Zhen Fang

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Current and Previous Appointments

Work

Nov, 2023 - Present

Lecturer (Corresponding to Tenured Assistant Professor in Macau Academic System)
- Australian Artificial Intelligence Institute, Faculty of Engineering & Information Technology, University of Technology Sydney
- University of Technology Sydney is ranked **88**th amongst universities worldwide (2025 QS World University Rankings), is the top university under fifty years of age in Australia, and ninth globally (Times Higher Education Young University Rankings 2023)
- University of Technology Sydney is the **1** ranked university in Australia and **10** in the world for artificial intelligence research, according to AI Research Index ranking by Korea's Software Policy and Research Institute 2020

Mar, 2023 - Nov, 2023

Lecturer (Research Intensive)

- Project: ARC Laureate

- Supervisor: Dist Prof. Jie Lu (Officer of the Order of Australia, IEEE Fellow, IFSA Fellow, Australian Computer Society Fellow, and Australian Laureate Fellow in AI)
- Institute: Australian Artificial Intelligence Institute, University of Technology Sydney

Nov, 2021 - Mar, 2023

Postdoctoral Researcher

- Project: ARC Laureate

- Supervisor: Dist Prof. Jie Lu
- Institute: Australian Artificial Intelligence Institute, University of Technology Sydney

Teaching

Aug, 2023 - Dec, 2023

Tutor-Assignment Marking
- Course: 41040 Introduction to AI (undergraduate group),
- University: University of Technology Sydney

Aug, 2023 - Dec, 2023

Tutor-Assignment Marking
- Course: 42172 Introduction to AI (postgraduate group),
- University: University of Technology Sydney

Feb, 2023 - Jun, 2023

Guest Lecturer
- Course: Computer Science Studio 2,
- University: University of Technology Sydney

Sep, 2017 - **Oct, 2017**	**Teaching Assistant**
	• Course: Calculus
	• School: School of Natural Sciences and Mathematics, The University of Texas at Dallas, United States

Education

Jan, 2018 - **Oct, 2021**	**PhD Student in Computer Science: Artificial Intelligence and Machine Learning**
	• Supervisor: Dist Prof. Jie Lu, Prof. Guangquan Zhang
	• University: University of Technology Sydney, Australia
Sep, 2014 - **Jul, 2017**	**Master Student in Pure Mathematics: Geometry Analysis (by Research)**
	• Supervisor: Prof. Bo Guan (Professor at Ohio State University)
	• University: Xiamen University, China
Sep, 2010 - **Jul, 2014**	**Undergraduate Student in Pure Mathematics**
	• Supervisor: Prof. Chunyou Sun
	• University: Lanzhou University, China

Key Research Achievements and Evidence of Broader Impact

Prizes and Awards

● NeurIPS 2022 Outstanding Paper Award

- This award is one of the **top** awards in machine learning and artificial intelligence.

- NeurIPS is a **top**-tier conference in the field of machine learning and artificial intelligence. Along with ICML and ICLR, it is regarded as one of the most challenging, prestigious, and influential conferences in the realm of machine learning (Ranking 1-2 among all machine learning conferences).

- Dr. Fang's paper "Is Out-of-distribution Detection Learnable?" was selected for NeurIPS 2022 Outstanding Paper Award from a total of **10,411** submissions. Among the **10,411** papers submitted to NeurIPS, **2,672** were accepted, and only **13** of these received the Outstanding Paper Award.

- Dr. Fang has won this award for China, marking the **fourth** time in the past 20 years that an Chinese scholar has achieved this accolade in the capacity of a lead author.

- Dr. Fang has won this award for Australia, marking the **first** time in the past 10 years that an Australian scholar has achieved this accolade in the capacity of a lead author.

- The awarded work addressed an **open problem** in artificial intelligence and machine learning, specifically focusing on the theoretical guarantee of out-of-distribution detection, which is the core topic of reliable machine learning and responsible artificial intelligence. This work discovered the sufficient and necessary conditions to determine when an out-of-distribution detection is learnable or unlearnable.

