Curriculum Vitae

Dacheng Tao

BEng (USTC) MPhil (CUHK) PhD (London)
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1. Personal Information

NAME Dacheng TAO

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QUALIFICATIONS

BEng.	97-02	Department of Electronic Engineering and Information Science, University of Science and Technology of China.
MPhil.	02-04	Department of Information Engineering, Chinese University of Hong Kong, Supervisor: Professor Xiaoou Tang.
PhD.	04-06	Department of Computer Science and Information Systems, Birkbeck, University of London, Supervisor: Professor Stephen J. Maybank

2. Short Biography

Dacheng Tao is the inaugural director for JD Explore Academy and a Corporate Senior Vice President in JD.com. He is an Advisor and Chief Scientist of the Digital Sciences Initiative in the University of Sydney. He is an Australian Laureate Fellow, Peter Nicol Russell Chair, and Professor of Computer Science at the School of Computer Science and Faculty of Engineering in The University of Sydney. He was the Inaugural Director of the UBTECH Sydney Artificial Intelligence Centre (now, the Sydney Artificial Intelligence Centre) in the University of Sydney and the Chief Scientist of AI in UBTECH Robotics. He takes/took a visiting professorship at universities and research institutes, including Birkbeck – University of London, Tsinghua University (Distinguished Visiting Professor), University of Science and Technology of China (Grand Master Visiting Chair Professor), Fudan University (Visiting Chair Professor), Shanghai Jiaotong University, Zhejiang University, Hong Kong University of Science and Technology, Wuhan University, Huazhong University of Science & Technology, Data61 (Adjunct Fellow) and Chinese Academy of

Sciences. Previously, he worked as a Professor of Computer Science with ARC Future Fellowship in the University of Technology Sydney, a Nanyang Assistant Professor in the Nanyang Technological University, 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).

His research interests spread across subareas in artificial intelligence (AI), including computer vision, data science, deep learning, image processing, medical informatics, social media, and statistical learning. His research results have expounded in one monograph and 600+ publications at prestigious journals and proceedings in prominent conferences, such as IEEE TPAMI, TIP, TIT, TNNLS, IJCV, JMLR, AIJ, IJCAI, AAAI, CVPR, ICCV, ECCV, NeurIPS, ICML, ICLR, ICDM, and KDD, with several best paper awards, such as the IEEE ICDM'07 best theory/algorithm paper runner up award, the IEEE ICDM'13 best student paper award, the 2014 ICDM 10-year highest-impact paper award, the IJCAI 2017 distinguished student paper award, the IJCAI 2018 distinguished paper award, and the 2017 IEEE signal processing society best paper award.

He has been ranked as a Highly-Cited Researcher in Engineering since 2014 and Computer Science since 2015 by Clarivate Analytics (before 2016, Thomson Reuters). His publications have been cited in Google Scholar 81K+ times, and his H-Index in Google Scholar is 142+. He has an Erdös number 3.

He received the 2021 IEEE Computer Society Edward J. McCluskey Technical Achievement Award, the 2020 Australian Museum Eureka Prize for Excellence in Data Science, the 2015 Australian Museum Scopus-Eureka Prize, the 2016 National Natural Science Award from Ministry of Science and Technology of China, the 2018 IEEE ICDM Research Contributions Award, the 2015 ACS Gold Disruptor Award, the UTS 2015 Vice-Chancellor's Medal for Exceptional Research, and the University of Sydney 2020 Vice-Chancellor's Award for Outstanding Research. He led several teams to win two major tasks of object detection from images and videos with additional training data in the ImageNet Large Scale Visual Recognition Challenge 2015 (ILSVRC, known as the world-cup in computer vision and machine learning, a first time for Australia); win four major tasks of object detection and tracking in the whole track of VID in the 2017 ILSVRC; win the 2018 visual dialog challenge; win the single image depth prediction task in the Robust Vision Challenge 2018; win the Finnish-English (FI-EN) track in the 2019 WMT (Conference on Machine Translation); win the detection task and receive the runner-up of the classification task in the 2016 Large Scale Activity Recognition Challenge (ActivityNet); win and receive the runner-up in the NIST Point-and-Shoot Face Recognition Challenge (PaSC) in 2016 (BTAS) and 2015 (FG), respectively; receive the runner-up in the 2017 CVPR Visual Question Answering Challenge; win the segmentation task in the 2019 MICCAI Multimodal Brain Tumor Segmentation Challenge (BraTS); win the Matching and Ranking Subtask at Video-To-Text in the 2017 TRECVID and win the General Language Understanding Evaluation (GLUE) benchmark.

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 14, respectively, UTS Chancellor Postdoctoral Fellowship in 2012, the Extraordinary Potential Prize of 2011 Chinese Government Award for Outstanding Self-Financed Students Abroad, and Australian Research Council Discovery (ARC) Early Career Researcher Award (DECRA) in 2017, 18, 19, and 20, respectively and ARC Future Fellow in 2022. His co-supervised PhD students won Microsoft Fellowship Award, Baidu Fellowship, Beihang "Zhuoyue" Program, 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, Excellent PhD Dissertation Award from Beijing University and Excellent PhD Dissertation Award from Shanghai Jiaotong University. To date, he has supervised 61 PhD and 22 MPhil completions. His PhD completions received 25 outstanding PhD thesis awards from universities, government councils, and research associations.

He is a co-series-editor of the Springer-Nature "Machine Learning: Foundations, Methodologies, and Applications". He is an Advisory Board Member and was an Associate Editor-in-Chief for Elsevier Pattern Recognition. He 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 Neural Networks and Learning Systems (TNNLS), IEEE Trans. on Image Processing (TIP), IEEE Trans. on Cybernetics (TCYB), IEEE Trans. on Knowledge and Data Engineering (TKDE), IEEE Trans. On Big Data (TBD), and IEEE Journal on Selected Areas in Communica-tions (JSAC) for "Artificial Intelligence and Machine Learning for Networking and Communications". He has edited five books on several topics of artificial intelligence and its applications. He has served for major conferences including AAAI, IJCAI, CVPR, ICCV, ECCV, NeurIPS, ICML, ICDM, KDD, and CIKM, as a general chair, program committee chair, track chair, panel chair, award committee chair, area chair, poster chair, workshop chair, session chair, senior program committee, or program committee for 200+ times.

He is a Fellow of the Association for Computing Machinery (FACM), a Fellow of the Institute of Electrical and Electronics Engineers (FIEEE), a Fellow of the American Association for the Advancement of Science (FAAAS), a Fellow of the International Association of Pattern Recognition (FIAPR), a Fellow of the Optical Society of America (FOSA), a Fellow of the International Society for Optical Engineering (FSPIE), a Fellow of the American Institute of Medical and Biological Engineering (FAIMBE), a foreign member of the Academia Europaea (Academy of Europe, MAE), a Fellow of the World Academy of Sciences (FTWAS), a Fellow of the Royal Society of NSW (FRSN) and a Fellow of the Australian Academy of Science (FAA).

3. Professional Qualifications/Memberships

- Fellow, The World Academy of Sciences (FTWAS, since 2022)
- Fellow, Royal Society of New South Wales (FRSN, since 2021)
- Fellow, American Institute for Medical and Biological Engineering (FAIMBE, since 2021)
- Life Fellow, Association for Computing Machinery (FACM, since 2019)
- Fellow, Australian Academy of Science (FAA, since 2018)
- Member, Sigma Xi (the world's largest multidisciplinary research honor society, since 2018)
- Fellow, American Association for the Advancement of Science (FAAAS, since 2017)
- Fellow, Royal Statistical Society (FRSS, since 2016)
- Academician (Foreign Member), Academia Europaea [Academy of Europe, MAE, since 2016]
- Life Fellow, Optical Society of America (FOSA, since 2014)
- Life Fellow, International Society for Optical Engineering (FSPIE, since 2013)
- Fellow, International Association of Pattern Recognition (FIAPR, since 2012)
- Life Elected Member, International Statistical Institute (Elected member, since 2011)
  - ❖ Bernoulli Society
  - ❖ International Association for Statistical Computing
- Fellow, Institute of Electrical and Electronics Engineers (FIEEE, since 2015)
  - ❖ IEEE Computer Society
  - ❖ IEEE Computational Intelligence Society
  - ❖ IEEE Signal Processing Society
  - ❖ IEEE SMC Society
  - ❖ Chapter Vice Chair (2013-2015), New South Wales Section (Region 10) SMC Society
  - ❖ Funding Vice-Chair (2013-2015), IEEE SMC New South Wales Section
  - ❖ TC Chair (2012-2015), IEEE SMC Technical Committee on Cognitive Computing
  - ❖ Member, IEEE SMC Technical Committee on Human Perception and Multimedia Computing
  - ❖ Advisor, SMC Society University of Technology Sydney (UTS) Branch Student Chapter

- ❖ Member-at-large, IEEE Technical Committee on Cyber Physical Systems (CPS)
- ❖ Advisory Board Member (2021-), IEEE Technical Committee on Carbon Neutrality (CN) [include: Hiroshi Amano (Nobel), Jamal Deen (Former President of the RSC-AS), Jan Mattsson (Former Under-Secretary-General of the United Nations), C.D. Mote, Jr (President Emeritus, U.S. National Academy of Engineering), Brian P. Schmidt (Nobel), Richard A. Williams (Former Senior Vice President, U.K. Royal Academy of Engineering), Vincenzo Piuri (President, the IEEE Systems Council), Yubo Shi (President, China Energy Research Society), Michael Condry (Former President, IEEE Technology and Engineering Management Society), Weihua Gui (Member, Chinese Academy of Engineering), Jessica Bian (President, IEEE Power and Energy Society), Albert Zomaya (Fellow of the Australian Academy of Science]

– Member of the Founding Council (2019–), Global Science and Technology Innovation Forum, other members are French chemist Jean-Marie Lehn (co-winner of the 1987 Nobel Prize in Chemistry), Dr John Hopcroft (Turing Prize winner, IBM Professor of Engineering and Applied Mathematics at Cornell University), Prof Seeram Ramakrishna (National University of Singapore), and Prof. Guangzhong Yang (Fellow of the Royal Academy of Engineering, director and cofounder of the Hamlyn Centre for Robotic Surgery at Imperial College London).

– Member of the Quantum Computing Network (2021–), the World Economic Forum

– Inaugural International Advisory Board Member, CCF Task Force on Computer Vision

– Academic Board Member (2020–), Alliance of Federated Learning Industrial Ecosystem Development

– Academic Board Member (2021–), Institute of Artificial Intelligence, Wuhan University, China

– Global Research Advisory Board (2020–2022), Yonsei University, Korean

– Technical Committee Member (2021–), Chinese Artificial Intelligence Industry Alliance (AIIA)

– Deputy Director (07/2021–07/2023), AIIA Trustworthy Artificial Intelligence Committee

– Advisory Board Member (04/2021–), Talent Development Advisory Board, Qiu Zhen College (Dean: Prof Shing-Tung Yau, Fields prize winner), Tsinghua University

– Trustee (11/2021–), Beijing Shing-Tung Yau Science Foundation

– University Council Trustee (11/2021–), Chongqing University of Posts and Telecommunications

– Member (2022–), Shanghai Artificial Intelligence Strategic Advisory Committee

4. Summary of Working Experience

– March/2021–Present, Inaugural Director for JD Explore Academy and Corporate Vice President of JD.com

– November/2020–March/2021, Interim Member of the Senior Executive Committee of JD.com

– 5/December/2020–Present, Chief Scientist and Advisor of the Digital Sciences Initiative, University of Sydney, Australia.

– 1/January/2018–31/December/2022 (suspended in 2020), Australian Laureate Fellow, the University of Sydney, Australia.

– 1/January/2018–31/December/2021, Adjunct Professor, The Hong Kong Polytechnic University, Hong Kong, China.

– 25/September/2017–23/September/2022, Adjunct Science Fellow, Data61, CSIRO, Australia.

– 21/April/2017–October/2020, Inaugural Director, UBTECH Sydney Artificial Intelligence Centre, the University of Sydney, Australia.

– 27/April/2017–Present, Peter Nicol Russell Chair in Image Processing, the University of Sydney, Australia.

