category of Engineering, "The World's Most Influential Scientific Minds 2014". (http://highlycited.com/)
- April 2014, Best Paper Award for "On the Robustness and Generalization of Cauchy Regression" at the IEEE International Conference on Information Science and Technology (ICIST), April 26-28, 2014, Shenzhen, China.
- December 2013, Best Student Paper Award for "Divide-and-Conquer Anchoring for Near-separable Nonnegative Matrix Factorization and Completion in High Dimensions" at the IEEE International Conference on Data Mining (ICDM), December 7-10, 2013, Dallas, Texas, US.
- August 2013, Best Student Paper Prize for "Large-margin Multi-view Gaussian Process for Image Classification" at the Fifth ACM International Conference on Internet Multimedia Computing and Service (ICIMCS), August 17-19, 2013, Huangshan, China.
- 2013, Signal Processing (Elsevier) Most Cited Article from 2010 Honorable Mention for "X. Li, Y. Hu, X. Gao, D. Tao, and B. Ning "A Multi-frame Image Super-Resolution Method," Signal Processing (Elsevier), vol. 90, no. 2, pp. 405-414, 2010."
- 2013, "A Unified Tensor Level Set for Image Segmentation" by Bin Wang, Xinbo Gao, Dacheng Tao and Xuelong Li won the second prize for the 12th Excellent Natural Science Research Paper Award in Shaanxi Province
- 2013, "Image quality assessment based on multiscale geometric analysis" by Xinbo Gao, Wen Lu, Dacheng Tao and Xuelong Li won the third prize for the 12th Excellent Natural Science Research Paper Award in Shaanxi Province
- 2013, "A local Tchebichef moments-based robust image watermarking" by Cheng Deng, Xinbo Gao, Dacheng Tao and Xuelong Li won the third prize for the 12th Excellent Natural Science Research Paper Award in Shaanxi Province
- 2012, finalists for the UTS Vice-Chancellor's Awards for Research Excellence.

- 2012, Top 100 Most Cited Chinese Papers Published in International Journals (Manifold Regularized Discriminative Nonnegative Matrix Factorization, IEEE Transactions on Image Processing, vol. 20, no. 7, pp. 2030-2048, July 2011), Institute of Scientific and Technical Information of China
- 2012, "HMM-based Graph Edit Distance for Image Indexing" by Bing Xiao, Xinbo Gao, Dacheng Tao and Xuelong Li won the second prize for the 11th Excellent Natural Science Research Paper Award in Shaanxi Province
- December 2012, ICMLA Appreciation Award for contribution as the Program Chair of the IEEE International Conference on Machine Learning and Applications 2012 main conference.
- 2012, Most Cited Neurocomputing Articles for "D. Tao, X. Li, X. Wu, and X. J. Maybank, Tensor Rank One Discriminant Analysis-A convergent method for discriminative multilinear subspace selection, Neurocomputing (Elsevier), vol. 71, no. 10-12, pp. 1866-1882, June 2008".
- 2012, Springer DMKD Editor's Choice Articles for "Manifold elastic net: a unified framework for sparse dimension reduction", selected by the EiC of DMKD Professor Geoff Webb at Monash University
- May 2012, Honorable mention for the "2012 Outstanding Young Researcher in Image & Vision Computing".
- December 2009, Best Paper Award for "Cross-Domain Web Image Annotation" at the IEEE ICDM Workshop on Internet Multimedia Mining, December 6, 2009
- March 2009, K. C. WONG Education Foundation Award, Chinese Academy of Sciences
- October 2008, Best Student Paper Award Honorable Mention for "Palmprint Identification on Directional Representation" at the IEEE International Conference on Systems, Man and Cybernetics, October 14, 2008, Singapore
- October 2008, Franklin V. Taylor Memorial Award Candidate, IEEE International Conference on Systems, Man and Cybernetics
- October 2007, Best Theory/Algorithm Paper Runner Up Award for "General Averaged Divergence Analysis" at the IEEE International Conference on Data Mining, October 28-31, 2007, Omaha, Nebraska, USA.

5. Research Funding from ARC

- Australian Research Council (ARC) Linage Project: Sequential Interaction Mining for Cyberbullying Detection on Social Media. (Project number LP150100671, Amount: AU \$550,000.00, from June/2015 to June/2018). [UTS Chief Investigators: A/Prof Ivor Tsang, A/Prof Xue Li; Prof Dacheng Tao, Dr Guodong Long, Mr David Wisener, Mr Jeffery Hinch, Dr Alan Wang, Mr Jennese Pallon]
- Australian Research Council (ARC) Linage Project: Deep Pattern Mining for Dynamic Real-time Enterprise Scale Pricing. (Project number LP140100569, Amount: AU \$510,000.00, from June/2014 to June/2017). [UTS Chief Investigators: Prof Chengqi Zhang, Prof Dacheng Tao, Dr Ling Chen, Coates Hire Chief Investigators: Mr Mark Liu, Dr Alex Lassauniere, Mr Javier Christie, Mr Ben Waterhouse] (Due to the ARC not permitting the variation of a new partner, this project has been relinquished in Oct 2015 and the allocated funding has been returned to the ARC)
- Australian Research Council (ARC) Discovery Project: Nonlinear Transfer Distance Metric Learning for Gleaning Knowledge from the Crowd. (Project number DP140102164, Account: 02. (325320)327310.120.1032181, Amount: AU \$400,000.00, from January/2014 to December/2016). [Chief Investigators: Prof Dacheng Tao and Dr Jun Li; Partner Investigator: Prof John Shawe-Taylor]
- Australian Research Council (ARC) Future Fellowship: Multiview Complete Space Learning for Sparse Camera Network Research. (Project number FT130101457, Account: 02. (325320)327310.120.1032190, Amount: AU \$916,144.00, from January/2013 to December/2017).

[Chief Investigator: Prof Dacheng Tao; International Collaborators: Prof Bernhard Schölkopf, Prof David Hogg, Prof Stephen J. Maybank, Prof Larry S. Davis]

- Australian Research Council (ARC) Linkage Infrastructure, Equipment and Facilities: FlashLite. (Project number LE140100061, Amount: 1,000,000.00, in 2014). [Chief Investigators: Prof David Abramson, Prof Xiaofang Zhou, Prof Debra J Bernhardt, Prof Chengqi Zhang, Prof Xingquan Zhu, Prof Dacheng Tao, Dr Ling Chen, Prof Michael J Drinkwater, Prof Rodger B Tomlinson, Prof Ross L Coppel, A/ Prof Yuantong Gu, Prof Kevin Burrage, Prof Lyn R Griffiths, Prof Ian W Turner, Prof Brendan G Mackey, A/ Prof Aijun Du, Prof Kerrie L Mengersen, and Prof David Edwards]
- Australian Research Council (ARC) Discovery Project: A General Bayesian Multilinear Analysis Framework for Human Behaviour Recognition. (Project number DP120103730, Account: 02.327310.120.1032103, Amount: AU \$378,000.00, from January/2012 to December/2014). [Chief Investigator: Prof Dacheng Tao; Partner Investigator: Prof Stephen J. Maybank]