● The 2023 Australasian AI Emerging Researcher Award

- This award is the **top** Australian AI award for early career researcher.

● AJCAI 2023 Outstanding Service Award

● NeurIPS 2022 Outstanding Reviewer

● AAII Student Best Paper Award 2021 in the category of AI impact

- The **top** student award at Australian Artificial Intelligence Institute, University of Technology Sydney

Research Leadership

• IEEE International Conference on Fuzzy Systems 2024 Special Issue on "Fuzzy Machine Learning". **Organizers and Chairs**: Keqiuyin Li, Hua Zuo, **Zhen Fang**, Luis Martínez, Guangquan Zhang, Jie Lu

• International Joint Conference on Neural Networks 2024 Special Issue on "Domain Adaptation for Complex Situations: Theories, Algorithms and Application". **Organizers and Chairs**: Keqiuyin Li, Hua Zuo, **Zhen Fang**, Jie Lu, Luis Martínez, Guangquan Zhang

• International Conference on Intelligent Systems and Knowledge Engineering 2023.
Publication Chairs: Xiaoping Qiu, Junbo Zhang, Li Zou, **Zhen Fang**

• Australasian Joint Conference on Artificial Intelligence. 2023
Workshop Chairs: **Zhen Fang**, Mingming Gong, Mehrtash Harandi

• International Joint Conference on Neural Networks 2023 Special Issue on "Domain Adaptation for Complex Situations: Theories, Algorithms and Application". **Organizers and Chairs**: **Zhen Fang**, Jie Lu, Jun Wang, Luis Martínez, Ivor W Tsang, Hua Zuo, Feng Liu, Guangquan Zhang

• International Joint Conference on Neural Networks 2022 Special Issue on "Transfer Learning under Weak Supervision". **Organizers and Chairs**: Feng Liu, Hua Zuo, **Zhen Fang**, Jie Lu

• Frontiers in Artificial Intelligence Special Issue on "Out-of-distribution Learning: Algorithms and Applications". **Guest Editors**: Bo Han, Tongliang Liu, Mingming Gong, **Zhen Fang**, Feng Liu

Invited Talks

• "Generalized Out-of-distribution Detection: Theory and Algorithm ", UQ Data Science Seminar, the University of Queensland , Online, 23 August, 2023

• "Autonomous Out-of-distribution Detection: Theory and Applications ", International Joint Conference on Neural Networks Workshop on Autonomous Learning in Complex Decision Situations , 23 June, 2023

• "Generalized Out-of-distribution Detection Theory", University of Chinese Academy of Sciences, Online, 10 March, 2023

• "Generalized Out-of-distribution Detection: Theory and Application", International Conference on Nano Bio Intelligence, 18 June, 2023

• "Out-of-distribution Detection Theory", group on "OOD Detection and Generalization" at Mila in Montreal, Online, 22 February, 2023

• "Out-of-distribution Detection Theory", TechBeat, Online, 22 February, 2023

• "Out-of-distribution Detection Theory", TrustML young scientist seminars, Riken, Online, 08 February, 2023

• "Open Set Domain Adaptation: Theoretical Bound and Algorithm", AAII Day Presentation, University of Technology Sydney, Sydney, Australia, Online, 05 November, 2020

Research Supervision Experience

Dr. Zhen Fang has co-supervised 8 students, including 6 PhD students, and 2 master students. Until now, 12 academic papers have been accepted. Among these, 7 papers have achieved the distinction of being published in top-tier conferences and journals, including one in International Conference on Machine Learning (ICML, CCF A), one in Association for the Advancement of Artificial Intelligence (AAAI, CCF A), one in International Joint Conference on Artificial Intelligence (IJCAI, CCF A), and one in International Conference on Learning Representations (ICLR), one in IEEE Transactions on Fuzzy Systems (IEEE-TFS, CCF A), two in IEEE Transactions on Neural Networks and Learning Systems (IEEE-TNNLS).