- 2021–Present, Grand Master Visiting Chair Professor, University of Science and Technology of China, Hefei, China.
- 2021–Present, Distinguished Visiting Professor, Tsinghua University, Beijing, China.
- 5/December/2016–Present, Professor of Computer Science (on leave in 2020), School of Information Technologies, Faculty of Engineering and Information Technologies, the University Sydney, Australia.
- 5/December/2016–4/December/2019, Adjunct Professor, Faculty of Engineering and Information Technology, University Technology Sydney, Australia.
- 12/September/2016–4/December/2016, Director, Centre for Artificial Intelligence, Faculty of Engineering and Information Technology, University Technology Sydney, Australia.
- 1/August/2013–4/December/2016, Research Professor of Computer Science, Faculty of Engineering and Information Technology, University Technology Sydney, Australia.
- November/2010–December/2016, 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/2018, Guest Professor, Shanghai Jiaotong University, Shanghai, China.
- 22/March/2011–21/March/2014, Guest Professor, Huazhong University of Science and Technology, Wuhan, China.
- November/2008–December/2010, Nanyang Assistant Professor, School of Computer Engineering, Nanyang Technological University, Singapore.
- January/2007–December/2008, Assistant Professor, Department of Computing, Hong Kong Polytechnic University, Hong Kong, China.
- 9/December/2010–8/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.
- 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.
- October/2006–January/2007, Research Assistant, Department of Computer Science and Information Systems, Birkbeck, University of London, London, U.K.

5. Awards

- September 2022, Being named as one of the World's Top Researchers in Science according to Clarivate Analytics report in the categories of Engineering and Computer Science
- September 2022, JD Explore Academy – Super Deep Learning, Shanghai World AI Conference - Superior AI Leader Award Top 30.
- August 2022, Vega-MT won seven tracks of Zh-En (Chinese to English), En-Zh (English to Chinese), De-En (German to English), En-De (English to German), Cs-En (Czech to English), En-Cs (English to Czech) and En-Ru (English to Russian); received runner-up for two tracks of Ru-En (Russian to English) and Ja-En (Japanese to English); and ranked third on one track of En-Ja (English to Japanese) according to the SACREBLEU in the 2022 ACL World Machine Translation challenge (WMT 2022).

- June 2022, IEEE Featured Author (by invitation)
- January 2022, ranked 1st (JDExplore d-team) on the General Language Understanding Evaluation (GLUE) benchmark; ranked 1st on SST-2, MRPC, QQP, and WNLI. For the first time, we demonstrated that machines outperform human on SST-2 and WNLI tasks.
- December 2021, world rank #22 and Australia rank #2 on Top Computer Science Scientists by Research.com
- December 2021, rank #1 on Global Artificial Intelligence Scholars Contribution (2015-2021) Index by CSRankings
- Septeber 2021, Research superstars by The Australian, (This Lifetime Achievers Leaderboard lists the five top researchers from Australian universities and research institutions in each of the eight major discipline areas)
- September 2021, Being named as one of the World's Top Researchers in Science according to Clarivate Analytics report in the categories of Engineering and Computer Science
- August 2021, Winner of the 2021 International Conference on Spoken Language Translation (IWSLT) Low-Resource Speech Translation Track (45 participating teams, including Facebook, Byte Dance, CMU, Samsung, and Oppo)
- June 2021, Winner of the 2021 IEEE CVPR EPIC-KITCHENS Challenge (action recognition track).
- 2 February 2021, IEEE Computer Society Edward J. McCluskey Technical Achievement Award "for exceptional contributions to representation learning and its applications".
- December 2020, "Six researchers who are shaping the future of artificial intelligence" by Nature Index.
- 24 November 2020, Australian Museum Eureka Prize for Excellence in Data Science
- 23 November 2020, Vice-Chancellor's Award for Outstanding Research, The University of Sydney.
- September 2020, Being named as one of the World's Top Researchers in Science according to Clarivate Analytics report in the categories of Engineering and Computer Science (The 2020 list contains 16 Highly Cited Researchers are in Engineering and 9 in Computer Science from Australia, among which five are selected in both areas)
- 23 Septeber 2020, a top 50 engineering and computer science researcher by The Australian.
- 23 Septeber 2020, Research superstars by The Australian, (This Lifetime Achievers Leaderboard lists the five top researchers from Australian universities and research institutions in each of the eight major discipline areas)
- July 2020, World Artificial Intelligence Conference Youth Outstanding Paper Nomination Award for "Yunhe Wang, Chang Xu, Chao Xu, and Dacheng Tao: Packing Convolutional Neural Networks in the Frequency Domain", IEEE Transactions on Pattern Analysis and Machine Intelligence, vol. 41, no. 10, pp. 2495-2510, October 2019" Shanghai.
- June 2020, IEEE TCSC (IEEE Computer Society Technical Committee on Scalable Computing) Most Influential Paper Award for "Tianyi Zhou, Dacheng Tao: GoDec: Randomized Lowrank & Sparse Matrix Decomposition in Noisy Case. ICML 2011: 33-40".
- June 2020, DL-61 received the joint runner-up for the visual question answering (VQA) challenge
- November 2019, winner (1st place) for the MICCAI Multimodal Brain Tumor Segmentation Challenge (BraTS) – Segmentation Task
- October 2019, DL-61 ranked third (on dev set) for the keypoint challenge in the Microsoft Common Objects in Context 2016 (COCO).
- September 2019, Being named as one of the World's Top Researchers in Science according to Clarivate Analytics report in the categories of Engineering and Computer Science, (The 2019 list contains 16 Highly Cited Researchers are in Engineering and 9 in Computer Science from Australia, among which five are selected in both areas).
- 18 June 2019, IEEE CVPR Best Paper Award Finalist for (Huan Fu, Mingming Gong, Chaohui Wang, Kayhan Batmanghelich, Kun Zhang, and Dacheng Tao, "Geometry-Consistent Generative Adversarial

Networks for One-Sided Unsupervised Domain Mapping") [45/5160, 1294 accepted, 5100+ submissions, 9227 registrated attendees]

- 18 June 2019, Diploma of The Polish Neural Network Society (in recognition of outstanding contribution to the development of computational intelligence), Zakopane, Poland

- April 2019, DL-61 won the Finnish-English (FI-EN) track in the 2019 WMT (Conference on Machine Translation).

- March 2019, 2018 Academic Influence of Chinese Scholars in Artificial Intelligence (ranked 3rd after Prof Zhi-Hua Zhou and Prof Andrew Ng)

- December 2018, the best papers regarding GANs for 2018: "Evolutionary Generative Adversarial Networks (E-GAN)" was selected as one of the three best papers by Damian Bogunowicz acoording to the discussion on reddit.

- November 2018, IEEE ICDM Research Contributions Award for outstanding research contributions to the data mining field, Singapore, November 17-20, 2018.

- September 2018, Being named as one of the World's Top Researchers in Science according to Clarivate Analytics report in the categories of Engineering and Computer Science, (The 2018 list contains 6,078 Highly Cited Researchers, 4,058 in 21 fields of the sciences and social sciences and 2,020 Highly Cited Researchers identified as having exceptional performance across several fields. Total 4,058 in 21 fields of the sciences and social sciences, each ranking among the top 1% most cited; among which 19 are from Australia in the categories of Engineering and Computer Science).

- September 2018, DL-61 won the visual dialog challenge (participating teams include Microsoft, NTU, UIUC, USTC, Seoul National University, and Technion)

- Aug 2018, DL-61 (together with SCUT) ranked third at the MICCAI Multimodal Brain Tumor Segmentation Challenge 2018 (After NVIDIA and German Cancer Research Center (DKFZ). More than 60 participating teams include Columbia, HKU, UNC Chapel Hill, Harvard, Yale, Berkeley, UW, and Tencent).

- July 2018, the IJCAI 2018 Distinguished Paper Award for "R-SVM+: Robust Learning with Privileged Information" at the International Joint Conference on Artificial Intelligence (IJCAI), Stockholm, Sweden, July 13-19, 2018. (7/3470)

- June 2018, DL-61 (together with HDU and UCAS) received the runner-up for the visual question answering (VQA) challenge (after Facebook AI Research. Participating teams include NVIDIA AI Tech Centre, University of Adelaide, The University of Tokyo, Seoul National University, Tsinghua University, University of Southampton, NTU, University of Texas at Austin, and University of Toronto)

- June 2018, DL-61 won the 1st prize for the Task of Single Image Depth Prediction in Robust Vision Challenge.

- March 2018, "Evolutionary Generative Adversarial Networks" was selected by MIT Technology Review as one of "The Best of the Physics arXiv" (i.e. week's most thought-provoking papers from the Physics arXiv)

- December 2017, Chinese AI Technology Innovation Top 10 Heroes (Andrew Ng at Stanford, Fei-Fei Li at Stanford and Google, Shuicheng Yan at 360, Zhi-Hua Zhou at Nanjing Univ, Dacheng Tao at USYD and UBTECH, Jian Sun at Face++, Tong Zhang at Rutgers and Tencent, Yu Zheng at Microsoft, Shiguang Shan at CAS, Kaiming He at Facebook)

- November 2017, DL-61-86 won the TRECVID 2017: VTT Task (Matching and Ranking Subtask, we beat CMU, University of Amsterdam, City University of Hong Kong, UTS, Korea University, Robert Bosch LLC, Etter Solutions, and Arete-acute Associates)

- October 2017, DL-61-86 is the runner-up (second place) for (1) Movie Description, (2) Movie Annotation and (3) Movie Retrieval for the MovieQA and The Large Scale Movie Description Challenge (LSMDC), at ICCV 2017.

- October 2017, IEEE Transactions on Cybernetics Andrew P. Sage Best Transactions Paper Award to "Jun Yu, Dacheng Tao, Meng Wang, and Yong Rui, Learning to Ranking using User Clicks and Visual

Features for Image Retrieval, IEEE Transactions on Cybernetics, vol. 45, no. 4, pp. 767-779, April 2015".

– September 2017, Being named as one of the World's Top Researchers in Science according to Clarivate Analyticsreport in the categories of Engineering and Computer Science, (Total 3,300+ in 21 fields of the sciences and social sciences, each ranking among the top 1% most cited; among which 15 are from Australia in the categories of Engineering and Computer Science).

– July 2017, one of the three finalists for the 2017 Eureka Prize for Excellence in Data Science.

– July 2017, co-recipient as the mentor of the student authors for the Distinguished Student Paper Award for "Tag Disentangled Generative Adversarial Network for Object Image Re-rendering" at the International Joint Conference on Artificial Intelligence (IJCAI), Melbourne, Australia, July 11-15, 2017.

– July 2017, finalist (three among 2,540 submissions) for the IJCAI 2017 Distinguished Paper Award for "General Heterogeneous Transfer Distance Metric Learning via Knowledge Fragments Transfer" at the International Joint Conference on Artificial Intelligence (IJCAI), Melbourne, Australia, July 11-15, 2017.

– July 2017, IC-USYD won the Large Scale Visual Recognition Challenge 2017 (ILSVRC2017) on all four tasks in Object Detection from Video (VID, object detection from video with provided training data, object detection from video with additional training data, and object detection/tracking from video with provided training data).

– July 2017, HDU-USYD-UNCC ranked second on the CVPR Visual Question Answering. (After Adelaide/Stanford/Microsoft, we beat Intel Labs, Zhejiang University, Samsung Software R&D Centre, NUS, PosTech, Heuritech company, Fraunhofer Heinrich Hertz Institute, and University of Freiburg)

– March 2017, the IEEE Signal Processing Society Best Paper Award

– January 2017, ranked 241st worldwide and 3rd in Australia on "Top Scientists by H-Index" for the category of "Computer Science and Electronics" by Guide2Research.com

– October 2016, DL-61 ranked third for the keypoint challenge in the Microsoft Common Objects in Context 2016 (COCO).

– 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, (Total 3,000 in 21 fields of the sciences and social sciences, each ranking among the top 1% most cited; among which 13 are from Australia in the categories of Engineering and Computer Science).

– June 2016, received the second prize of the National Natural Science Award (with Prof Xinbo Gao, Prof Xuelong Li, Prof Cheng Deng, and Prof Yuan Yuan) from Ministry of Science and Technology of the People's Republic of China

– June 2016, DL-61 won the detection task in the Large Scale Activity Recognition Challenge 2016 (ActivityNet).

– June 2016, DL-61 received 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" (Total 3,125 in 21 fields of the sciences and social sciences, each ranking among the top 1% most cited during over past 11 years; among which 9 are from Australia in the categories of Engineering and Computer Science). (http://highlycited.com/)

– 18 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 Australian Meseum 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 Impact 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" (Total 3,215 in 21 fields of the sciences and social sciences, each ranking among the top 1% most cited during over past 11 years; among which 9 are from Australia in the categories of Engineering and Computer Science). (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, co-recipient as the mentor of the student authors for the 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, Ranked 3rd among 55,118 authors and has been recognized as one of the "Top authors in machine learning & pattern recognition" by Microsoft Academic Search.
- 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, 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.