6. Journal/Book Editorships

- Associate Editor, ACM Transactions on Intelligent Systems and Technology (ACM)
- Associate Editor, ACM Transactions on Knowledge Discovery from DATA (ACM)
- Associate Editor, IEEE Access (IEEE) ISSN: 2169-3536. [2015 PROSE Award]
- Associate Editor, IEEE Transactions on Big Data (IEEE)
- Associate Editor, IEEE Transactions on Emerging Topics in Computational Intelligence (TETCI)
- Associate Editor, IEEE Transactions on Neural Networks and Learning Systems (IEEE) ISSN: 2162-237X. [SCI-IF: 4.37]
- Associate Editor, IEEE Transactions on Image Processing (IEEE) ISSN: 1057-7149. [SCI-IF: 3.111]
- Associate Editor, IEEE Transactions on Cybernetics (IEEE, Ranked #1 in Computer Science-Cybernetics) ISSN: 1083-4419. [SCI-IF: 3.781]
- Associate Editor, IEEE Transactions on Systems, Man and Cybernetics: Part B (IEEE, Ranked #1 in Computer Science-Cybernetics) ISSN: 1083-4419. [SCI-IF: 3.781]
- Associate Editor, IEEE Transactions on Circuits and Systems for Video Technology (IEEE, a premier journal of video processing algorithms, real-time implementation, VLSI architecture and technology, and related topics) ISSN: 1051-8215. [SCI-IF: 2.259]
- Associate Editor, IEEE Transactions on Knowledge and Data Engineering (IEEE, a premier journal of data mining) ISSN: 1041-4347. [SCI-IF: 1.815]
- Associate Editor, Pattern Recognition (Elsevier, the official journal of the Pattern Recognition Society) ISSN: 0031-3203. [SCI-IF: 2.584]
- Associate Editor, Cognitive Computation (Springer) ISSN: 1866-9956. [SCI-IF: 1.1]
- Associate Editor, Neurocomputing (Elsevier) ISSN: 0925-2312. [SCI-IF: 2.005]
- Associate Editor, Computational Statistics & Data Analysis (Elsevier, the Official Journal of the International Association for Statistical Computing) ISSN: 0167-9473. [SCI-IF: 1.151]
- Associate Editor, Information Sciences (Elsevier) ISSN: 0020-0255. [SCI-IF: 3.893]
- Associate Editor, Pattern Analysis and Applications (Springer) ISSN: 1433-7541. [SCI-IF: 0.742]
- Associate Editor, Neural Processing Letters (Springer) ISSN: 1370-4621 (print version), 1573-773X (electronic version). [SCI-IF: 1.237]
- Editorial Board Member, EURASIP Signal Processing Journal (Elsevier, A publication of the European Association for Signal Processing) ISSN: 0165-1684. [SCI-IF: 2.238]

- Editorial Board Member, Advances in Multimedia (An open access journal published by the Hindawi Publishing Corporation)
- Editorial Board Member, American Journal of Engineering and Applied Sciences (Science Publications)
- International Advisory Board Member, International Journal of Patterns.
- Guest Editor, IEEE Computational Intelligence Magazine (IEEE) special issue on Computational Intelligence for Changing Environments. [SCI-IF: 2.706]
- Guest Editor, Pattern Recognition (Elsevier) special issue on learning semantics from multimedia content. [SCI-IF: 3.279]
- Guest Editor, Computer Vision and Image Understanding (Elsevier) special issue on video analysis.
 [SCI-IF: 2.22]
- Guest Editor, Neurocomputing (Elsevier) special issue on subspace learning. [SCI-IF: 1.234]
- Guest Editor, Neurocomputing (Elsevier) special issue on neurocomputing for vision research. [SCI-IF: 1.234]
- Guest Editor, Pattern Recognition Letters (Elsevier) special issue on video-based object and event analysis. [SCI-IF: 1.559]
- Guest Editor, Signal Processing (Elsevier) special issue on visual information analysis for security. [SCI-IF: 1.256]
- Book Editor, "Semantic Mining Technologies for Multimedia Databases", Idea Group Inc.
- Book Editor, "Computational Intelligence and Its Applications", The Press of University of Science and Technology of China.
- Book Editor, "Video Search and Mining", Springer.
- Book Editor, "Tensors in Image Processing and Computer Vision", Springer.
- Book Editor, "Multimedia Analysis, Processing and Communications", Springer.

7. Conference Chairs

- Senior Program Committee Member, 23rd ACM SIGKDD Knowledge Discovery and Data Mining (SIGKDD 2017).
- Area Chair (machine learning), 2017 International Joint Conference on Artificial Intelligence (IJCAI), Melbourne, Australia, July 11-15, 2017.
- Summit Chair, Emerging Big Data Technologies Summit, Melbourne, Australia, December 7-9, 2016.
- Program Chair, ACCV 2016 Workshop on Benchmark and Evaluation of Surveillance Task (BEST), Taibei, Taiwan, November 20-24, 2016.
- Program Chair, 4th Chinese Conference on Intelligent Video Surveillance, October, 19, 2016.
- Senior Program Committee Member, 22nd ACM SIGKDD Knowledge Discovery and Data Mining (SIGKDD 2016).
- Area Chair (Image/video content analysis), 2016 IEEE International Conference on Multimedia and Expo (ICME), Seattle, WA, USA, July 11-15, 2016.
- Poster Chair, 21st ACM SIGKDD Conference on Knowledge Discovery and Data Mining, August 24 -27, 2015
- Senior PC (Area Chair), The 19th Pacific-Asia Conference on Knowledge Discovery and Data Mining (PAKDD 2015)
- Program Co-Chair, 21st International Conference on MultiMedia Modelling, January 5-7, 2015