• Co-supervisor of Mr. Bo Peng (PhD@University of Technology Sydney), on the topic: Towards responsible machine learning

• Co-supervisor of Mr. Yue Yang (PhD@University of Technology Sydney), on the topic: Towards responsible AI for gene

• Co-supervisor of Mr. Guohang Zeng (PhD@University of Technology Sydney), on the topic: Towards responsible recommended system

• Co-supervisor of Miss. Wengting Zhang (PhD@University of Technology Sydney), on the topic: Towards responsible transfer learning

• Co-supervisor of Mr. Kuo Shi (PhD@University of Technology Sydney), on the topic: Towards responsible fuzzy transfer learning

• Co-supervisor of Miss. Ran Wang (PhD@University of Technology Sydney), on the topic: Towards responsible online transfer learning

• Co-supervisor of Mr. Li Zhong (Visiting Master@University of Technology Sydney), on the topic: Towards open-world transfer learning for responsible AI

• Co-supervisor of Miss. Yiyang Zhang (Visiting Master@University of Technology Sydney), on the topic: Towards abnormal label transfer learning for responsible AI

Professional Activities

• **Member** of the Institute of Electrical and Electronics Engineers (IEEE)

• **Area Chair** of ACMMM 2024 (CCF A conference)

• **Area Chair** of NeurIPS 2024 (CCF A conference)

• Journal Reviewers for
  IEEE Transactions on Pattern Analysis and Machine Intelligence (IEEE-TPAMI)
  International Journal of Computer Vision (IJCV)
  IEEE Transactions on Image Processing (IEEE-TIP)
  IEEE Transactions on Neural Networks and Learning Systems (IEEE-TNNLS)
  IEEE Transactions on Fuzzy Systems (IEEE-TFS)
  IEEE Transactions Systems, Man and Cybernetics: Systems (IEEE-SMCS)
  IEEE Network Magazine
  IEEE Transactions on Emerging Topics in Computational Intelligence (IEEE-TETCI)
  Knowledge-Based Systems (KBS)
  Transactions on Machine Learning Research (TMLR)
  International Journal of Computational Intelligence Systems (IJCI)
  Neural Networks (NEUNET)

• Conference Program Committee Members (Reviewers) for
  Conference on Neural Information Processing Systems (NeurIPS 2022-2023)
  International Conference on Machine Learning (ICML 2022-2023)
  International Conference on Learning Representations (ICLR 2023)
  Association for the Advancement of Artificial Intelligence (AAAI 2022-2024)
  International Joint Conferences on Artificial Intelligence (IJCAI 2022-2024)
  Conference on Computer Vision and Pattern Recognition (CVPR 2022-2023)
  International Conference on Computer Vision (ICCV 2023)
  European Conference on Computer Vision (ECCV 2022)
  International Joint Conference on Neural Networks (IJCNN 2022-2023)
  IEEE International Conference on Fuzzy Systems (FUZZ-IEEE 2023)

- Conference Meta Reviewers for IEEE International Conference on Fuzzy Systems (FUZZ-IEEE 2023)

Collaboration

Dr. Fang has received very good support to work closely with leading researchers and organisations around the world to share knowledge and exchange ideas with many researchers in Zhen's research fields.

Collaborator:

- Dr. Tongliang Liu, Associate Professor, Director of Sydney AI Centre, ARC Future Fellow, The University of Sydney, Australia;

- Dr. Sharon Yixuan Li, Assistant Professor, NSF Career Award, The University of Wisconsin Madison, United States;

- Dr. Bo Han, Assistant Professor of Computer Science, Director of Trustworthy Machine Learning and Reasoning Group, Hong Kong Baptist University, China;

- Dr. Feng Liu, Assistant Professor, ARC DECRA Fellow, The University of Melbourne, Australia.