6. Research Funding

- Linkage Infrastructure, Equipment and Facilities (LIEF): Whopping Volta GPU Cluster – Transforming Artificial Intelligence Research, (Project ID: LE200100049; Amount: AU$ 900K from ARC and AU $1 million from participating universities, from 1/2020 to 12/2020) Chief Investigators: Prof Dacheng Tao, Prof Branka Vucetic, Prof Ramamohanarao Kotagiri, Prof Eduardo Nebot, Prof Xuemin Lin, Prof Yongsheng Gao, Prof Mohammed Bennamoun, Prof Rajkumar Buyya, Prof Timothy Baldwin, Prof Stefan Williams, Prof Jinhong Yuan, and Prof Maurice Pagnucco

- Australian Research Council (ARC) – ARC Training Centre in Data Analytics for Resources and Environments (DARE), (Project ID: IC190100031; Amount: AU $4 million from ARC and AU $2 million from industry and government, from 1/2020 to 12/2023) Chief Investigators: Prof Sally Cripps, A/Prof Lucy Marshall, Prof Fabio Ramos, Prof Glenda Wardle, Prof Dacheng Tao, Prof Mark Girolami, Prof Robert Kohn, Dr Edward Cripps, Dr Mark Lindsay, A/Prof Jody Webster, Dr Tristan Salles, Dr Emi Tanaka, Dr Richard Scalzo, Dr Fiona Johnson, Dr Rohitash Chandra, Dr Aaron Greenville, A/Prof Rutger Vervoort, Prof Mark Jessell, and Dr lamiae Azizi; Partner Investigator: Dr Ian Oppermann, Dr Milan Korbel, A/Prof John Paul Gosling, Miss Victoria Hirst, Mr Jeffrey Bell, Mr Jeremy Black, Dr Karol Czarnota, Dr Lesley Gibson, Mr Neil Symington, Mr Peter Dupen, and Mr Martin Gallagher

- Sydney Nano Institute Grand Challenge – NanoTechnology for carbon neutral manufactury, (Amount: AU $150K, from 1/2019 to 12/2020) A/Prof Jun Huang, IT&Eng/AMME (Prof Assaad Masri, Prof Xiaozhou Liao, IT&Eng/CBE (Prof Dianne Wiley, A/Prof Ali Abbas, Prof Brian Haynes), IT&Eng/IT (Prof Dacheng Tao), Sci/Chem (Prof Cameron Prof Thomas Mascmeyer, Prof Chris Ling, A/Prof Deanna D'Alessandro), Sci/Phy (A/Prof Rongkun Zheng, Prof Catherine Stampfl), and Business (A/Prof Eric Night, Prof Steve McGuire)

- Cooperative Research Centre (CRC) – SmartSat CRC: Smart Satellite Cooperative Research Centre (Amount: AU $245 million: 110 million cash and 135 million in-kind, including people, infrastructure and satellite time; from 2019 to 2026; 74 participants, research to be carried out by11 universities and 8 givernment/industry organisations; Research areas: Advanced Communications, Connectivity and IoT; Advanced Satellite Systems, Sensors & Intelligence; and Next Generation Earth Observation Data Services)

- Partnership Collaboration Awards (PCA) The University of Sydney and Zhejiang University: Leverage Massive Data in High-Speed Train System for Real-time Intrusion Detection. (amount: AU $50K, from 2018 to 2019) [Chief Investigator: Prof Dacheng Tao at USYD and Prof Jiming Chen at ZJU]

- NHMRC & University of Sydney Equipment Grant – CASSIE: A Biped Robot for Research in Locomotion and Perception (Project ID: G201321, amount: AU$ 180,000, 2019) [Chief Investigators: Associate Prof Ian Manchester and Prof Dacheng Tao]

- NHMRC & University of Sydney Equipment Grant – NVIDIA Medical Imaging Computational and AI platform (Project ID: G201307, amount: AU$ 180,000.00, 2019) [Chief Investigators: Prof Michael Barnett, Prof Dacheng Tao, and Prof Fernando Calamante]

- Australian Research Council (ARC) – ARC Research Hub for Driving Farming Productivity and Disease Prevention (amount: A$ 5 million from ARC and A$ 3.8 million from industry, from 2019 to 2023) [Chief Investigators: Prof Yongsheng Gao; Prof Dacheng Tao; Prof Anton van den Hengel; Prof Dr Mohammed Bennamoun; Prof Rosanne Guijt; Prof Chunhua Shen; Prof John Grundy; A/Prof Ajmal Mian; Dr Jun Zhou; Dr Andrew Busch; Prof Jin Song Dong; Prof Nam-Trung Nguyen; A/Prof Qin Li; A/Prof Rebecca Ford; Industrial Collaborators: Dr Say Hwa Tan; Dr Changming Sun; Dr Satoshi Mikami; Mr David Cox; Mr Raymond Daniels; Dr Ji Zhou; Mr Sergio Koulakov]

- Cooperative Research Centre Projects (CRC-P) – AI: new smarts for the medical imaging industry (amount: AU $2,360,000, from 2018 to 2020) [Chief Investigators: Prof Dacheng Tao, A/Prof Weidong Cai and Prof Michael Barnett]

- NSW Cyber Security Network Pilot Grants – Internet-scale Phishing Website Detection Through Deep Feature-based Image Embeddings and Forensics (amount: AU $150,000.00) [Chief Investigators: Dr

Suranga Seneviratne, A/Prof Zhiyong Wang, Dr Ralph Holz, and Prof Dacheng Tao; Partner Investigator: A/Prof Markus Hagenbuchner]

– Nerve Research Foundation – Imaging Neuroanalytics Platform (amount: AU $1,321,463, from 2018 to 2020) [Chief Investigators: A/Prof Michael Barnett {Program: Clinical Neurology and Neuroimaging}, Prof Matthew Kiernan, Emeritus Prof John Pollard, A/Prof Tom Cai {Program: Multimodal Image Analysis and Computational Analysis}, Prof Dacheng Tao {Program: Imaging Data Integration and Machine Learning}, Prof Sasha Klistorner {Program: Visual Sciences}]

– Partnership Collaboration Awards (PCA) The University of Sydney and Shanghai Jiao Tong University: Brain-inspired modelling and its applications. (amount: AU $40K, from 2018 to 2019) [Chief Investigator: Prof Dacheng Tao at USYD and Prof Jie Yang at SJTU]

– Australian Research Council (ARC) – Discovery Project: Streaming Label Learning for Leaching Knowledge from Labels on the Fly. (Project number DP180103424, Amount: AU $392,893.00, from June/2018 to June/2021). [Chief Investigators: Prof Dacheng Tao, Dr Chang Xu, and Dr Tongliang Liu; Partner Investigator: Prof Gábor Lugosi]

– Australian Research Council (ARC) – Laureate Fellowship: On Snapping up Semantics of Dynamic Pixels from Moving Cameras. (Project number FL170100117, Amount: AU $3,208K+, from January/2018 to December/2022). [Chief Investigator: Prof Dacheng Tao]

– Data61 Collaborative Research Project 2017-2019 – High speed machine learning using FPGAs (Project number: C008179, Amount: AU $598,795; University Partner Contributions: Prof Philip Leong, Prof Dacheng Tao, Dr David Boland; Data61 Contributions: Dr Mark Hedley, Nipun Bhaskar, Chang-Kyung Sung, Jayasri Joseph, David Abbott, Xuyan (Rosalind) Wang)

– 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]

– Toyota Motor Engineering and Manufacturing North America, Inc: Urban Driving using Multiple Sensor Fusion. (Project number: 2015000875, Amount: AU $267,017, from 1/May/2015 to 30/April/2016, Chief Investigator: Prof Dacheng Tao)

– University of Technology Sydney (UTS) 2014 Research Infrastructure Block Grant (RIBG) Funding: High Performance Server for Big Data Research. (Amount: AU $ 30,000, QCIS matching amount: up to AU $ 150,000, Chief Investigator: Prof Dacheng Tao)

– Toyota Motor Engineering and Manufacturing North America, Inc: Traffic Scene Understanding for Automated Vehicles with Focus on Freeway Merging Maneuvers. (Project number: 2013001793, Amount: AU $167,017, from 1/May/2014 to 30/April/2015, Chief Investigator: Prof Dacheng Tao)

– Australian Research Council (ARC) – Discovery Project: Nonlinear Transfer Distance Metric Learning for Gleaning Knowledge from the Crowd. (Project number DP140102164, 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, Amount: AU $916,144.00, from January/2013 to December/2017). [Chief Investigator: Prof Dacheng Tao]

– 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, Amount: AU

$378,000.00, from January/2012 to December/2014). [Chief Investigator: Prof Dacheng Tao; Partner Investigator: Prof Stephen J. Maybank]

- Singapore NTU NAP First Grant: Multi-Linear Analysis and Computational Theory. (Project number M58020010). (Amount: SG $ 1,000,000.00) [Single PI]
- Microsoft Operations PTE LTD-NTU Joint R&D: Active Metric Learning. (Project number M48020065). (Amount: SG $ 21,266.36) [PI]
- Hong Kong Research Grants Council General Research Fund (GRF formerly CERG): Video Shot Categorization with Multimodal Fusion for Mining Video Semantics. (Project number 528708, PolyU5287/08E). (Amount: HK $534,365.00) [PI]
- Internal Competitive Research Grants of the Department of Computing with the Hong Kong Polytechnic University: Facial Feature Points based 3D Face Alignment. (Project number A–PH42). (Amount: HK $150,000.00) [PI]
- Competitive Research Grants for Newly Recruited Junior Academic Staff 2007-2008 with the Hong Kong Polytechnic University: A Unifying Subspace Selection Framework. (Project number A–PC0A). (Amount: HK $150,000.00) [PI]
- Internal Competitive Research Grants of the Department of Computing with the Hong Kong Polytechnic University: Colour Perception Preservation for Colour2Grey and Its Applications in Biometrics Research. (Project number G–YG30). (Amount: HK $120,000.00) [PI]
- Startup Grant of the Department of Computing with the Hong Kong Polytechnic University. (Amount: HK $300,000.00) [PI]
- Hong Kong Research Grants Council General Research Fund (GRF formerly CERG): A New Image Processing Approach to Non-Invasive Diabetic Diagnosis and Monitoring. (Project number 534108, PolyU5341/08E). (Amount: HK$ 227,830.00) [Co-I]

7. Journal/Book Editorships

- Series Editor: Machine Learning: Foundations, Methodologies, and Applications [Springer]
- Advisor Board Member, Pattern Recognition (Elsevier, the official journal of the Pattern Recognition Society) ISSN: 0031-3203. [SCI-IF: 5.898]

- Associate Editor-in-Chief [completed], Pattern Recognition (Elsevier, the official journal of the Pattern Recognition Society) ISSN: 0031-3203. [SCI-IF: 5.898]
- Associate Editor [completed], ACM Transactions on Intelligent Systems and Technology (ACM, rank #1 in ACM journals regarding it citations per paper and a flagship journal of intelligent systems) [SCI-IF: 2.861]
- Associate Editor, ACM Transactions on Knowledge Discovery from DATA (ACM)
- Associate Editor [completed], IEEE Access (IEEE) ISSN: 2169-3536. [SCI-IF: 4.098, 2015 PROSE Award]
- Associate Editor [completed], IEEE Transactions on Big Data (IEEE)
- Associate Editor [completed], IEEE Transactions on Emerging Topics in Computational Intelligence (TETCI)
- Associate Editor [completed], IEEE Transactions on Neural Networks and Learning Systems (IEEE) ISSN: 2162-237X. [SCI-IF: 11.683]
- Associate Editor [completed], IEEE Transactions on Image Processing (IEEE) ISSN: 1057-7149. [SCI-IF: 5.071]
- Associate Editor, IEEE Transactions on Cybernetics (IEEE, Ranked #1 in Computer Science-Cybernetics) ISSN: 1083-4419. [SCI-IF: 10.387]

- Associate Editor [completed], 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 [completed], 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 [completed], IEEE Transactions on Knowledge and Data Engineering (IEEE, a premier journal of data mining) ISSN: 1041-4347. [SCI-IF: 1.815]
- Associate Editor [completed], Pattern Recognition (Elsevier, the official journal of the Pattern Recognition Society) ISSN: 0031-3203. [SCI-IF: 2.584]
- Associate Editor [completed], Neurocomputing (Elsevier) ISSN: 0925-2312. [SCI-IF: 2.005]
- Associate Editor [completed], Computational Statistics & Data Analysis (Elsevier, the Official Journal of the International Association for Statistical Computing) ISSN: 0167-9473. [SCI-IF: 1.151]
- Associate Editor [completed], Information Sciences (Elsevier) ISSN: 0020-0255. [SCI-IF: 3.893]
- Associate Editor [completed], Pattern Analysis and Applications (Springer) ISSN: 1433-7541. [SCI-IF: 0.742]
- Associate Editor [completed], Neural Processing Letters (Springer) ISSN: 1370-4621 (print version), 1573-773X (electronic version). [SCI-IF: 1.237]

- Editorial Board Member [completed], EURASIP Signal Processing Journal (Elsevier, A publication of the European Association for Signal Processing) ISSN: 0165-1684. [SCI-IF: 2.238]