- General Co-Chair, 2014 International Conference on Security, Pattern Analysis, and Cybernetics (ICSPAC 2014) October 15 18, 2014
- Program Area Chair, IEEE International Conference on Tools with Artificial Intelligence (ICTAI 2014).
- Technical Track Chair (Pattern recognition for SIP), IEEE China Summit and International Conference on Signal and Information Processing (ChinaSIP14).
- Steering Committee Member, The International Conference on Progress in Informatics and Computing (PIC-2014)
- Senior PC (Area Chair), The 18th Pacific-Asia Conference on Knowledge Discovery and Data Mining (PAKDD 2014)
- Program Area Chair, 15th IEEE International Conference on Multimedia & Expo (ICME 2014).
- International Chair, IEEE International Conference on Computing, Networking and Communications (ICNC, 2013).
- PC Vice Chair, IEEE International Conference on Data Mining (ICDM'13).
- Program Area Chair, IEEE International Conference on Tools with Artificial Intelligence (ICTAI 2013).
- Special Session Program Committee Chair, IEEE International Conference on Systems, Man, and Cybernetics, Special Session on Matrix and Tensor Analysis for Big Vision (SMC 2013, MTA)
- Track Chair, International conference on Emerging Trends in Engineering & Technology (ICETET-13, Cognitive Computing).
- General Chair, The 2nd International Workshop on Emerging Multimedia Systems and Applications in conjunction with ICME (EMSA 2013).
- Program Committee Co-Chair, IEEE International Conference on Machine Learning and Application (ICMLA 2012).
- General Co-Chair, IEEE ICME Workshop on Advances in Large-Scale Multimedia Data Collection, Mining and Retrieval (ICME-Workshop 2012).
- Senior Program Committee Member, 18th ACM SIGKDD Knowledge Discovery and Data Mining (SIGKDD 2012).
- International Chair, IEEE International Conference on Computing, Networking and Communications (ICNC, 2012).
- Senior Program Committee Member, The Pacific-Asia Conference on Knowledge Discovery and Data Mining (PAKDD 2012).
- PC Vice Chair, IEEE International Conference on Data Mining (ICDM'11).
- Program Area Chair, IEEE International Conference on Tools with Artificial Intelligence (ICTAI 2011).
- Tutorial Co-Chair, The 5th International Conference on Knowledge Science, Engineering and Management (KSEM 2011).
- Steering Committee Member, The International Conference on Progress in Informatics and Computing (PIC-2010)
- Program Area Chair, IEEE International Conference on Pattern Recognition (ICPR 2010). [Track I: Computer vision, Areas: Stereo and motion, Tracking and surveillance, and Real-time video analysis]
- Track Chair, IEEE International Conference on Systems, Man and Cybernetics (SMC 2010) [Track S3: Visual Information Processing]
- Technical Co-Chair, International Conference on Advances in Computing, Control, and Telecommunication Technologies (ACT 2010)
- Co-chair, Special Session of Visual Quality Assessment, 2010 SPIE International Conference on Visual Communications and Image Processing.
- Co-chair, Special Session of Interactive Multimedia Analysis, 2010 SPIE International Conference on Visual Communications and Image Processing.

- Co-chair, Special Session of Visual Information Processing, 2009 IEEE International Conference on Systems, Man, and Cybernetics.
- Co-chair, Invited Session of Information Security, 2009 International Conference on Machine Learning and Cybernetics.
- Area Chair, IEEE International Conference on Systems, Man, and Cybernetics 2008 (SMC 2008).
- Co-chair, IEEE International Conference on Data mining Workshop on Video Mining (VM08).
- Co-chair, Special Session on Visual Information Processing in the IEEE International Conference on Systems, Man, and Cybernetics 2008 (SMC 2008).
- Co-chair, Special Session on Information Security in the IEEE International Conference on Machine Learning and Cybernetics 2007.
- Co-chair, Invited Session on Information Security in the IEEE International Conference on Machine Learning and Cybernetics 2008.
- Co-chair, IEEE International Conference on Data Mining Workshop on Knowledge Discovery and Data Mining From Multimedia Data and Multimedia Applications 2007.
- Publicity Chair, The Fourth IEEE International Conference on Information Science and Technology (ICIST), April 26-28, 2014, Shenzhen, China.
- Publicity Chair, International Conference on Frontiers of Computer Science, Systems and Applications (FCSSA) 2010, China.
- Publicity Co-chair, SPIE Visual Communications and Image Processing 2010, China.
- Publicity Chair, International Conference on Progress in Informatics and Computing (PIC) 2010, China.
- Publicity Chair, IEEE workshop on Multimedia Computing & Communication (MCC) 2009 in conjunction with International Conference on Computer Communications and Networks.
- Publicity Chair, 2009 13th International Conference on Computer Analysis of Images and Patterns, Münster (North Rhine-Westphalia), Germany.
- Publicity Chair, 2009 IEEE International Conference on Intelligence Computation and Intelligent System (ICIS'09), Shanghai China.
- Publicity Chair, 2009 International Conference on Computational Intelligence and Security (CIS'2009), BeiJing, China.
- Publicity Co-chair, IEEE International Workshop on Multimedia Analysis and Processing 2008 in conjunction with International Conference on Computer Communications and Networks.
- Publicity Co-chair, the 1st International Symposium Multimedia Applications and Processing, MAP 2008.
- Publicity Co-chair, the 3rd International Workshop on Hybrid Artificial Intelligence Systems, HAIS 2008.
- Publicity Chair, International Conference on Cyberworlds 2008.
- Publicity Chair, IEEE International Conference on Machine Learning and Cybernetics 2008.
- Publicity Chair, International Workshop on Tensors in Image Processing and Computer Vision in Conjunction with IEEE International Conference on Computer Vision and Pattern Recognition 2008.
- Invited Panelist, IEEE Data Mining Forum, 2008.
- Invited Panel Member, Panel discussion with PhD students and ECRs from QCIS & FEIT: "Spark up your life by research", 2012.
- Best paper selection panel, ACM International Conference on Image and Video Retrieval (CIVR 2008).
- Panel member for best paper selection, IEEE International Conference on Systems, Man and Cybernetics (SMC 2012), Seoul.

- Session Chair (Brain and Body Signal Analysis), IEEE International Conference on Systems, Man and Cybernetics (SMC 2012), Seoul.
- Session Chair (Biometric Systems), IEEE International Conference on Systems, Man and Cybernetics (SMC 2012), Seoul.
- Session Chair (Machine Learning), IEEE International Conference on Systems, Man and Cybernetics (SMC 2012), Seoul.
- Session Chair (Matching), IEEE International Conference on Pattern Recognition (ICPR2012), Tsukuba.
- Demo chair, 2009 Asian Conference of Computer Vision, Xi'an China.
- Session Chair (Biometrics I), IEEE International Conference on Image Processing (ICIP), 2009.
- Session Chair, IEEE Pacific-Rim Conference on Multimedia (PCM), 2009.
- Session Chair, IEEE Data Mining Forum, 2008.
- Session Chair, Unsupervised Learning in the World Congress on Computational Intelligence (WCCI), 2008.