Full Publication List

Since 2019, Dr. Fang has published 40 high-quality academic papers, including 12 journals and 28 conference papers. These include 11 articles in top-tier AI journals: 2 IEEE-TPAMI (CCF A), 1 JMLR (CCF A), 1 IJCV (CCF A), 3 IEEE-TNNLS (CCF B), 2 IEEE-TFS (CCF A) and 2 IEEE-TCYB (CCF B); and 21 in top-tier AI conferences: 6 NeurIPS (CCF A), 5 ICLR, 4 ICML (CCF A), 2 ICCV (CCF A), 1 CVPR (CCF A), 1 AAAI (CCF A), 1 IJCAI (CCF A) and 2 ACMMM (CCF A). Among these publications, Dr. Fang is the first author in 7 papers (1 IEEE-TPAMI, 1 JMLR, 1 IEEE-TNNLS, 1 IEEE-TCYB, 1 NeurIPS, 1 ICML, 1 IJCNN) and the co-first author in 6 (2 IEEE-TNNLS, 2 NeurIPS, 1 AAAI, 1 ICLR). Dr. Fang is the corresponding author for 5 papers (1 ICCV, 1 ICLR, 1 ICML, 1 ACMMM, 1 FUZZ-IEEE).

One of Dr. Fang's papers (as first author) was honored with the **NeurIPS 2022 Outstanding Paper Award**, a top award in artificial intelligence and machine learning. Two of Dr. Fang's papers have been recognized as highly-cited or hot papers by Essential Science Indicators. From 2019 to the present, Dr. Fang has accrued 1170+ citations, a h-index of 13, and an i10-index of 15, underscoring the impact and quality of Dr. Fang's research.

Publications—Conference (+: Co-first author; *: Corresponding author)

1. Bo Peng, **Zhen Fang***, Guangquan Zhang, Jie Lu. Knowledge Distillation with Auxiliary Variable. *International Conference on Machine Learning 2024* (ICML). [CCF **A**] –the **top-tier** conference in artificial intelligence and machine learning with **h5-index 237** (Ranking 3 among machine learning conferences).

2. Xuefeng Du, **Zhen Fang**$^+$, Ilias Diakonikolas, Yixuan Li. How Does Wild Data Provably Help OOD Detection? *International Conference on Learning Representations 2024* (ICLR). [Tsinghua **A**] –the **top-tier** conference in artificial intelligence and machine learning with **h5-index 303** (Ranking 1-2 among machine learning conferences).

3. Bo Peng, Yadan Luo, Yonggang Zhang, Yixuan Li, **Zhen Fang***. ConjNorm: Tractable Density Estimation for Out-of-Distribution Detection. *International Conference on Learning Representations 2024* (ICLR). [Tsinghua **A**] –the **top-tier** conference in artificial intelligence and machine learning with **h5-index 303** (Ranking 1-2 among machine learning conferences).

4. Jun Nie, Yonggang Zhang, **Zhen Fang**, Tongliang Liu, Bo Han, Xinmei Tian. Out-of-Distribution Detection with Negative Prompts. *International Conference on Learning Representations 2024* (ICLR). [Tsinghua **A**] –the **top-tier** conference in artificial intelligence and machine learning with **h5-index 303** (Ranking 1-2 among machine learning conferences).

5. Xue Jiang, Feng Liu, **Zhen Fang**, Hong Chen, Tongliang Liu, Feng Zheng, Bo Han. Negative Label Guided OOD Detection with Pretrained Vision-Language Models. *International Conference on Learning Representations 2024* (ICLR). [Tsinghua **A**] –the **top-tier** conference in artificial intelligence and machine learning with **h5-index 303** (Ranking 1-2 among machine learning conferences). **Spotlight**.

6. Pengfei Zheng, Yonggang Zhang, **Zhen Fang**, Tongliang Liu, Defu Lian, Bo Han. Beyond Linear Spherical Interpolation: Noise Correction for Image Interpolation with Diffusion Models. *International Conference on Learning Representations 2024* (ICLR). [Tsinghua **A**] –the **top-tier** conference in artificial intelligence and machine learning with **h5-index 303** (Ranking 1-2 among machine learning conferences). **Spotlight**.