- Guest Editor, IEEE Journal on Selected Areas in Communications (JSAC) special issue on Artificial Intelligence and Machine Learning for Networking and Communications [SCI-IF: 7.172]
- 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]

8. Conference Keynote Speech/Invited Talk/Tutorial

- 20/September/2022, "JD Industrial Metaverse from Strategy and Plan to Practice", the 2022 World Manufacturing Convention – Metaverse Forum, Hefei, Anhui, China. [Keynote speech]
- 2/September/2022, "Four JD Perspectives of Industrial Metaverse", WAIC Indurtrial Metaverse Forum, Shanghai, China. [Keynote speech]
- 2/September/2022, "Understanding Metaverse from Nine Perspectives", WAIC Global Metaverse Forum, Shanghai, China. [Keynote speech]
- 1/September/2022, "Trustworthy AI: JD's Practice" WAIC Trustworthy AI Forum, Shanghai, China. [Keynote speech]
- 25/August/2022, "Foundation Models: More is different, simpler yet refined", International Conference on Data Intelligence and Security, Shenzhen, Guangdong, August 24-26, China. [Keynote speech]
- 16/August/2022, "More Is Different: ViTAE elevates the art of computer vision", 34th Chinese Control and Decision Conference, Hefei, Anhui, August 15-17, China. [Keynote speech]
- 13/August/2022, "More Is Different: ViTAE elevates the art of computer vision", China Automation Congress, Intelligent Computing and Machine Learning Forum, Kunming, Yunnan, China. [Keynote speech]
- 8/August/2022, "More Is Different: ViTAE elevates the art of computer vision", 18th International Conference on Intelligent Computing, Xi'an, Shanxi, August 7-11, China. [Keynote speech]

- 27/July/2022, "More is different, simpler yet refined", City University of Hong Kong Forum on Data Science and AI, Hong Kong. [Keynote speech]
- 16/July/2022, "More is different: ViTAE redefines the art of computer vision", International Conference on Computational Intelligence and Security, Chengdu, July 15-17, China. [Keynote speech]
- 15/July/2022, "ViTAE: More is different", China Artificial Intelligence Industry Annual Conference – Machine Intelligent Interaction Forum, Beijing and Suzhou, July 16-18, China. [Keynote speech]
- 13/July/2022, "JD Industrial Metaverse", 2022 JD Discovery and JD Cloud Summit, Beijing. [Keynote speech]
- 05/July/2022, "ViTAE: More is Different", 2022 Frontier Forum on AI Standardization and Industrial Innovation and Development, Beijing. [Keynote speech]
- 30/June/2022, "Industrial Metaverse", The First China Industry Metaverse Conference, Beijing. [Keynote speech]
- 23/June/2022, "Industrial Metaverse", 2022 Shangxi SXR Digital Conference, Beijing/Nanjing/Ningbo. [Keynote speech]
- 23/May/2022, "Artificial Intelligence: Past and Present", Qiuzhen Lectures on the History of Mathematics, Invited by Prof Shing-tung Yau, Tsinghua University. [Lecture and invited speech]
- 17/March/2022, "Industrial Metverse", Tsinghua X Forum – Beijing National Research Center for Information Science and Technology, Beijing, China. [Invited speech]
- 17/March/2022, "Super Deep Learning for Computer Vision", Next Generation AI Symposium - AI/ET in the real world, CSIRO – Data61, Sydney, NSW, Australia. [Keynote speech]
- 2/March/2022, "Communication-Efficient Personalized Federated Learning: A Sparse Training Approach", AAAI 2022 International Workshop on Trustable, Verifiable and Auditable Federated Learning in Conjunction (FL-AAAI-22), Vancouver, BC, Canada. [Keynote speech]
- 18/January/2022, "Super Deep Learning for Computer Vision", Nanyang Technological University CoE Distinguished Speaker Lecture Series, Singapore.
- 16/January/2022, "Industrial Metaverse", USTC Singapore Alumni Association, Singapore. [Invited speech]
- 18/December/2021, "Super Deep Learning for Computer Vision", Frontiers of Information Technology - High-Level Academic Seminar Series, Zhengzhou, China. [Keynote speech]
- 18/December/2021, "Super Deep Learning for Computer Vision", the 5th International Symposium on Image Computing and Digital Medicine (ISICDM 2021), Guilin, December 17-20, China. [Keynote speech]
- 17/December/2021, "Industrial MetaVerse: On building a new world of digital and physical integration", Netease Future Conference, Hangzhou and Beijing, December 17-18, China. [China]
- 12/December/2021, "Super Deep Learning for Computer Vision", IEA Conference, London, UK. [Keynote speech]
- 12/December/2021, "Super Deep Learning for Computer Vision", Shandong University Taishan College Forum, Qingdao, China. [Keynote]
- 11/December/2021, "Trustworthy AI: Past and Present", Southern China University of Science and Technology, Shenzhen, China. [Keynote speech and panel]
- 11/December/2021, "Super Deep Learning for Computer Vision", the 4th International Workshop on Advanced Intelligent and Self-organizing Networks, Xi'an, China. [Keynote speech]
- 9/December/20201, "Foundations of Deep Learning", Beijing Information Science and Technology National Research Centre Interdisciplinary Forum, Beijing, China. [Keynote speech]
- 4/December/2021, "Super Deep Learning for Computer Vision", IEEE International Conference on Intelligent System and Technology, December 4-7, 2021, Dali, Yunnan, China. [Keynote speech]
- 4/December/2021, "Foundations of Deep Learning", the 20th China National Conference on Computational Linguistics (CCL), December 3-5, 2021, Huhehaote, China. [Keynote speech]

– 13/November/2021, "Trustworthy Artificial Intelligence", World Young Scientist Summit – International Digital Technology Summit and the Third Digital Economy Standard Innovation Forum, Wenzhou, Zhejiang, China. [Keynote speech]

– 10/November/2021, "Foundations of Deep Learning", 3rd International Conference on Industrial Artificial Intelligence, November 9-10, 2021, Shenyang, Liaoning, China. [Keynote speech]

– 30/October/2021, "Deep Learning Theory", 2021 International Conference on Big Data and Information Analytics (BigDIA 2021), October 29-31, 2021, Chongqing, China. [Keynote speech]

– 22/October/2021, "Foundations of Deep Learning", CCF Advanced Disciplines Lectures, ADL 121 – Safe and Trusted AI, October 22, Beijing, China. [3 hours tutorial]

– 16/October/2021, "RobustART: Benchmarking Robustness on Architecture Design and Training Techniques", International Conference on Crowd Science and Engineering (ICCSE), October 16, 2021, Jinan, Shandong, China. [Keynote speech]

– 15/October/2021, "Trustworth Artificial Intelligence", Shandong University 120th Anniversary Celebration, China-Singapore Higher Education Forum, October 15, 2021, Jinan, Shandong, China. [Keynote speech]

– 13/October/2021, "Foundations of Deep Learning", 2021 China Conference on Artificial Intelligence, Industrial AI Forum, October 13, 2021, Chengdu, Sichuan, China. [Keynote speech]

– 12/September/2021, "Trustworthy AI and Foundations of Deep Learning", Beijing Institute Technology "Hundreds of Podium: AI Science Frontier Lecture", Beijing, China.

– 22/August/2021, "Foundations of Deep Learning and Trustworthy AI", The first Artificial Intelligence Innovation Technology Summer School, August 21-22, 2021, Hangzhou, China. [Lecture, 1.5 hours]

– 22/August/2021, "Human-Object Interaction Understanding", IJCAI Workshop - Long-Tailed Distribution Learning, August 22, 2021, Shanghai, China. [Keynote speech]

– 20/August/2021, "Foundations of Deep Learning", IJCAI Workshop – Safety & Security of Deep Learning, August 20, 2021, Shanghai, China. [Keynote speech]

– 1/August/2021, Round table dialogue, Future Forum Reception - AI Ethics and Governance Series, August 1, 2021, Beijing, China.

– 31/July/2021, "Foundations of Deep Learning", ACM Turing Conference, SIGAI Forum, July 30 – August 1, Hefei, China. [Keynote speech]

– 25/July/2021, Panel discussion: AI and VC, China Optics Valley AI Summit Forum, July 24-25, 2021, Wuhan, China.

– 18/July/2021, "Trustworthy AI and Foundations of Deep Learning", Pre-KDD Conference, July 17-18, 2021, Chengdu, China. [Keynote]

– 17/July/2021, "Foundations of Deep Learning", Chongqing Post University, Chongqing, China. [VC invited university speech]

– 15/July/2021, "Trustworthy AI: Past and Present", the Seventh China Robotop and Intelligent Economic Talents Summit, July 14-16, Yuyao, Zhejiang, China. [Keynote]

– 12/July/2021, "Trustworthy AI: Past and Present", Fudan University – College of Data Science Summer School, July 12-15, 2021, Shanghai, China. [Tutorial]

– 10/July/2021, Panel discussion: Brain-AI fusion and its application, (Prof Shouyan Wang, Prof Michael Levitt [Nobel Laureate], Prof Dacheng Tao, Prof Bo Hong, Prof Valerie Voo, Ms Lynn Yang), World AI Conference – AI Forefront Exploring: From Brain-inspired AI to Brain-AI Fusion, July 8-10, Shanghai, China.

– 10/July/2021, "Foundations of Deep Learning", World AI Conference – AI Forefront Exploring: From Brain-inspired AI to Brain-AI Fusion, July 8-10, Shanghai, China. [Keynote speech]

– 9/July/2021, "Trustworthy AI: Past and Present", World AI Conference – Trustworthy AI Forum, July 8-10, Shanghai, China. [Keynote speech]

- 8/July/2021, Panel discussion: AI for human well-being, (Prof Xuelong Li, Prof Chengqi Zhang, Prof Qiang Yang, Prof Feng Wu, and Prof Dacheng Tao), World AI Conference, July 8-10, Shanghai, China.
- 7/July/2021, "Super Model Ecosystem – Leading a new round of industrial revolution", World AI Conference – Industrial Internet Summit, July 8-10, Shanghai, China. [Keynote speech]
- 3/July/2021, "Foundations of Deep Learning", Shandong University. [Keynote speech]
- 26/June/2021, "Foundations of Deep Learning", Ningbo Big Data Research Forum, June 25-27, 2021, Ningbo, China. [Keynote speech]
- 21/June/2021, "Human Object Interaction Understanding", IEEE CVVPR - the 3rd Person in Context (PIC) Workshop and Challenge, June 21, 2021, Nashville, TN, United States. [Invited talk]
- 12/June/2021, "The fourth wave of artificial intelligence: trustworthy AI", Pre-CVPR conference, June 12, 2021, Beijing, China. [Keynote speech, on site audience: about 600]
- 7/June/2021, "Demystifying Deep Learning", USYD - Fudan Brain and Intelligence Science Alliance Virtual Workshop, June 07, 2021 in Sydney and Shanghai. [Keynote speech]
- 22/May/2021, "Re-building Trust in Deep Learning", IEEE International Conference on Intelligent Systems and Technology (ICIST), May 21-23, 2021 in Chengdu, China. [Keynote speech]
- 29/January/2021, "Towards Trustworthy Deep Learning", International Symposium on Geometry and Vision (ISVG), January 28-29, 2021 in Auckland, New Zealand. [Keynote speech]
- 26/December/2020, "Trustworthy Deep Learning", China National Stroke Roundtable (CNSR), December 26, 2020 in Beijing, China. [Keynote speech]
- 17/December/2020, "Trustworthy Deep Learning", Intelligent Science Interdisciplinary Research Forum, School of Artificial Intelligence, University of Chinese Academy of Sciences, December 17, 2020 in Beijing, China. [Keynote speech]
- 12/December/2020, "Towards Trustworthy Deep Learning", 2020 4th International Conference on Computer Science and Artificial Intelligence (CSAI 2020), December 11-13, 2020 in Zhuhai, China. [Keynote speech]
- 16-18/October/2020, "On Sculpturing Deep Learning", 2020 3rd Chinese Conference on Pattern Recognition and Computer Vision (PRCV), 16-18/October/2020, Nanjing, Jiangsu, China. [Keynote speech]
- 12/October/2020, "AI: A Brief Introduction", United Nations – ITU Academy – Centres of Excellence and Expert Management Procedures, 2020. [Tutorial, 350 trainees from 82 countries]
- 28/August/2020, "On Sculpturing Deep Learning", CAAI Technical Committee on Deep Learning Invited Speech [online, 350+ audience]
- 14/August/2020, "AI: Design the Future", The Design Research Society 2020 International Conference (DSR2020), 12-14, August 2020, in Brisbane, Australia. [Keynote speech]
- 9/August/2020, "Deep Learning Theory", The 5th International Symposium on Artificial Intelligence and Robotics (ISAIR2020), 8-10, August 2020, Fukuoka, Japan. [Keynote speech]
- 29/July/2020, "How Deep Learning Works for Information Retrieval", The 43rd International ACM SIGIR Conference on Research and Development in Information Retrieval, 25-30 July 2020, Xi'an, China. [Keynote speech]
- 26/July/2020, "Trustable AI for Livable City", The Global Artificial Intelligence Technology Conference – Frontiers of Pattern Recognition, 25-26 July 2020, Hangzhou, China. [Keynote speech, 670,000+ audience]
- 12/July/2020, "Towards the Essence of Deep Learning", World AI Conference – Developer Day, 11 July 2020, Shanghai, China. [Keynote speech]
- 9/July/2020, "Trustable AI for Livable City", World AI Conference – Smart City, 9 July 2020, Shanghai, China. [Keynote Speech]
- 9/July/2020, "Towards Trust of AI", World AI Conference, 9-12, July 2020, Shanghai, China. [Keynote Speech, headlines of World AI Conference and the related media interview news was viewed more than

720,000 times in one hour] [The content of the first day of the conference, including this speech, was viewed more than 100,000,000 times] [The content of the four day conference was reviewed more than 220,000,000 times during the conference.]