8. Journal and Conference Referees/Reviewers

Journal Referee

- ACM Multimedia System Journal (ACM and Springer)
- ACM Transactions on Knowledge Discovery from Data (ACM)
- ACM Transactions on Information Systems (ACM)
- ACM Transactions on Intelligent Systems and Technology (ACM)
- ACM Transactions on Multimedia Computing, Communications, and Applications (ACM)
- Applied Soft Computing (Elsevier)
- APSIPA Transactions on Signal and Information Processing (Cambridge)
- Artificial Intelligence Journal (Elsevier)
- Biomedical Signal Processing and Control (Elsevier)
- Brain-Computer Interfaces (Taylor & Francis)
- Computational Statistics (Springer)
- Computational Statistics and Data Analysis (Elsevier)
- Computer Methods and Programs in Biomedicine (Elsevier)
- Computer Vision and Image Understanding (Elsevier)
- Data Mining and Knowledge Discovery (Springer)
- Digital Signal Processing (Elsevier)
- Electronic Journal of Statistics (EJMS)
- Entropy (MDPI)
- EURASIP Journal on Advances in Signal Processing (Hindawi)
- Frontiers of Computer Science in China (Springer and Higher Education Press)
- IEEE Access
- IEEE Intelligent Systems (IEEE)
- IEEE Journal on Emerging and Selected Topics in Circuits and Systems (IEEE)
- IEEE Journal of Selected Topics in Applied Earth Observations and Remote Sensing (IEEE)
- IEEE Journal on Selected Topics in Signal Processing (IEEE)
- IEEE Journal of Biomedical and Health Informatics (IEEE)
- IEEE Multimedia (IEEE)
- IEEE Network (IEEE)
- IEEE Transactions on Automation Science and Engineering (IEEE)
- IEEE Transactions on Broadcasting (IEEE)
- IEEE Transactions on Circuits & Systems for Video Technology (IEEE)
- IEEE Transactions on Cybernetics (IEEE)

- IEEE Transactions on Emerging Topics in Computing (IEEE)
- IEEE Transactions on Image Processing (IEEE)
- IEEE Transactions on Industrial Informatics (IEEE)
- IEEE Transactions on Information Forensics and Security (IEEE)
- IEEE Transactions on Knowledge and Data Engineering (IEEE)
- IEEE Transactions on Multimedia (IEEE)
- IEEE Transactions on Neural Networks (IEEE)
- IEEE Transactions on Neural Networks and Learning Systems (IEEE)
- IEEE Transactions on Pattern Analysis and Machine Intelligence (IEEE)
- IEEE Transactions on Signal Processing (IEEE)
- IEEE Transactions on Systems, Man and Cybernetics, Part A (IEEE)
- IEEE Transactions on Systems, Man and Cybernetics, Part B (IEEE)
- IEEE Transactions on Systems, Man and Cybernetics, Part C (IEEE)
- IEEE Transactions on Systems, Man and Cybernetics, Systems (IEEE)
- IEEE/ACM Transactions on Computational Biology and Bioinformatics (IEEE and ACM)
- IET Image Processing
- Image and Vision Computing (Elsevier)
- Image Communication (Elsevier)
- Information Fusion (Elsevier)
- Information Processing Letters (Elsevier)
- Information Science (Elsevier)
- International Journal of Computer Mathematics (Taylor & Francis)
- International Journal of Computer Vision (Springer)
- International Journal of Image and Graphics (World Scientific)
- International Journal of Imaging Systems and Technology (Wiley)
- International Journal of Machine Learning and Cybernetics (Springer)
- International Journal of Pattern Recognition and Artificial Intelligence (World Scientific)
- International Journal on Very Large Data Bases (Springer)
- IOSPress Integrated Computer-aided Engineering
- Iranian Journal of Electrical and Computer Engineering (IJECE)
- Journal of Applied Mathematics (Hindawi)
- Journal of Applied Remote Sensing (SPIE)
- Journal of Biomedical Informatics (Elsevier)
- Journal of Computer Science and Technology (Springer)
- Journal of Computers (Academy publisher)
- Journal of Electronic Imaging (SPIE)
- Journal of Information Science and Engineering (Academia Sinica)
- Journal of Network and Computer Applications (Elsevier)
- Journal of Signal Processing Systems (Springer)
- Journal of The Institution of Engineers (India) Series B (Springer)
- Journal of Visual Communication and Image Representation (Elsevier)
- Knowledge and Information Systems (Springer)
- Knowledge-Based Systems (Elsevier)
- KSII Transactions on Internet and Information Systems (KSII and KETI)
- Machine Learning Journal (Springer)
- Machine Vision and Applications (Springer)
- Mathematical Problems in Engineering (Hindawi)
- Multidimensional Systems and Signal Processing (Springer)
- Neural Networks (Elsevier)
- Neural Processing Letters (Springer)
- Neurocomputing (Elsevier)
- Neural Computation (MIT)
- Neural Computing and Applications (Springer)
- Optics Letters (OSA)

- Optics Express (OSA)
- Pattern Analysis & Applications (Springer)
- Pattern Recognition (Elsevier)
- Pattern Recognition Letters (Elsevier)
- PLoS One (PLOS)
- Proceedings of the National Academy of Sciences, Physical Sciences
- Royal Society Proceedings A (The Royal Society Publishing)
- Sensors (MDPI AG)
- SIAM Journal on Imaging Sciences (SIAM)
- Signal Processing (Elsevier)
- Signal Processing: Image Communication (Elsevier)
- Soft Computing (Springer)
- The Scientific World Journal (Hindawi)
- The Visual Computer (Springer)
- Wiley Encyclopedia of Electrical and Electronics Engineering (Wiley and IEEE)
- WIREs Data Mining and Knowledge Discovery (Wiley)

Conference Program Committee Member

- AAAI Conference on Artificial Intelligence [2017 (SPC), 2016]
- ACM SIGKDD International Conference on Knowledge Discovery and Data Mining [2017 (SPC), 2016 (SPC), 2015, 2014, 2012 (SPC), 2011, 2010, 2009, 2008, 2007]
- ACM International Conference on Information and Knowledge Management [2012, 2011]
- ACM International Conference on Image and Video Retrieval [2010, 2008]
- ACM International Conference on Multimedia [2015, 2014, 2012, 2011, 2010, 2009, 2008]
- ACM International Conference on Multimedia Retrieval [2011]
- Asian Conference on Computer Vision [2009]
- Asian Conference on Machine Learning [2013, 2011, 2009]
- Asian Conference on Pattern Recognition [2014, 2013, 2011]
- British Machine Vision Conference [2013, 2012, 2011, 2010, 2009, 2007]
- European Conference on Computer Vision [2016, 2014, 2012, 2010, 2008]
- European Conference on Machine Learning and Principles and Practice of Knowledge Discovery in Databases [2015, 2014, 2011]
- IEEE International Conference on Big Data [2013]
- IEEE International Conference on Computer Vision [2017, 2015, 2013, 2011, 2009, 2007]
- IEEE International Conference on Computer Vision and Pattern Recognition [2017, 2016, 2015, 2014, 2013, 2012, 2011, 2010, 2009, 2008, 2007]
- IEEE International Conference on Data Mining [2015, 2014, 2013 (SPC), 2011, 2010, 2009]
- IEEE International Conference on Information Science and Technology [2014]
- IEEE International Conference on Multimedia & Expo [2016 (SPC), 2015, 2014 (SPC), 2010, 2009, 2008, 2007]
- IEEE International Conference on Machine Learning and Application [2011, 2010]
- IEEE International Conference on Machine Learning and Cybernetics [2014, 2013, 2012, 2010, 2009, 2008, 2007, 2006, 2005]
- IEEE International Conference on Pattern Recognition [2014, 2012]
- IEEE International Conference on Systems, Man, and Cybernetics [2014, 2013, 2012, 2009, 2008]
- IEEE International Conference on Tools with Artificial Intelligence [2014 (SPC), 2013 (SPC), 2011]
- IEEE International Conference on Visual Communications and Image Processing [2016]
- IEEE World Congress on Computational Intelligence [2008]
- International Conference on Artificial Intelligence and Statistics [2015, 2014]
- International Conference on Computer Analysis of Images and Patterns [2011, 2009, 2008]
- International Conference on Image Analysis and Recognition [2012, 2011, 2008]
- International Conference on Machine Learning [2016]
- International Joint Conference on Artificial Intelligence [2016, 2015, 2011]