7. **Zhen Fang**, Yixuan Li, Jie Lu, Jiahua Dong, Bo Han, Feng Liu. Is Out-of-distribution Detection Learnable? *Conference on Neural Information Processing Systems 2022* (NeurIPS). [CCF **A**] –the **top-tier** conference in artificial intelligence and machine learning with **h5-index 278** (Ranking 1-2 among machine learning conferences). **Outstanding Paper Award**.

8. **Zhen Fang**, Jie Lu, Anjin Liu, Feng Liu, Guangquan Zhang. Learning Bounds for Open-Set Learning. *International Conference on Machine Learning 2021* (ICML). [CCF **A**] –the **top-tier** conference in artificial intelligence and machine learning with **h5-index 237** (Ranking 3 among machine learning conferences).

9. **Zhen Fang**, Jie Lu, Feng Liu, Guangquan Zhang. Unsupervised Domain Adaptation with Sphere Retracting Transformation. *International Joint Conference on Neural Networks 2019* (IJCNN). [CCF **C**]– the **flagship** conference in the neural networks community with **h5-index 90**.

10. Qizhou Wang, **Zhen Fang**$^+$, Yonggang Zhang, Feng Liu, Yixuan Li, Bo Han. Learning to Augment Distributions for Out-of-distribution Detection. *Conference on Neural Information Processing Systems 2023* (NeurIPS). [CCF **A**] –the **top-tier** conference in artificial intelligence and machine learning with **h5-index 278** (Ranking 1-2 among machine learning conferences).

11. Mengyue Yang, **Zhen Fang**, Yonggang Zhang, Yali Du, Furui Liu, Jean-Francois Ton, Jun Wang. Invariant Learning via Probability of Sufficient and Necessary Causes. *Conference on Neural Information Processing Systems 2023* (NeurIPS). [CCF **A**] –the **top-tier** conference in artificial intelligence and machine learning with **h5-index 278** (Ranking 1-2 among machine learning conferences). **Spotlight Paper**.

12. Haotian Zheng, Qizhou Wang, **Zhen Fang**, Yonggang Zhang, Xiaobo Xia, Feng Liu, Tongliang Liu, Bo Han. Out-of-distribution Detection Learning with Unreliable Out-of-distribution Sources. *Conference on Neural Information Processing Systems 2023* (NeurIPS). [CCF **A**] –the **top-tier** conference in artificial intelligence and machine learning with **h5-index 278** (Ranking 1-2 among machine learning conferences).

13. Zige Wang, Yonggang Zhang, **Zhen Fang**, Long Lan, Wenjing Yang, Bo Han. SODA: Robust Training of Test-Time Data Adaptors. *Conference on Neural Information Processing Systems 2023* (NeurIPS). [CCF **A**] –the **top-tier** conference in artificial intelligence and machine learning with **h5-index 278** (Ranking 1-2 among machine learning conferences).

14. Jiahua Dong, **Zhen Fang**$^+$, Anjin Liu, Gan Sun, Tongliang Liu. Confident Anchor-Induced Multi-Source Free Domain Adaptation. *Conference on Neural Information Processing Systems 2021* (NeurIPS). [CCF **A**] –the **top-tier** conference in artificial intelligence and machine learning with **h5-index 278** (Ranking 1-2 among machine learning conferences).

15. Li Zhong, **Zhen Fang**$^+$, Feng Liu, Jie Lu, Bo Yuan, Guangquan Zhang. How does the Combined Risk Affect the Performance of Unsupervised Domain Adaptation Approaches?. *Association for the Advancement of Artificial Intelligence 2021* (AAAI). [CCF **A**] – the **top-tier** conference in artificial intelligence with **h5-index 180** (Ranking 4 among artificial intelligence conferences).

16. Guohang Zeng, **Zhen Fang**, Jie Lu, Guangquan Zhang. One-step Domain Adaptation Approach with Partial Label. *International Joint Conference on Neural Networks 2023* (IJCNN). [CCF **C**]– the **flagship** conference in the neural networks community with **h5-index 90**.