- 22/April/2020, "AI – Quest for Deep Learning", Cyber Physical Systems and Internet of Things Week (CPS-IoT Week 2020), 21-24 April 2020, in Sydney, Australia. [Keynote speech]

- 13/February/2020, "AI – Quest for Deep Learning", 4th Australian Microwave Symposium (AMS), 13-14 February 2020, Sydney, Australia [Plenary presentation]

- 30/December/2019, "AI – Quest for Deep Learning", Shanghai Academicians Forum, Shanghai, 2019. [450 Auidence, technical news traffic (total visits within one week) – 250K]

- 29/November/2019, "AI – Carpe Juvenis", Asian Conference on Pattern Recognition (ACPR), Auckland, New Zeland, 2019 [Keynote]

- 24/October/2019, "AI Stays Ever Young", Frontier Forum of Artificial Intelligence Technology – Exploring Foundations for Deep Learning, Xi'an, China [Keynote]

- 18/October/2019, "I am AI", University-Industry Leaders Forum and IEEE International Conference on Agents, Jinan, China [Keynote]

- 16/October/2019, "AI: Seize your youth", International Acadecimian Summit on Smart-X & APEC Innovation Technology Dialoge, Chengdu, China [Keynote]

- 15/October/2019, "AI: A Gentle Tutorial", China Telcom, Beijing, China [Tuitorial]

- 17/September/2019, "AI Rocks", 2019 International Forum on Innovation and Emerging Industries Development – New Generation of Information Technology and Industry, Shanghai, China [Keynote]

- 30/August/2019, "AI Rocks", World AI Conference – Fudan, Shanghai, China [Keynote]

- 30/August/2019, "AI – Carpe Juvenis", World AI Conference – AI for Health Care, Shanghai, China [Keynote]

- 12/August/2019, "AI Rocks", AI Education Conference, Hefei, China [Keynote]

- 7/August/2019, "AI Stays Ever Young", 17th Chinese Conference on Machine Learning (CCML), Guiyang, China [Keynote]

- 3/August/2019, "Young for AI", 9th IEEE International Conference on Information Science and Technology (ICIST), Hulunbeier, Inner Mongolia, China [Keynote]

- 22/July/2019, "Young for AI", 1st Australian Autonomous Vehicle Industry Engagement Forum, Macquarie University, NSW, Australia [Keynote Speech]

- 29/June/2019, "AI at Dawn: Opportunities and Challenges", 5th International Summit of Service Robots Industry, Nanjing, China [Keynote Speech]

- 17/June/2019, "AI at Dawn: Opportunities and Challenges", International Conference on Computational Intelligence, Information Technology and Systems, Lublin, Poland [Keynote Speech]

- 13/June/2019, "AI at Dawn: Opportunities and Challenges", the 18th International Conference on Artificial Intelligence and Computational Intelligence, Zakopane, Poland [Keynote Speech]

- 26/May/2019, "AI at Dawn: Opportunities and Challenges", Shanghai Forum - Roundtable Symposium: "Deep into Brain: Artificial Intelligence Beyond Imagination", Shanghai, China. [Panel Members: Jianfeng Feng, Dacheng Tao, Xue Xiangyang, Wang Shouyan, Zhang Lihua, Sharon Naismith, Michael Barnett, Michael Bowen, Matthew Kiernan, Trevor Robinson, Kathy Belov]

- 23/May/2019, "AI at Dawn: Opportunities and Challenges", International Master Lecture, Shanghai University, China.

- 14/April/2019, "AI at Dawn: Opportunities and Challenges", 9th Vision And Learning Seminar (VALSE), Hefei, China. [Keynote speech, 5,100+ registrations]

- 11/March/2019, "AI: Opportunities and Challenges", COMP 45th Anniversary Distinguished Lecture Series, Hong Kong Polytechnic University, Hong Kong. [Distinguished lecture]

- 9/March/2019, "AI: Opportunities and Challenges", the first Australian congress of the Society for Artificial Intelligence in Medicine, Surgery and Healthcare, Sydney, Australia. [Invited Talk]
- 9/February/2019, "AI at Dawn: Opportunities and Challenges", North Sydney Forum, Sydney, Australia. [Invited public speech]
- 16/December/2018, "AI at Dawn: Opportunities and Challenges", The 6th Chinese Computer Science Postdoctoral Fellow Forum, Shenzhen, China, 16-18, December 2018. [Keynote]
- 10/December/2018, "AI at Dawn: Opportunities and Challenges", Shandong University AI Research Centre Launch Ceremony, Jinan, China, 10-12, December 2018. [Intived Speech]
- 9/December/2018, "AI at Dawn: Opportunities and Challenges", The Second Symposium on Machine Intelligence and Data Analytics (MIDA), Kunming, China, 7-10, December 2018. [Keynote]
- 8/December/2018, "AI at Dawn: Opportunities and Challenges", Public Speech Series of "More Than Science", jointly organized by China Digital Science & Technology Museum and the Scientific American (China), Beijing, China, 8, December 2018. [Public Speech. The first two public speeches were delivered by Prof Frank Wilczek (Nobel Prize Winner) and Prof Paul Davies (Regents' Professor and Director of the Beyond Center for Fundamental Concepts in Science, ASU)]
- 2/November/2018, ZhongGuanCun Forum – Innovative Entrepreneur Forum "Artificial Intelligence and Creative Life", Dialouge between Zhongguancun Entrepreneurs and Global Entrepreteurs – Panel Discussion "The Development Trend of Science and Technology Innovation Ecology". Host: Peng Du (General Manager of Z-Street, Vice Chairman of Council of industry and technology alliance in Z-Park); Oarticipants: Sean Randolph (Former President of the Bay Area Council Economic Institute), Keith Carson (Member of the Alameda County Board of Supervisors in Alameda County, California), Ferdinand Tomassini (Head of Investor Relations of OneDome), Edouard Cukierman (Co-Founder of Caralyst Fund, Author of Israel Vally), Michael Gamber (Head of Innovation Centre at Merck Group), Dacheng Tao, and Hong Xuan (CEO of ZGC Group).
- 1/November/2018, "AI at Dawn: Opportunities and Challenges", Yuandu Global Master Lecture, Weifang, Shandong, China. [Keynote]
- 20/September/2018, "AI at Dawn: Opportunities and Challenges", Post Life – Beijing Media Art Biennale, Central Academy of Fine Arts, 5-25 September, 2018. [Invited talk]
- 20/September/2018, "AI at Dawn: Opportunities and Challenges", Beijing, 20-21 September, 2018. [Keynote, more than 2000 audience]
- 18/September/2018, "AI at Dawn: Opportunities and Challenges", World Artificial Intelligence Conference – Future Computational Intelligence Forum, Shanghai, 17-19 September, 2018. [Keynote]
- 4/September/2018, "AI: Transforming the Future", NVIDIA AI Conference, ICC, Sydney, 3-4 September, 2018. [Invited Speech]
- 1/August/2018, "AI: Transforming the Future", University of Sydney's Annual Innovation Week Gala Dinner, 2018. [Invited Speech, ~500 Audience, at MacLaurin Hall, The Quadrangle]
- 5/July/2018, "AI: Transforming the Future", Artificial Intelligence on Fashion and Textile (AIFT) Conference, Organised by Alibaba Group and Hong Kong Polytechnic University, Hong Kong, 3-6 July 2018. [Plenary Speech]
- 26/June/2018, "AI: Transforming the Future", IEEE International Symposium on Neural Networks (ISNN), Minsk, Belarus, 25-28 June 2018. [Plenary Keynote]
- 5/June/2018, "AI: Transforming the Future", Orientation Seminar (New Starters), Hosted by workforce development team at the University of Sydney, New Law Annexe – Seminar Room 446.
- 23/May/2018, "AI: Transforming the Future", Science at the Shine Dome, Australian Academy of Science, Canberra [New Fellow Seminar]
- 9/April/2018, "Robotics Driven by AI", 2018 International Academician Forum on Robot and Intelligence, jointly organized by IEEE, SIAT, CITE and SRA [Keynote]

- 28/February/2018, "AI: From Perceiving and Learning to Reasoning and Behaving", Guest speech at Joint Alibaba-NTU Workshop Emerging Topics of AI Research, opening ceremony of Alibaba-NTU Joint Research Institute of Artificial Intelligence

- 26/February/2018, "GPU Computing is Boosting the Research of Artificial Intelligence", Guest Speech at NVIDIA Deep Learning Institute Workshop @ University of Sydney

- 16/December/2017, "Recent Progress in AI", 2017 International Conference on Security, Pattern Analysis, and Cybernetics, 15-17 December, Shenzhen, China [Keynote]

- 3/December/2017, "Recent Progress in AI", The 12th International Conference on Bio-inspired Computing: Theories and Applications, 1-3 December, Harbin, China [Keynote]

- 28/November/2017, "Recent Progress in AI", the 7th Australia-China Symposium on Education, Science and Technology, Sydney, Australia [Invited talk]

- 11/November/2017, "Recent Progress in AI", New Scientist Event on Artificial Intelligence, Sydney, Australia [Invited talk]

- 12/October/2017, "Artificial Intelligence", International Bar Association Annual Conference Sydney, 8-13 October, Sydney, Australia [Invited talk, 4500+ registrations for IBA conference]

- 21/September/2017, "Recent Progress in AI", World Robotics Conference, 21-22 September, Foshan, Guangdong, China [Keynote, 1000+ audience]

- 21/August/2017, "Recent Progress in Artificial Intelligence: From Perceiving, Learning, and Reasoning to Behaving", IJCAI workshop on "Biomedical infOrmatics with Optimization and Machine learning" (BOOM), August 21, Melbourne, Victoria, Australia [Keynote]

- 20/August/2017, "Computer Vision Meets Machine Learning", Big Data Summit, Co-located with IJCAI 2017, August 20-22, Melbourne, Victoria, Australia [Lecture]

- 20/August/2017, "Recent Progress in Artificial Intelligence: From Perceiving, Learning, and Reasoning to Behaving", IJCAI workshop on "Learning in the Presence of Class Imbalance and Concept Drift", August 20, Melbourne, Victoria, Australia [Keynote]

- 12/August/2017, "Step into a Robot's Brain", Geek Park Rebuild, August, Beijing, China [Keynote, 2000+ audience]

- June/2017, "The Recent Progress in Artificial Intelligence", Hong Kong RGC IIDS Workshop series in Data Science and Machines Learning, June 19-21, Hong Kong, China [Keynote]

- May/2017, "Meet Artificial Intelligence in Sydney", The Pacific Asia Conference on Knowledge and Data Discovery (PAKDD), May 22-28, 2017, Jeju island, Korean [Keynote]

- December/2016, "Multiview Learning and Computer Vision Breakthroughs", The Emerging Big Data Technology Summit, Dec 7-9, 2016, Melbourne, Australia [Keynote]

- October/2016, "Multiview Learning", The 4th Chinese Conference on Intelligent Visual Surveillance, Oct 19, 2016, Beijing, China [Invited talk]

- September/2016, "Multiview Learning", The 2016 Symposium on Research and Application in Computer Vision, Sept 18-20, 2016, Shanghai, China [Keynote]

- March/2016, "Multiview Learning," Department of Computer Science, Nanjing University, Nanjing, China.

- September/2015, "Multiview Intact Space Learning," Department of Computer Science, Tsinghua University, Beijing, China.

- August/2015, "Multiview Learning," The 16th IEEE International Conference on Communication Technology, Hangzhou, China. [Keynote]

- June/2015, "Multiview Intact Space Learning," School of Computer Engineering, Nanyang Technological University, Singapore.

- February/2015, "Low-rank and Sparse Matrix Decomposition," School of Business, Beihang University, Beijing, China.