- International Conference on MultiMedia Modeling [2010]
- International Conference on the Theory and Practice of Natural Computing [2013]
- International Conference on Wavelet Analysis and Pattern Recognition [2012, 2010, 2009, 2008, 2007]
- Pacific-Rim Conference on Multimedia [2009]
- Pacific-Asia Conf. on Knowledge Discovery and Data Mining [2014, 2011, 2009]
- SIAM Conference on Data Mining [2015, 2014, 2013, 2011, 2010]
- The Annual Conference on Neural Information Processing Systems [2017, 2016, 2015, 2014, 2011]
- European Conference on Computer Vision Workshop VS-RE-ID [2014]
- IEEE/ACM International Conference on Web Intelligence [2014]
- IEEE International Conference on Mechatronics and Automation [2010]
- IEEE International Conference on Semantic Computing
- IEEE/RSJ International Conference on Intelligent Robots and Systems [2010]
- Australasian Joint Conference on Artificial Intelligence
- Australia Annul Video Conference
- International Congress on Image and Signal Processing [2010]
- International Symposium on Neural Networks [2010]
- IEEE CVPR International Workshop "Three Dimensional Information Extraction for Video Analysis and Mining" [2010]
- IEEE ICDM Workshop "Mining and Understanding from Big Data" [2013]
- IEEE International Workshop on Biometrics
- IEEE International Workshop on Visual Surveillance in conjunction with Europe Conference on Computer Vision
- IEEE International Workshop on Visual Surveillance in conjunction with IEEE International Conference on Computer Vision and Pattern Recognition
- IEEE International Workshop on Internet Multimedia Mining in conjunction with IEEE International Conference on Data Mining [2009]
- IEEE International Workshop on Multimedia Analysis and Processing in conjunction with International Conference on Computer Communications and Networks
- IEEE International Workshop on Multimedia Computing and Communications in conjunction with International Conference on Computer Communications and Networks
- IEEE International workshop on Optimization Based Methods for Emerging Data Mining Problems in conjunction with IEEE International Conference on Data Mining [2009]
- International Conference on Advances in Social Networks Analysis and Mining [2010]
- International Conference on Computer Graphics, Imaging and Visualization [2010, 2009]
- International Conference on Computer Vision Theory and Applications [2010, 2009]
- International Conference on Image and Graphics [2009]
- International Conference on Image Processing, Computer Vision, and Pattern Recognition
- International Conference on Knowledge Science, Engineering and Management
- International Conference on Signal Processing and Multimedia Applications [2010, 2009, 2008, 2007]
- International Conference on Soft Computing as Transdisciplinary Science and Technology
- International Symposium on Neural Network
- International Workshop on Computational Intelligence in Medical Imaging in conjunction with the First
- Internal Workshop on Video Database and Retrieval in Conjunction with DASFAA
- IADIS International Conference e-Commerce [2010, 2009, 2008]
- IADIS International Conference Visual Communication
- IADIS International Conference WWW/Internet
- Pacific-Asia Conf. on Knowledge Discovery and Data Mining [2011]
- Pacific-Asia Conf. on Knowledge Discovery and Data Mining (Industry Track)
- SPIE International Conference on Visual Communications and Image Processing [2010]
- TaoScience International Workshop on Machine learning, Optimization and big Data (MOD) [2015]
- The Annual Conference on Neural Information Processing Systems [2015, 2014, 2013, 2012]
- Top10Qi in Intelligent Informatics/Computing [2012, TC Member]

Conference Referee/Reviewer

- The Annual Conference on Neural Information Processing Systems [2010]
- IEEE International Conference on Image Processing [2013, 2012, 2011, 2010, 2009, 2008, 2007]
- IEEE International Conference on Acoustics, Speech, and Signal Processing [2013, 2012, 2011, 2010, 2009, 2008, 2007]
- ACM International Conference on Multimedia
- ACM/IEEE International Conference on Web Intelligence
- Europe Conference on Information Retrieval
- IEEE International Workshop on Visual Surveillance and Performance Evaluation of Tracking and Surveillance in conjunction with IEEE International Conference on Computer Vision
- IEEE International Conference on Advanced Video and Signal based Surveillance
- IEEE International Conference on Computer Vision and Pattern Recognition
- IEEE International Conference on Intelligent Computing
- IEEE International Conference on Semantic Computing
- IEEE International Conference on Systems, Man, and Cybernetics
- IEEE International Special Session on Intelligent Forecasting Systems and Application of the IEEE World Congress on Computational Intelligence
- International Conference on Bioinformatics
- International Conference on Biometrics
- International Conference on Computer Graphics, Imaging and Visualization
- International Conference on E-learning and Games
- International Conference on Visual Information Engineering
- Pacific-Asia Conference on Knowledge Discovery and Data Mining
- Pacific Rim International Conference on Artificial Intelligence

Grant Referee

- Australian Research Council
- European Research Council
- Fonds Wetenschappelijk Onderzoek (Research Foundation Flanders, an independent funding agency that supports fundamental research in all disciplines in Flanders or Belgium)
- General Research Fund of Hong Kong Research Grant Council
- Israel Science Foundation
- Ministry of Science and Technology of the People's Republic of China
- National Research Foundation, South Africa
- Natural Sciences and Engineering Research Council of Canada
- Romanian National Council for Research and Development
- Science Foundation Ireland

Award committee

- The paper awards committee for IEEE ICIP 2016
- IEEE Fellow Committee, SMC Society
- IEEE Transactions on Neural Networks and Learning Systems 2015 Best Paper Award Committee
- MultiMedia Modelling Conference (MMM 2015), Best demo selection panel
- ACM International Conference on Image and Video Retrieval (CIVR 2008), Best paper selection panel
- Elsevier JVCI best paper award committee (2014)

9. Publications

Patents

- 1. Xue Mei, Danil Prokhorov, Jun Li, and Dacheng Tao, "Multi-Task Deep Convolutional Neural Networks for Efficient and Robust Traffic Lane Detection", *U.S. Pat.*, App. No. 14/687,820. (TEMA Ref.: 2013-326; IP-A-1459), April 15, 2015, Filed.
- 2. Xue Mei, Chaohui Wang, Zhibin Hong, Danil Prokhorov, and Dacheng Tao, "Tracking Using Multilevel Representations", U.S. Pat., App. No. 14/323,360. (TEMA Ref.: 2013-326; IP-A-1459)
- 3. Zhibin Hong, Xue Mei, Zhe Chen, Chaohui Wang, Danil Prokhorov, and Dacheng Tao, "Multi-Store Tracker", U.S. Pat., App. No. 14/716,661. (TEMA Ref.: 2014-385; IP-A-1694)