- December/2014, "Multiview Learning and Matrix Factorization," School of Computer Engineering, Nanyang Technological University, Singapore.
- October/2014, "Matrix Decomposition - A savoury ingredient for cooking your research," International Conference on Multi-Valued Fuzzy Logic, Jinan, Shandong, China. [Keynote]
- June/2014, "Multiview Learning," Huazhong University of Science and Technology, Wuhan, Hubei, China.
- August 2013, "MahNMF: Manhattan Non-negative Matrix Factorization," Macau University of Science and Technology, Macau.
- September 2012, "MahNMF: Manhattan Non-negative Matrix Factorization," NICTA, Sydney, Australia.
- July 2012, "Learning and Mining with Visual Data on the Web," IEEE International Conference on Multimedia and Expo, Melbourne, Australia. [Tutorial: 3.5 hours]
- April 2012, "GoDec: Randomized Low-rank & Sparse Matrix Decomposition in Noisy Case," Vision and Learning Seminar 2012, Xi'an, China. [Keynote]
- August 2011, "GoDec: Randomized Low-rank & Sparse Matrix Decomposition in Noisy Case," The Third Pao-Lu Hsu Conference on Statistical Machine Learning and Cross-media Retrieval, Hangzhou, China. [Invited speaker]
- July 2011, "GoDec: Randomized Low-rank & Sparse Matrix Decomposition in Noisy Case," Shanghai Jiaotong University, Shanghai, China.
- November 2010, "Manifold elastic net via backward-forward equal correlation continuation," Department of Computer Science, Hong Kong University of Science and Technology, Hong Kong, China.
- November 2010, "Manifold elastic net via backward-forward equal correlation continuation," Department of Computer Science, Hong Kong Baptist University, Hong Kong, China.
- September 2010, "Computational modelling of the human visual cortex," Shenzhen University, China.
- September 2010, "Computational modelling of the human visual cortex," National University of Defense Technology, China.
- August 2010, "Computational modelling of the human visual cortex," Shenzhen Institutes of Advanced Technology, Chinese Academy of Sciences, China.
- August 2010, "Computational modelling of the human visual cortex," The Chinese University of Hong Kong, Hong Kong, China.
- July 2010, "Computational modelling of the human visual cortex," Machine Learning Study Group at Academia Sinica, Taipei, Taiwan.
  http://mml.citi.sinica.edu.tw/mlwiki/doku.php
- July 2010, "Computational modelling of the human visual cortex," Institute of Information Science, Academia Sinica, Taipei, Taiwan.
- April 2010, "Computational modelling of the human visual cortex," University of Ulster, Ulster, N. Ireland, U.K.
- April 2010, "Biologically inspired models for object categorization," DSO National Laboratories, Singapore.
- April 2010, "Dimension reduction all around," Panasonic Singapore Laboratories, Singapore.
- January 2010, "Discriminative subspace Selection - problems, solutions and applications," Tsinghua University, Beijing, China.
- January 2010, "Discriminative subspace Selection - problems, solutions and applications," Beihang University, Beijing, China.
- June 2009, "Subspace learning – linear and multilinear forms," University of Science and Technological University, Hefei, China.

- May 2009, "Subspace learning – linear and multilinear forms," National Lab of Pattern Revognition, Beijing, China.
- May 2009, "Discriminative Subspace Selection: Problems, Solutions, and Applications," Xidian University, Xi'an, China.
- May 2009, "Subspace selection: From geometric mean to general mean," Wuhan University, Wuhan, China.
- May 2009, "Discriminative Subspace Selection: Problems, Solutions, and Applications," South China University of Technology, Guangzhou, China.
- May 2009, "Biologically inspired feature manifold," Huazhong University of Science and Technology, Wuhan, China.
- May 2008, "Learning and mining from tensors," Xidian University, Xi'an, China.
- May 2008, "Geometric mean for subspace selection," Nanyang Technological University, Singapore.
- September 2007, "Supervised tensor learning," School of Computer Science and Information Systems, Birkbeck, University of London, London, U.K.
- June 2007, "Learning and mining from tensors," Shanghai Jiao Tong University, Shanghai, China.
- June 2007, "General tensor discriminant analysis," Hong Kong University of Science and Technology, Hong Kong, China.
- June 2006, "Linear and multilinear subspace methods," National Lab of Pattern Recognition, Institute of Automation, Chinese Academy of Sciences, Beijing, China.
- June 2006, "General tensor discriminant analysis," Anhui University, Hefei, China.
- May 2006, "Multilinear subspace method and its applications," University of Science and Technology of China, Hefei, China.
- May 2006, "Linear and multilinear subspace methods for pattern Analysis," Department of Computer Science and Information Systems, Birkbeck, University of London, London, U.K.
- October 2005, "Tensor rank one discriminant analysis for human action analysis," National Lab of Pattern Recognition, Institute of Automation, Chinese Academy of Sciences, Beijing, China.
- October 2005, "Supervised tensor learning," Department of Computer Science and Information Systems, Birkbeck, University of London, London, U.K.
- September 2004, "Small samples learning for relevance feedback," National Lab of Pattern Recognition, Institute of Automation, Chinese Academy of Sciences, Beijing, China.
- July 2004, "Relevance feedback in image retrieval," Department of Information Engineering, Chinese University of Hong Kong, Hong Kong, China.
- September 2002, "Face detection," Multimedia Lab, Department of Information Engineering, Chinese University of Hong Kong, Hong Kong, China.
- June 2002, "Mathematic modeling," Department of Mathematics, University of Science and Technology of China, Hefei, China.

- August 2011, "GoDec: Randomized Low-rank & Sparse Matrix Decomposition in Noisy Case," The 3rd Hsu International Conference, Hangzhou, China.
- October 2008, "Biologically Inspired Model: Theory and Applications," The 2nd Microsoft Research Asia-Tsinghua University Workshop on Internet Services and Cloud Computing, Multimedia Group Discussion, Beijing, China.
- June 2008, "Bayesian tensor analysis," IEEE International Joint Conference on Neural Networks (IJCNN) as part of IEEE World Congress on Computational Intelligence (WCCI).
- June 2008, "A unifying framework for spectral analysis based dimensionality reduction," IEEE International Joint Conference on Neural Networks (IJCNN) as part of IEEE World Congress on Computational Intelligence (WCCI).

- 2008, "Supervised tensor learning," Croucher Advanced Study Institute Mathematical & Algorithmic Challenges for Modeling & Analyzing Modern Data Sets.
- 2007, "Bayesian tensor approach for 3-D face modelling," IEEE International Conference on Multimedia and Expo Workshop on Multimedia Communications and Computing.
- November 2005, "Supervised tensor learning", IEEE International Conference on Data Mining at Houston, Texas, USA.

9. Conference Chairs

- General Chair, International Conference on Digital Image Computing Techniques and Applications (DICTA), Sydney, November 28-30, NSW, Australia, 2022.
- General Chair, Australasian Joint Conference on Artificial Intelligence (AJCAI), Australia, 2022.
- Area Chair, the Thirty-third Conference on Neural Information Processing Systems (NeurIPS), 2021.
- Co-organizer (Dawn Song, Dacheng Tao, Alan Yuille, Anima Anandkumar, Aishan Liu, Xinyun Chen, Yingwei Li, Chaowei Xiao, Xun Yang, and Xianglong Liu), 2021 International Workshop on Adversarial Learning for Multimedia, Chengdu, Sichuan, China, 2021.
- General Chair, 2021 IEEE International Conference on Data Mining (ICDM), New Zeland, 2021.
- Senior Area Chair, 2021 International Joint Conference on Artificial Intelligence (IJCAI), 2021.
- Area Chair, the Thirty-fourth Conference on Neural Information Processing Systems (NeurIPS), 2021.
- Senior Program Committee Member, SIAM International Conference on Data Mining (SDM), Alexandria, Virginia, USA, March 25 – 27, 2021.
- Organizer, ACM Multimedia 2021 – 1st International Workshop on Adversarial Learning for Multimedia, Chengdu, Sichuan, China, October 20, 2021.
- Co-Chair, AAAI-20 Workshop on Intelligent Process Automation (IPA-20), New York, NY, USA, February 7, 2020.
- Co-Chair, IJCAI-PRICAI-20 Workshop on 3D Furniture shape with TextURE (3D-FUTURE), Yokohama, Japan, July 11-17, 2020.
- Co-Chair, 3D-FUTURE Challenge, July 2020.
- Area Chair, 2020 International Joint Conference on Artificial Intelligence (IJCAI), Yokohama, Kanagawa, Japan, July 11 – 17, 2020.
- Senior Program Committee Member, 26th ACM SIGKDD Knowledge Discovery and Data Mining (KDD), San Diego, California USA, August 22 – 27, 2020.
- Area Chair, 2020 AAAI Conference on Artificial Intelligence (AAAI), New York, USA, February 7 – 12, 2020.
- Demo Chair, 2020, IEEE International Conference on Data Engineering (ICDE), Dallas, Texas, USA, April 20–24, 2020.
- Program Committee Chair, 2019 Big Data Technology Conference (BDTC), Beijing, China, December 5–7, 2019.
- General Chair, ACM International Conference on Information and Knowledge Management (CIKM), Beijing, China, November 3-7, 2019.
- Area Chair, 2019 International Joint Conference on Artificial Intelligence (IJCAI), Macao, China, August 10-16, 2019.
- Senior Program Committee Member, 25th ACM SIGKDD Knowledge Discovery and Data Mining (KDD), Alaska, USA, August 3 – 7, 2019.

- Area Chair, 2019 AAAI Conference on Artificial Intelligence (AAAI), Honolulu, USA, January 27 – February 1, 2019.
- Program Committee Chair, 2018 IEEE International Conference on Data Mining (ICDM), Singapore, November 17-20, 2018.
- Track Chair (Pattern Recognition and Machine Learning), 2018 IEEE International Conference on Pattern Recognition (ICPR), Beijing, China, August 20-24, 2018.
- Senior Program Committee Member, 24th ACM SIGKDD Knowledge Discovery and Data Mining (KDD), London, UK, August 19 – 23, 2018.
- Area Chair (machine learning), 2018 International Joint Conference on Artificial Intelligence (IJCAI-ECAI), Stockholm, Sweden, July 13-19, 2018.
- Senior Program Committee Member (Area Chair), 2018 AAAI Conference on Artificial Intelligence (AAAI), New Orleans, Louisiana, USA, February 11-15, 2018.
- Senior Program Committee Member, 23rd ACM SIGKDD Knowledge Discovery and Data Mining (KDD), Nova Scotia, Canada, August 13 – 17, 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 (KDD), San Francisco, USA, August 13 – 17, 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.

10. Journal and Conference Referees/Reviewers

Journal Referee

- ACM Computing Surveys (ACM)
- ACM Multimedia System Journal (ACM and Springer)
- ACM Transactions on Data Science (ACM)
- 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)
- Briefings in Bioinformatics
- 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 Internet of Things Journal (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 Robotics and Automation Letters (IEEE)
- IEEE Signal Processing Magazine (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 Transactions on Visualization and Computer Graphics (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 American Statistical Association
- 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)
- Nature Scientific Reports (Nature)
- Nature Biomedical Engineering (Nature)
- 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 [2022 (AC), 2021 (AC), 2020 (AC), 2019 (AC), 2018 (AC), 2017 (SPC), 2016]
- ACM SIGKDD International Conference on Knowledge Discovery and Data Mining [2019 (SPC), 2018 (SPC), 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 [2018, 2017, 2016, 2015, 2014, 2013, 2012, 2011, 2010, 2009, 2008, 2007]
- IEEE International Conference on Data Mining [2016, 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 [2017, 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

Book Referee

- Bentham Science Publishers (Introduction to Data Mining – A Practical Approach, K. Raghava Rao)
- Bentham E-Book (Internet Multimedia Search and Mining, Edited by Xian-Sheng Hua, Marcel Worring, and Tat-Seng Chua)
- Chapman & Hall/CRC Press (Hypergraph Spectral Learning for Multi-Label Dimensionality Reduction)
- Idea Group Inc (E-Strategies for Resource Management Systems: Planning and Implementation)

Grant Referee

- Australian Research Council (Australian Laureate Fellowship, Future Fellowship, DECRA, Discovery Project, Linkage Project, Industrial Transformation Training Centres, Excellence in Research for Australia)
- Chilean National Science and Technology Commission
- European Research Council (ECREA- the FP7 "Ideas" Specific Programme)
- European Science Foundation (ESF, ESF College of Expert Reviewers)
- European Science Foundation (ESF, Junior and Senior Research Projects of the Research Foundation Flanders (FWO))
- 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 (External reviewer)
- General Research Fund of Hong Kong Research Grant Council (Engineering Panel Member)
- Israel Science Foundation (ISF)
- The Leverhulme Trust
- Ministry of Education and Science of the Russian Federation
- Ministry of Science and Technology of the People's Republic of China
- National Research Foundation, Singapore - AI Singapore Research Programme Evaluation Panel
- National Research Foundation, South Africa
- Natural Sciences and Engineering Research Council of Canada (E.W.R. Steacie Memorial Fellowship)
- Natural Sciences and Engineering Research Council of Canada (NSERC Discovery Grants)
- National Center of Science & Technology Evaluation, Kazakhstan
- National Science Centre, Poland
- New Zealand Ministry of Business, Innovation and Employment (MBIE), College of Assessors [2021-]