Journal papers

- Zhe Xu, Shaoli Huang, Ya Zhang, and Dacheng Tao, "Webly-supervised Fine-grained Visual Categorization via Deep Domain Adaptation", *IEEE Transactions on Pattern Analysis and Machine Intelligence* (T-PAMI), vol. 37, no. **, pp. ***, 2016. Accepted on 19 November 2016. [ARC FT-130101457, DP-140102164]
- Ke Gu, Dacheng Tao, Guangtao Zhai, and Weisi Lin, "Learning a No-Reference Image Quality Metric of Enhanced Images", *IEEE Transactions on Neural Networks and Learning Systems* (T-NNLS), vol. 23, no. **, pp. *****, Accepted on 31 December 2016. DOI: [ARC FT-130101457, DP-140102164, LP- 150100671]
- Kailing Guo, Liu Liu, Xiangmin Xu, Dong Xu, and Dacheng Tao, "GoDec+: Fast and Robust Low-rank Matrix Decomposition Based on Maximum Correntropy", *IEEE Transactions on Neural Networks and Learning Systems* (T-NNLS), vol. 23, no. **, pp. *****, Accepted on 13 December 2016. DOI: [ARC FT-130101457, DP-140102164, LP- 150100671]
- 4. Jie Gui, Tongliang Liu, Zhenan Sun, Dacheng Tao, and Tieniu Tan, "Supervised Discrete Hashing with Relaxation", *IEEE Transactions on Neural Networks and Learning Systems* (**T-NNLS**), vol. 23, no. **, pp. *****, Accepted on 1 December 2016. DOI: [ARC FT-130101457, DP-140102164, LE-140100061]
- Wenrui Hu, Dacheng Tao, Wensheng Zhang, Yuan Xie, and Yehui Yang, "The Twist Tensor Nuclear Norm for Video Completion", *IEEE Transactions on Neural Networks and Learning Systems* (T-NNLS), vol. 23, no. **, pp. *****, Accepted on 12 September 2016. DOI: [ARC FT-130101457, DP-140102164, LE-140100061]
- Shengping Zhang, Xiangyuan Lan, Hongxun Yao, Huiyu Zhou, Dacheng Tao, and Xuelong Li, "A Biologically Inspired Appearance Model for Robust Visual Tracking", *IEEE Transactions on Neural Networks and Learning Systems* (T-NNLS), vol. 23, no. **, pp. *****, Accepted on 23 June 2016. DOI: [ARC FT-130101457, DP-140102164, LE-140100061]
- 7. Tongliang Liu, Mingming Gong, and Dacheng Tao, "Large Cone Non-negative Matrix Factorization", *IEEE Transactions on Neural Networks and Learning Systems* (**T-NNLS**), vol. 23, no. **, pp. *****, Accepted on 27 May 2016. DOI: [ARC FT-130101457, DP-140102164]
- 8. Jie Gui, Zhenan Sun, Shuiwang Ji, Dacheng Tao, and Tieniu Tan, "Feature Selection Based on Structured Sparsity: A Comprehensive Study", *IEEE Transactions on Neural Networks and Learning Systems* (T-NNLS), vol. 23, no. **, pp. *****, Accepted on 3 April 2016. DOI: [ARC FT-130101457, DP-140102164]
- Jun Li, Xue Mei, Danil Prokhorov, and Dacheng Tao, "Deep Neural Network for Structural Prediction and Lane Detection in Traffic Scene", *IEEE Transactions on Neural Networks and Learning Systems* (T-NNLS), vol. 23, no. **, pp. *****, Accepted on 31 December 2015. DOI: [ARC FT-130101457, Toyota]
- 10. Chen Gong, Dacheng Tao, Wei Liu, Liu Liu, and Jie Yang, "Label Propagation via Teaching-to-Learn and Learning-to-Teach", *IEEE Transactions on Neural Networks and Learning Systems* (T-NNLS), vol.

23, no. **, pp. *****, Accepted on 31 December 2015. DOI: 10.1109/TNNLS.2016.2514360 [ARC FT-130101457, DP-140102164]

- Kaibing Zhang, Dacheng Tao, Xinbo Gao, Xuelong Li, and Jie Li, "Coarse-to-Fine Learning for Single Image Super-resolution", *IEEE Transactions on Neural Networks and Learning Systems* (T-NNLS), vol. 23, no. **, pp. *****, Accepted on 20 December 2015. DOI: 10.1109/TNNLS.2015.2511069 [ARC FT-130101457, DP-140102164]
- 12. Yunhe Wang, Chang Xu, Shan You, Chao Xu, and Dacheng Tao, "Parts for the Whole: The DCT Norm for Extreme Visual Recovery", *IEEE Transactions on Image Processing* (**T-IP**), vol. 23, no. **, pp. *****, Accepted on 9 January 2017. [ARC FT-130101457, DP-140102164, LP-150100671]
- Bo Du, Zengmao Wang, Lefei Zhang, Liangpei Zhang, and Dacheng Tao, "Robust and Discriminative Labeling for Multi-label Active Learning Based on Maximum Correntropy Criterion", *IEEE Transactions on Image Processing* (T-IP), vol. 23, no. **, pp. *****, Accepted on 20 December 2016. [ARC FT-130101457, DP-140102164, LP-150100671]
- Zhifeng Li, Dihong Gong, Weilin Huang, Xuelong Li, and Dacheng Tao, "Heterogeneous Face Recognition: A Common Encoding Feature Discriminant Approach", *IEEE Transactions on Image Processing* (T-IP), vol. 23, no. **, pp. *****, Accepted on 20 December 2016. [ARC FT-130101457, DP-140102164]
- 15. Yanyun Qu, Li Lin, Fumin Shen, Chang Lu, Yang Wu, Yuan Xie, and Dacheng Tao, "Joint Hierarchical Category Structure Learning and Large-Scale Image Classification", *IEEE Transactions* on *Image Processing* (T-IP), vol. 23, no. **, pp. *****, Accepted on 25 September 2016. [ARC FT-130101457, DP-140102164 and LE-140100061]
- 16. *** Sun, Dacheng Tao, Gang Chen, Chun Chen, and Mingli Song, "Robust and Efficient Depth Reconstruction with Hierarchical Confidence-Based Matching", *IEEE Transactions on Image Processing* (T-IP), vol. 23, no. **, pp. *****, Accepted on 24 August 2016. [ARC FT-130101457, DP-140102164 and LE-140100061]
- Junjie Wu, Hongfu Liu, Tongliang Liu, Dacheng Tao, and Yun Fu, "Spectral Ensemble Clustering via Weighted K-means: Theoretical and Practical Evidence", *IEEE Transactions on Knowledge and Data Engineering* (T-KDE), vol. 23, no. **, pp. *****, Accepted on 3 January 2017. [ARC FT-130101457, DP-140102164, LP-150100671]
- Lefei Zhang, Qian Zhang, Liangpei Zhang, Yuan Yan Tang, Xin Huang, Bo Du, and Dacheng Tao, "Simultaneous Spectral-Spatial Feature Selection and Extraction for Hyperspectral Images", *IEEE Transactions on Cybernetics* (T-CYB), Accepted on 25 August 2016. [ARC FT-130101457, DP-140102164 and LE-140100061]
- 19. Meng Fang, Jie Yin, Lawrence O. Hall, and Dacheng Tao, "Active Multi-Task Learning with Trace Norm Regularization based on Excess Risk", *IEEE Transactions on Cybernetics* (**T-CYB**), Accepted on 25 June 2016. [ARC FT-130101457, DP-140102164 and LE-140100061]
- 20. Jun Yu, Xiaokang Yang, Fei Gao, and Dacheng Tao, "Deep Multimodal Distance Metric Learning Using Click Constraints for Image Ranking", *IEEE Transactions on Cybernetics* (**T-CYB**), Accepted on 25 June 2016. [ARC FT-130101457, DP-140102164 and LE-140100061]
- 21. Zijing Chen, Xinge You, Boxuan Zhong, Jun Li, and Dacheng Tao, "Dynamically Modulated Mask Sparse Tracking", *IEEE Transactions on Cybernetics* (**T-CYB**), Accepted on 25 May 2016. [ARC FT-130101457, DP-140102164 and LE-140100061]
- 22. Bo Du, Wei Xiong, Jia Wu, Lefei Zhang, Liangpei Zhang, and Dacheng Tao, "Stacked Convolutional Denoising Auto-Encoders for Feature Representation", *IEEE Transactions on Cybernetics* (**T-CYB**), Accepted on February 18, 2016.
- 23. Tao Mei, Lusong Li, Xinmei Tian, Dacheng Tao, and Chong-Wah Ngo, "PageSense: Towards Stylewise Contextual Advertising via Visual Analysis of Webpages", *IEEE Transactions on Circuits and Systems for Video Technology* (T-CSVT), Accepted on 13 July 2016. [ARC FT-130101457 and LP-140100569]

- 24. Dapeng Tao, Dacheng Tao, Xuelong Li, and Xinbo Gao, "Large Sparse Cone Non-negative Matrix Factorization for Image Annotation", *ACM Transactions on Intelligent Systems and Technology* (ACM T-IST), vol. **, no. **, Article no. **, Accepted on 8 August 2016. [ARC FT-130101457, DP-140102164 and LE-140100061]
- 25. Liping Xie, Dacheng Tao, and Haikun Wei, "Joint Structured Sparsity Regularized Multi-view Dimension Reduction for Video-based Facial Expression Recognition", *ACM Transactions on Intelligent Systems and Technology* (ACM T-IST), vol. **, no. **, Article no. **, Accepted on 13 June 2016. [ARC FT-130101457, DP-140102164 and LE-140100061]
- Tongliang Liu, Dacheng Tao, Mingli Song, and Stephen J. Maybank, "Algorithm-Dependent Generalization Bounds for Multi-Task Learning", *IEEE Transactions on Pattern Analysis and Machine Intelligence* (T-PAMI), vol. 39, no. 2, pp. 227-241, February 2017. DOI. 10.1109/TPAMI.2016.2544314. Accepted on 13 March 2016. [ARC FT-130101457, DP-140102164]
- Qingshan Liu, Yubao Sun, Cantian Wang, Tongliang Liu, and Dacheng Tao, "Elastic Net Hypergraph Learning for Image Clustering and Semi-supervised Classification", *IEEE Transactions on Image Processing* (T-IP), vol. 26, no. 1, pp. 452-463, January 2017. [ARC FT-130101457, DP-140102164 and LE-140100061]
- Zhe Xu, Shaoli Huang, Ya Zhang, and Dacheng Tao, "Friend or Foe: Fine-Grained Categorization with Weak Supervision", *IEEE Transactions on Image Processing* (T-IP), vol. 26, no. 1, pp. 135-146, January 2017. [ARC FT-130101457, DP-140102164 and LE-140100061]
- Dayong Tian and Dacheng Tao, "Global Hashing System for Fast Image Search", *IEEE Transactions* on *Image Processing* (T-IP), vol. 26, no. 1, pp. 79-89, January 2017. [ARC FT-130101457, DP-140102164]
- Kun Zeng, Jun Yu, Runxin Wang, Cuihua Li, and Dacheng Tao, "Coupled Deep Autoencoder for Single Image Super-Resolution", *IEEE Transactions on Cybernetics* (T-CYB), vol. 47, no. 1, pp. 27-37, January 2017. [ARC FT-130101457, DP-140102164]
- 31. Bo Du, Zengmao Wang, Lefei Zhang, Liangpei Zhang, Wei Liu, Jialie Shen, and Dacheng Tao, "Exploring Representativeness and Informativeness for Active Learning", *IEEE Transactions on Cybernetics* (**T-CYB**), vol. 47, no. 1, pp. 14-26, January 2017. [ARC FT-130101457, DP-140102164]
- 32. Bo Du, Mengfei Zhang, Lefei Zhang, Ruimin Hu, and Dacheng Tao, "PLTD: Patch-Based Low-Rank Tensor Decomposition for Hyperspectral Images", *IEEE Transactions on Multimedia* (T-MM), vol. 19, no. 1, pp. 67-79, January 2017. [ARC FT-130101457 and LP-140100569]
- 33. Chao Zhang, Lei Du, and Dacheng Tao, "LSV-based Tail Inequalities for Sums of Random Matrices", *Neural Computation* (NC), vol. 29, pp. 247-262, 2017. [ARC FT-130101457, DP-140102164]
- 34. Wei Xiong, Lefei Zhang, Bo Du, and Dacheng Tao, "Combining Local and Global: Rich and Robust Feature Pooling for Visual Recognition", *Pattern Recognition* (Elsevier), vol. 62, no. 1, pp. 225-235, January 2017. [ARC FT-130101457, DP-140102164]
- 35. Maoying Qiao, Liu Liu, Jun Yu, Chang Xu, and Dacheng Tao, "Diversified Dictionaries for Multiinstance Learning", *Pattern Recognition* (Elsevier), vol. 64, pp. 407-416, 2017. [ARC FT-130101457, DP-140102164]
- 36. Xiaoshuang Shi, Zhenhua Guo, Feiping Nie, Lin Yang, Jane You, and Dacheng Tao, "Two-dimensional Whitening Reconstruction for Enhancing Robustness of Principal Component Analysis", *IEEE Transactions on Pattern Analysis and Machine Intelligence* (T-PAMI), vol. 38, no. 10, pp. 2130-2136, October 2016. [ARC FT-130101457, DP-140102164]
- Tongliang Liu and Dacheng Tao, "Classification with Noisy Labels by Importance Reweighting", *IEEE Transactions on Pattern Analysis and Machine Intelligence* (T-PAMI), vol. 38, no. 3, pp. 447-461, March 2016. DOI. 10.1109/TPAMI.2015.2456899. [ARC FT-130101457, DP-140102164]
- Changxing Ding, Jonghyun Choi, Dacheng Tao and Larry S. Davis, "Multi-Directional Multi-Level Dual-Cross Patterns for Robust Face Recognition", *IEEE Transactions on Pattern Analysis and Machine Intelligence* (T-PAMI), vol. 38, no. 3, pp. 518-531, March 2016. DOI. 10.1109/TPAMI.2015.2462338. [ARC FT-130101457, DP-140102164]