- Romanian National Council for Research and Development (Evaluator for Partnership Programme - Joint Applied Research Projects - PCCA 2011)
- Royal Society of New Zealand (Te Apārangi) – James Cook Research Fellowship
- Selection Panel of the Hong Kong PhD Fellowship
- Science Foundation Ireland
- Singapore's AME Programmatic –Scientific Workshop & Technical Review Panel [Chair, 2020]
- Swiss National Science Foundation (SNSF)
- The Innovation Centre of the Singapore-MIT Alliance for Research and Technology
- United Arab Emirates University (UAEU) Research Proposal

Award committee

- 2022 IEEE TCSVT Best Paper Award Committee
- 2022 AAAI Best Paper Award Committee
- 2021 Reviewer for the Koerber European Science Prize
- 2020 CCF Technical Committee on Computer Vision Test of Time Paper Award Committee [Member]
- 2020 IEEE ICDM Awards Nomination Committee [Member]
- 2020 IEEE TCCPS Technical Achievement Award [Chair]
- 2020-2022 Heidelberg Laureate Forum Selection Committee [Member]
- 2020-2022 Australian Academy of Science Sectional Committee (11 – Information Science, Quantum Information and Communication) Member
- 2020 Independent reviewer for Australian Council of Learned Academies (ACOLA) report – The Internet of Things Report
- World AI Conference – Superior AI Leader Award Panel [2018-2021]
- Edwin H. Land Medal 2017 panel chair
- Edwin H. Land Medal 2016 panel 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)

11. 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", US9286524B1, 2015-04-15 Applied, 2016-03-15 Published, 2016-03-15 Granted.
2. Xue Mei, Chaohui Wang, Zhibin Hong, Danil V. Prokhorov, and Dacheng Tao, "Tracking Using Multilevel Representations", US9519837B2, 2014-07-03 Submitted, 2016-01-07 Published, 2016-12-13 Granted.
3. Zhibin Hong, Xue Mei, Zhe Chen, Chaohui Wang, Danil Prokhorov, and Dacheng Tao, "Apparatus and method for object tracking", US20170185860A1, 2015-05-19 Submitted, 2017-06-29 Published, and 2019-02-19 Granted.

Journal papers

1. Xikun Zhang, Dongjin Song, and Dacheng Tao, "Hierarchical Prototype Networks for Continual Graph Representation Learning", *IEEE Transactions on Pattern Analysis and Machine Intelligence* (**TPAMI**), Accepted on 20 June 2022.

2. Quanxue Gao, Xinbo Gao, Chris Ding, and Dacheng Tao, "Tensorized Bipartite Graph Learning for Multi-view Clustering", *IEEE Transactions on Pattern Analysis and Machine Intelligence* (**TPAMI**), Accepted on 29 June 2022.

3. Chen Gong, Yongliang Ding, Bo Han, Gang Niu, Jian Yang, Jane You, Dacheng Tao, and Masashi Sugiyama, "Class-Wise Denoising for Robust Learning under Label Noise", *IEEE Transactions on Pattern Analysis and Machine Intelligence* (**TPAMI**), Accepted on 20 May 2022.

4. Kai Han, Yunhe Wang, Hanting Chen, Xinghao Chen, Jianyuan Guo, Zhenhua Liu, Yehui Tang, An Xiao, Chunjing Xu, Yixing Xu, Zhaohui Yang, Yiman Zhang, and Dacheng Tao, "A Survey on Vision Transformer", *IEEE Transactions on Pattern Analysis and Machine Intelligence* (**TPAMI**), Accepted on 10 February 2022.

5. Cheng Deng, Hao Wang, Tongliang Liu, and Dacheng Tao, "Transferable Coupled Network for Zero-Shot Sketch-Based Image Retrieval", *IEEE Transactions on Pattern Analysis and Machine Intelligence* (**TPAMI**), Accepted on 18 September 2021.

6. Youjian Zhang, Chaoyue Wang, Stephen John Maybank, and Dacheng Tao, "Exposure Trajectory Recovery from Motion Blur," *IEEE Transactions on Pattern Analysis and Machine Intelligence* (**TPAMI**), Accepted on 18 September 2021.

7. Yunhe Wang, Chang Xu, and Dacheng Tao, "Learning Versatile Convolution Filters for Efficient Visual Recognition", *IEEE Transactions on Pattern Analysis and Machine Intelligence* (**TPAMI**), Accepted on 18 September 2021.

8. Baosheng Yu and Dacheng Tao, "Heatmap Regression via Randomized Rounding", *IEEE Transactions on Pattern Analysis and Machine Intelligence* (**TPAMI**), Accepted on 3 August 2021.

9. Haibo Qiu, Dihng Gong, Zhifeng Li, Wei Liu, and Dacheng Tao, "End2End Occluded Face Recognition by Masking Corrupted Features", *IEEE Transactions on Pattern Analysis and Machine Intelligence* (**TPAMI**), Accepted on 6 July 2021.

10. Liu Liu, Ji Liu, and Dacheng Tao, "Variance Reduced Methods for Non-convex Composition Optimization", *IEEE Transactions on Pattern Analysis and Machine Intelligence* (**TPAMI**), Accepted on 18 February 2021.

11. Chen Gong, Qizhou Wang, Tongliang Liu, Bo Han, Jia You, Jian Yang, and Dacheng Tao, "Instance-Dependent Positive and Unlabeled Learning with Labeling Bias Estimation", *IEEE Transactions on Pattern Analysis and Machine Intelligence* (**TPAMI**), Accepted on 18 February 2021.

12. Yuxuan Du, Min-Hsiu Hsie, Tongliang Liu, and Dacheng Tao, "Quantum Differentially Private Sparse Regression Learning", *IEEE Transactions on Information Theory* (**TIT**), Accepted March 20, 2022.

13. Jianping Gou, Liyuan Sun, Baosheng Yu, Lan Du, Kotagiri Ramamohanarao, and Dacheng Tao, "Collaborative Knowledge Distillation via Multi-Knowledge Transfer", *IEEE Transactions on Neural Networks and Learning Systems* (**TNNLS**), Accepted on 18 Sept 2022.

14. Mengya Han, Yibing Zhan, Yong Luo, Bo Du, Han Hu, Yonggang Wen, and Dacheng Tao, "Not All Instances Contribute Equally: Instance-adaptive Class Representation Learning for Few-Shot Visual Recognition", *IEEE Transactions on Neural Networks and Learning Systems* (**TNNLS**), Accepted on 04 April 2022.

15. Mingjin Zhang, Jingwei Xin, Jing Zhang, Dacheng Tao, and Xinbo Gao, "Microscope Chip Image Super-Resolution Reconstruction via Curvature Consistent Network", *IEEE Transactions on Neural Networks and Learning Systems* (**TNNLS**), Accepted on 04 April 2022.

16. Guanyu Gao, Yonggang Wen, and Dacheng Tao, "Distributed Energy Trading and Scheduling among Microgrids via Multiagent Reinforcement Learning", *IEEE Transactions on Neural Networks and Learning Systems* (**TNNLS**), Accepted on 04 April 2022.

17. Zhen Wang, Liu Liu, Yiqun Duan, and Dacheng Tao, "SIN: Semantic Inference Network for Few-shot Streaming Label Learning", *IEEE Transactions on Neural Networks and Learning Systems* (**TNNLS**), Accepted on 11 August 2021.

18. Jingwei Zhang, Tongliang Liu, and Dacheng Tao, "An Optimal Transport Analysis on Generalization in Deep Learning", *IEEE Transactions on Neural Networks and Learning Systems* (**TNNLS**), Accepted on 11 August 2021.

19. Dalu Guo, Chang Xu, and Dacheng Tao, "Bilinear Graph Networks for Visual Question Answering", *IEEE Transactions on Neural Networks and Learning Systems* (**TNNLS**), Accepted on 11 August 2021.

20. Yang Xu, Cheng Deng, Zhiyuan Dang, and Dacheng Tao, "Deep Multi-View Collaborative Clustering", *IEEE Transactions on Neural Networks and Learning Systems* (**TNNLS**), Accepted on 05 July 2021.

21. Zhihao Cheng, Liu Liu, Aishan Liu, Hao Sun, Meng Fang, and Dacheng Tao, "On the Guaranteed Almost Equivalence between Imitation Learning from Observation and Demonstration", *IEEE Transactions on Neural Networks and Learning Systems* (**TNNLS**), Accepted on 05 July 2021.

22. Liu Liu, Ji Liu, Cho-Jui Hsieh, and Dacheng Tao, "Stochastically Controlled Compositional Gradient for Composition Problems", *IEEE Transactions on Neural Networks and Learning Systems* (**TNNLS**), Accepted on 05 July 2021.

23. Mingyu Fan, Xiaoqin Zhang, Jie Hu, Nannan Gu, and Dacheng Tao, "Adaptive Data Structure Regularized Multi-class Discriminative Feature Selection", *IEEE Transactions on Neural Networks and Learning Systems* (**TNNLS**), Accepted on 1 April 2021.

24. Jingwei Zhang, Tongliang Liu, and Dacheng Tao, "On the Rates of Convergence from Surrogate Risk Minimizers to the Bayes Optimal Classifier", *IEEE Transactions on Neural Networks and Learning Systems* (**TNNLS**), Accepted on 25 March 2021.

25. Xiao Wang, Zhe Chen, Bo Jiang, Jin Tang, Bin Luo, and Dacheng Tao, "Beyond Greedy Search: Tracking by Multi-Agent Reinforcement Learning-based Beam Search", *IEEE Transactions on Image Processing* (**TIP**), accepted on 31 May 2022.

26. Yufei Xu, Jing Zhang, Stephen J Maybank, and Dacheng Tao, "DUT: Learning Video Stabilization By Simply Watching Unstable Videos", *IEEE Transactions on Image Processing* (**TIP**), accepted on 31 May 2022. (USYD, corresponding author)

27. An Empirical Study of Remote Sensing Pretraining, TGRS, Accepted on 27 May 2022.

28. Jie Gui, Dacheng Tao, and Jieping Ye, "A Review on Generative Adversarial Networks: Algorithms, Theory, and Applications", *IEEE Transations on Knowledge and Data Engineering* (**TKDE**), Accepted on November 2021.

29. Jun Cheng, Lei Wang, Jiaji Wu, Xiping Hu, Gwanggil Jeon, Dacheng Tao, and Mengchu Zhou, "Visual Relationship Detection: A Survey", *IEEE Transactions on Cybernetics* (**TCYB**), Accepted on 07 January 2022.

30. Fusheng Hao, Fengxiang He, Jun Cheng, and Dacheng Tao, "Global-Local Interplay in Semantic Alignment for Few-Shot Learning", *IEEE Transactions on Circuits and Systems for Video Technology* **(TCSVT)**, accepted on December 2021.

31. Rui Jin, Jing Zhang, Jianyu Yang, and Dacheng Tao, "Multi-Branch Adversarial Regression for Domain Adaptive Hand Pose Estimation", *IEEE Transactions on Circuits and Systems for Video Technology* (**TCSVT**), accepted on January 2022.

32. Pengfei Wang, Changxing Ding, Wentao Tan, Mingming Gong, Kui Jia, and Dacheng Tao, "Uncertainty-aware Clustering for Unsupervised Domain Adaptive Object Re-identification", *IEEE Transactions on Multimedia* (**TMM**), Accepted 3 January 2022.

33. Yongsheng Dong, Xuelong Li, Guosheng Cui, and Dacheng Tao, "Discriminative and Orthogonal Subspace Constraints based Nonnegative Matrix Factorization", *ACM Transactions on Intelligent Systems and Technology* (**ACM TIST**), Accepted 12 May 2018.

34. Sen Zhang, Jing Zhang, and Dacheng Tao, "Information-Theoretic Odometry Learning", *International Journal of Computer Vision* (**IJCV**), Accepted 10 April 2022.

35. Bo Du, Jian Ye, Jing Zhang, Juhua Liu, and Dacheng Tao, "I3CL: Intra- and Inter-Instance Collaborative Learning for Arbitrary-shaped Scene Text Detection", *International Journal of Computer Vision* (**IJCV**), Accepted 10 April 2022.

36. Luofeng Liao, Li Shen, Jia Duan, Mladen Kolar, and Dacheng Tao, "Local AdaGrad-Type Algorithm for Stochastic Convex-Concave Optimization", *Machine Learning Journal* (MLJ), accepted 13 Sept 2022.

37. Xue Xu, Kuo Yang, Feilong Zhang, Wenwen Liu, Yinyan Wang, Changying Yu, Junyao Wang, Keke Zhang, Chao Zhang, Dacheng Tao, Edwin Wang, JianXin Chen, Hongcai Shang, "Identification of herbal categories active in pain disorder subtypes by machine learning help reveal novel molecular mechanisms of algesia", *Pharmacological Research* (**Elsevier**), 2020.

38. Yuxuan Du, Tao Huang, Shan You, Min-Hsiu Hsieh, and Dacheng Tao, "Quantum circuit architecture search for variational quantum algorithms", *NPJ Quantum Information*, Accepted 31 March 2022.

39. Yuxuan Du, Zhuozhuo Tu, Xiao Yuan, and Dacheng Tao, "Efficient Measure for the Expressivity of Variational Quantum Algorithms", *Physical Review Letter* (PRL), Accepted 1 February 2022.

40. Xu-Fei Yin, Yuxuan Du, Yue-Yang Fei, Rui Zhang, Li-Zheng Liu, Yingqiu Mao, Tongliang Liu, Min-Hsiu Hsieh, Li Li, Nai-Le Liu, Dacheng Tao, Yu-Ao Chen, and Jian-Wei Pan, "An Efficient Bipartite Entanglement Detection Scheme with a Quantum Adversarial Solver", *Physical Review Letter* (PRL), Accepted 8 February 2022.

41. Yuxuan Du, Min-Hsiu Hsieh, Tongliang Liu, and Dacheng Tao, "On the learnability of QNNs", *Physics Review X* – Quantum (APS, PRX-Quantum), Accepted 20 October 2021.

42. Yuxuan Du, Min-Hsiu Hsieh, Tongliang Liu, and Dacheng Tao, "Expressive power of parameterized quantum circuits", *Physical Review Research* (APS), Accepted May 18, 2020.

43. Yuxuan Du, Min-Hsiu Hsieh, Tongliang Liu, and Dacheng Tao, "A Quantum-inspired Algorithm for General Minimum Conical Hull Problems", *Physical Review Research* (APS), Accepted May 18, 2020.

44. Elija Perrier, Dacheng Tao, and Christopher Ferrie, "Quantum Geometric Machine Learning for Quantum Circuits and Control", *New Journal of Physics* (IOP NJP), Accepted October 8, 2020.

45. Tianyu Guo, Chang Xu, Boxin Shi, Chao Xu, and Dacheng Tao, "Optimizing Latent Distributions for Non-Adversarial Generative Networks", *IEEE Transactions on Pattern Analysis and Machine Intelligence* (**TPAMI**), vol. 44, no. 5, pp. 2657-2672, May 2022.

46. Chaohui Wang, Huan Fu, Dacheng Tao, and Michael Black, "Occlusion Boundary: A Formal Definition & Its Detection via Deep Exploration of Context", *IEEE Transactions on Pattern Analysis and Machine Intelligence* (**TPAMI**), vol. 44, no. 5, pp. 2641-2656, May 2022.

47. Mingbao Lin, Rongrong Ji, Xiaoshuai Sun, Baochang Zhang, Feiyue Huang, Yonghong Tian, and Dacheng Tao, "Fast Class-wise Updating for Online Hashing", *IEEE Transactions on Pattern Analysis and Machine Intelligence* (**TPAMI**), vol. 44, no. 5, pp. 2453-2467, May 2022.

48. Cheng Deng, Yang Xu, Tongliang Liu, and Dacheng Tao, "Heterogeneous Graph Attention Network for Unsupervised Multiple-Target Domain Adaptation", *IEEE Transactions on Pattern Analysis and Machine Intelligence* (**TPAMI**), vol. 44, no. 4, pp. 1992-2003, April 2022.

49. Jun Yu, Min Tan, Hongyuan Zhang, Yong Rui, and Dacheng Tao, "Hierarchical Deep Click Feature Prediction for Fine-grained Image Recognition", *IEEE Transactions on Pattern Analysis and Machine Intelligence* (**TPAMI**), vol. 44, no. 2, pp. 563-578, February 2022.

50. Changxing Ding, Kan Wang, Pengfei Wang, and Dacheng Tao, "Multi-task Learning with Coarse Priors for Robust Part-aware Person Re-identification", *IEEE Transactions on Pattern Analysis and Machine Intelligence* (**TPAMI**), vol. 44, no. 3, pp. 1474-1488, March 2022.

51. Xu Yang, Hao Wang, De Xie, Cheng Deng, and Dacheng Tao, "Object-Agnostic Transformers for Video Referring Segmentation", *IEEE Transactions on Image Processing* (**TIP**), vol. 31, pp. 2839-2849, 2022.

52. Wen Wang, Jing Zhang, Wei Zhai, Yang Cao, and Dacheng Tao, "Robust Object Detection via Adversarial Novel Style Exploration", *IEEE Transactions on Image Processing* (**TIP**), vol. 31, no. 1, pp. 1949-1962, January 2022.

53. Yongsheng Dong, Wei Tan, Dacheng Tao, Lintao Zheng, and Xuelong Li, "CartoonLossGAN: Learning Surface and Coloring of Images for Cartoonization", *IEEE Transactions on Image Processing* (**TIP**), vol. 31, pp. 485-498, 2022.

54. Jun Cheng, Fusheng Hao, Liu Liu, and Dacheng Tao, "Imposing Semantic Consistency of Local Descriptors for Few-shot Learning", *IEEE Transactions on Image Processing* (**TIP**), vol. 31, pp. 1587-1600, 2021.

55. Lefei Zhang, Meng Lan, Jing Zhang, and Dacheng Tao, "Stagewise Unsupervised Domain Adaptation with Adversarial Self-Training for Road Segmentation of Remote Sensing Images", *IEEE Transactions on Geoscience and Remote Sensing* (**TGRS**), vol. 60, pp. 1-13, January 2022.

56. Liping Xie, Weili Guo, Haikun Wei, Yuan-Yan Tang, and Dacheng Tao, "Efficient Unsupervised Dimension Reduction for Streaming Multiview Data", *IEEE Transactions on Cybernetics* (**TCYB**), vol. 52, no. 3, pp. 1772-1784, March 2022.

57. Jingchen Ke, Chen Gong, Tongliang Liu, Lin Zhao, Jian Yang, and Dacheng Tao, "Laplacian Welsch Regularization for Robust Semisupervised Learning", *IEEE Transactions on Cybernetics* (**TCYB**), vol. 52, no. 1, pp. 164-177, January 2022.

58. Xinyu Wu, Ye Yuan, Xikun Zhang, Can Wang, Tiantian Xu, and Dacheng Tao, "Gait Phase Classification for a Lower Limb Exoskeleton System Based on a Graph Convolutional Network Model", *IEEE Transactions on Industrial Electronics* (**TIE**), vol. 69, no. 5, pp. 4999-5008, May 2022.

59. Kai Yang, Jiao Yang, Dongjin Song, and Dacheng Tao, "TimeAutoAD: Autonomous Anomaly Detection with Self-supervised Contrastive Loss for Multivariate Time Series", *IEEE Transactions on Network Science and Engineering* (TNSE), vol. 9, no. 3, pp. 1604-1619, March 2022.

60. Yuxiang Yang, Zhihao Ni, Mingyu Gao, Jing Zhang, and Dacheng Tao, "Collaborative Pushing and Grasping of Tightly Stacked Objects via Deep Reinforcement Learning", *IEEE CAA Journal Autom. Sinica* (JAS), vol. 9, no. 1, pp. 135-145, January 2022.

61. Guanyu Gao, Chengru Song, Thannehene Gedara Thusitha Bandara, Meng Shen, Fan Yang, Wolf Posdorfer, Dacheng Tao, Yonggang Wen, "FogChain: a Blockchain-based Peer-to-Peer Solar Power Trading System Powered by Fog AI", *IEEE Internet of Things Journal* (**IoT**), vol. 9, no. 7, pp. 5200-5215, July 2022.

62. Yun Liu, Ming-Ming Cheng, Deng-Ping Fan, Le Zhang, Jia-Wang Bian, and Dacheng Tao, "Semantic Edge Detection with Diverse Deep Supervision", *International Journal of Computer Vision* (**IJCV**), vol. 130, no. 1, pp. 179-198, January 2022.

63. Jizhizi Li, Sihan Ma, Jing Zhang, and Dacheng Tao, "Bridging Composite and Real: Towards End-to-end Deep Image Matting", *International Journal of Computer Vision* (**IJCV**), vol. 130, no. 2, pp. 246-266, February 2022.

64. Yuxiang Yang, Qi Cao, Jing Zhang, and Dacheng Tao, "CODON: On orchestrating cross-domain attentions for depth super-resolution", *International Journal of Computer Vision* (**IJCV**), vol. 130, no. 2, pp. 267-284, February 2022.

65. Jinlong Fan, Jing Zhang, and Dacheng Tao, "Wide-angle Image Rectification: A Survey", *International Journal of Computer Vision* (**IJCV**), vol. 130, no. 3, pp. 747-776, March 2022.

66. Qi Zheng, Mingming Gong, Xinge You, and Dacheng Tao, "A Unified B-Spline Framework for Scale-Invariant Keypoint Detection", *International Journal of Computer Vision* (**IJCV**), vol. 130, no. 3, pp. 777-799, March 2022.

67. Quanxue Gao, Xinbo Gao, and Dacheng Tao, "Enhanced Tensor RPCA and Its Application", *IEEE Transactions on Pattern Analysis and Machine Intelligence* (**TPAMI**), vol. 43, no. 6, pp. 2133-2140, June 2021.

68. Shuai Li, Kui Jia, Yuxin Wen, Tongliang Liu, and Dacheng Tao, "Orthogonal Deep Neural Networks", *IEEE Transactions on Pattern Analysis and Machine Intelligence* (**TPAMI**), vol. 43, no. 4, pp. 1352-1368, April 2021.

69. Jiayan Qiu, Xinchao Wang, Pascal Fua, and Dacheng Tao, "Matching Seqlets: An Unsupervised Approach for Locality Preserving Sequence Matching", *IEEE Transactions on Pattern Analysis and Machine Intelligence* (**TPAMI**), vol. 43, no. 2, pp. 745-752, February 2021.

70. Chen Gong, Shi Hong, Tongliang Liu, Chuang Zhang, Jian Yang, and Dacheng Tao, "Loss Decomposition and Centroid Estimation for Positive and Unlabeled Learning", *IEEE Transactions on Pattern Analysis and Machine Intelligence* (**TPAMI**), vol. 43, no. 3, pp. 918-932, March 2021.

71. Xiaoqin Zhang, Mingyu Fan, Di Wang, Peng Zhou, and Dacheng Tao, "Top-k Feature Selection Framework using Robust 0-1 Integer Programming", *IEEE Transactions on Neural Networks and Learning Systems* (**TNNLS**), vol. 32, no. 7, pp. 3005-3019, July 2021.

72. Chao Zhang, Dacheng Tao, Tao Hu, and Bingchen Liu, "Generalization Bounds of Multitask Learning from Perspective of Vector-valued Function Learning", *IEEE Transactions on Neural Networks and Learning Systems* (**TNNLS**), vol. 32, no. 5, pp. 1906-1919, May 2021.

73. Shiming Ge, Chunhui Zhang, Shikun Li, Dan Zeng, and Dacheng Tao, "Cascaded Correlation Refinement for Robust Deep Tracking", *IEEE Transactions on Neural Networks and Learning Systems* (**TNNLS**), vol. 32, no. 3, pp. 1276-1288, March 2021.

74. Lin Wu, Yang Wang, Junbin Gao, Meng Wang, Zheng-Jun Zha, and Dacheng Tao, "Deep Coattention based Comparators for Relative Representation Learning in Person Re-identification", *IEEE Transactions on Neural Networks and Learning Systems* (**TNNLS**), vol. 32, no. 2, pp. 722-735, February 2021.

75. Yuan Xie, Jinyan Liu, Yanyun Qu, Dacheng Tao, Wensheng Zhang, Longquan Dai, and Lizhuang Ma, "Robust Kernelized Multiview Self-Representation for Subspace Clustering", *IEEE Transactions on Neural Networks and Learning Systems* (**TNNLS**), vol. 32, no. 2, pp. 868-881, February 2021.

76. Hanting Chen, Yunhe Wang, Chang Xu, Chao Xu, and Dacheng Tao, "Learning Student Networks via Feature Embedding", *IEEE Transactions on Neural Networks and Learning Systems* (**TNNLS**), vol. 32, no. 1, pp. 25-35, January 2021.

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