- 39. Weiqiang Ren, Kaiqi Huang, Dacheng Tao, and Tieniu Tan, "Discovering Visual Objects in Largescale Image Datasets with Weak Supervision", *IEEE Transactions on Pattern Analysis and Machine Intelligence* (**T-PAMI**), vol. 38, no. 2, pp. 405-416, February 2016. DOI. [ARC FT-130101457, DP-140102164]
- Cheng Deng, Jie Xu, Kaibing Zhang, Dacheng Tao, Xinbo Gao, and Xuelong Li, "Similarity Constraints-Based Structured Output Regression Machine: An Approach to Image Super-Resolution", *IEEE Transactions on Neural Networks and Learning Systems* (T-NNLS), vol. 27, no. 12, pp. 2472-2485, December 2016. [ARC FT-130101457, DP-140102164 and DP-120103730]
- 41. Chunlei Peng, Xinbo Gao, Nannan Wang, Dacheng Tao, Xuelong Li, and Jie Li, "Multiple Representations based Face Sketch-Photo Synthesis", *IEEE Transactions on Neural Networks and Learning Systems* (T-NNLS), vol. 27, no. 11, pp. 2201-2215, November 2016. [ARC FT-130101457, DP-140102164, and LP-140100569]
- 42. Tongliang Liu and Dacheng Tao, "On the Performance of Manhattan Non-negative Matrix Factorization", *IEEE Transactions on Neural Networks and Learning Systems* (**T-NNLS**), vol. 28, no. 7, pp. 1851-1863, July 2016. [ARC FT-130101457 and DP-140102164]
- Xi Yang, Xinbo Gao, Dacheng Tao, Xuelong Li, Bing Han, and Jie Li, "Shape-Constrained Sparse and Low-Rank Decomposition for Auroral Substorm Detection", *IEEE Transactions on Neural Networks and Learning Systems* (T-NNLS), vol. 27, no. 1, pp. 32-46, January 2016. DOI: 10.1109/TNNLS.2015.2411613 [ARC FT-130101457, DP-140102164 and LP-140100569]
- Richang Hong, Zhenzhen Hu, Ruxin Wang, Meng Wang, and Dacheng Tao, "Cross-Domain Multi-View Object Retrieval via Multi-Scale Topic Models", *IEEE Transactions on Image Processing* (T-IP), vol. 25, no. 12, pp. 5814-5827, December 2016. [ARC FT-130101457, DP-140102164 and LE-140100061]
- Fumin Shen, Xiang Zhou, Yang Yang, Jingkuan Song, Heng Tao Shen, and Dacheng Tao, "A Fast Optimization Method for General Binary Code Learning", *IEEE Transactions on Image Processing* (T-IP), vol. 25, no. 12, pp. 5610-5621, December 2016. [ARC FT-130101457, DP-140102164 and LE-140100061]
- 46. Bo Du, Yuxiang Zhang, Liangpei Zhang, and Dacheng Tao, "Beyond the Sparsity-Based Target Detector: A Hybrid Sparsity and Statistics Based Detector for Hyperspectral Images", *IEEE Transactions on Image Processing* (**T-IP**), vol. 25, no. 11, pp. 5345-5357, November 2016. [ARC FT-130101457, DP-140102164 and LE-140100061]
- 47. Bolun Cai, Xiangmin Xu, Kui Jia, Chunmei Qing, and Dacheng Tao, "DehazeNet: An End-to-End System for Single Image Haze Removal", *IEEE Transactions on Image Processing* (**T-IP**), vol. 25, no. 11, pp. 5187-5198, November 2016. [ARC FT-130101457, DP-140102164 and LE-140100061]
- 48. Yuan Xie, Wensheng Zhang, Dacheng Tao, Wenrui Hu, Yanyun Qu, and Hanzi Wang, "Removing Turbulence Effect via Hybrid Total Variation and Deformation-Guided Kernel Regression", *IEEE Transactions on Image Processing* (**T-IP**), vol. 25, no. 10, pp. 4943-4958, October 2016. [ARC FT-130101457, DP-140102164 and LE-140100061]
- 49. Xinge You, Weigang Guo, Shujian Yu, Kan Li, Jose C. Principe, and Dacheng Tao, "Kernel Learning for Dynamic Texture Synthesis", *IEEE Transactions on Image Processing* (**T-IP**), vol. 25, no. 10, pp. 4782-4795, October 2016. [ARC FT-130101457, DP-140102164 and LE-140100061]
- Xianglong Liu, Lei Huang, Cheng Deng, Lang Bo, and Dacheng Tao, "Query-Adaptive Hash Code Ranking for Large-Scale Multi-View Visual Search", *IEEE Transactions on Image Processing* (T-IP), vol. 25, no. 10, pp. 4514-4524, October 2016. [ARC FT-130101457, DP-140102164 and LE-140100061]
- 51. Yanting Hu*, Nannan Wang*, Dacheng Tao, Xinbo Gao, and Xuelong Li, "SERF: A Simple, Effective, Robust, and Fast Image Super-Resolver from Cascaded Linear Regression", *IEEE Transactions on Image Processing* (T-IP), vol. 25, no. 9, pp. 4091-4102, September 2016. [ARC FT-130101457, DP-140102164 and LE-140100061]
- 52. Qiang Li, Bo Xie, Jane You, Wei Bian, and Qiang Li, "Correlated Logistic Model with Elastic Net Regularization for Multilabel Image Classification", *IEEE Transactions on Image Processing* (**T-IP**),

vol. 25, no. 8, pp. 3801-3813, August 2016. DOI: 10.1109/TIP.2016.2577382 [ARC FT-130101457, DP-140102164 and LE-140100061]

- 53. Hao Xiong, Tongliang Liu, and Dacheng Tao, "Dual Diversified Dynamical Gaussian Process Latent Variable Model for Video Repair", *IEEE Transactions on Image Processing* (**T-IP**), vol. 25, no. 8, pp. 3626-3637, August 2016. [ARC FT-130101457, DP-140102164 and LE-140100061]
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