17. Yiyang Zhang, Feng Liu, **Zhen Fang**, Bo Yuan, Guangquan Zhang, Jie Lu, Clarinet: A One-step Approach

Towards Budget-friendly Unsupervised Domain Adaptation. *International Joint Conference on Artificial Intelligence 2020* (IJCAI) (Ranking 5 among artificial intelligence conferences). [CCF **A**] – the **top-tier** conference in artificial intelligence with **h5-index 120**.

18. Rui Dai, Yonggang Zhang, **Zhen Fang**, Bo Han, Xinmei Tian. Moderately Distributional Exploration for Domain Generalization. *International Conference on Machine Learning 2023* (ICML). [CCF **A**] – the **top-tier** conference in artificial intelligence and machine learning **h5-index 237** (Ranking 3 among machine learning conferences).

19. Xue Jiang, Feng Liu, **Zhen Fang**, Hong Chen, Tongliang Liu, Fenf Zheng, Bo Han. Detecting Out-of-distribution Data through In-distribution Class Prior. *International Conference on Machine Learning 2023* (ICML). [CCF **A**] – the **top-tier** conference in artificial intelligence and machine learning with **h5-index 237** (Ranking 3 among machine learning conferences).

20. Yadan Luo, Zhuoxiao Chen, **Zhen Fang**, Zheng Zhang, Zi Huang, Mahsa Baktashmotlagh. KECOR: Kernel Coding Rate Maximization for Active 3D Object Detection. *International Conference on Computer Vision 2023* (ICCV). [CCF **A**] – a **top-tier** conference in artificial intelligence and computer version with **h5-index 228** (Ranking 2 among computer version conferences).

21. Xinheng Wu, Jie Lu, **Zhen Fang***, Guangquan Zhang. Meta OOD Learning For Continuously Adaptive OOD Detection. *International Conference on Computer Vision 2023* (ICCV). [CCF **A**] – a **top-tier** conference in artificial intelligence and computer version with **h5-index 228** (Ranking 2 among computer version conferences).

22. Jiahua Dong, Lixu Wang, **Zhen Fang**, Gan Sun, Shichao Xu, Xiao Wang, Qi Zhu. Federated Class-Incremental Learning. *Computer Vision and Pattern Recognition 2022* (CVPR). [CCF **A**] – a **top-tier** conference in artificial intelligence and computer version with **h5-index 389** (Ranking 1 among computer version conferences).

23. Duzhen Zhang, Wei Cong, Jiahua Dong, Yahan Yu, Xiuyi Chen, Yonggang Zhang, **Zhen Fang**. Continual Named Entity Recognition without Catastrophic Forgetting. *Empirical Methods in Natural Language Processing* (EMNLP). [CCF **B**] – a **top-tier** conference in artificial intelligence and natural language processing (Ranking 1-3 among natural language processing conferences).

24. Yue Yang, Kairui Guo, **Zhen Fang**, Hua Lin, Mark Grosser, Jie Lu. Multi-model Transfer Learning and Genotypic Analysis for Seizure Type Classification. *International Conference on Health Information Science.*

25. Ran Wang, Hua Zuo, **Zhen Fang**, Jie Lu. Multiple Teacher Model for Continual Test-Time Domain Adaptation. *Australasian Joint Conference on Artificial Intelligence 2023.*

26. Ran Wang, Hua Zuo, **Zhen Fang***, Jie Lu. Towards Robustness Prompt Tuning with Fully Test-Time Adaptation for CLIP's Zero-Shot Generalization. *ACM Multimedia 2024.* [CCF **A**] – a **top-tier** conference in artificial intelligence and multimedia.

27. Kuo Shi, Jie Lu, **Zhen Fang***, Guangquan Zhang. Enhancing Vision-Language Models Incorporating TSK Fuzzy System for Domain Adaptation. *2024 IEEE International Conference on Fuzzy Systems.* – a **top-tier** conference in artificial intelligence and fuzzy system.

26. Chenrui Wu, Haishuai Wang, Xiang Zhang, **Zhen Fang**, Jiajun Bu. Spatio-temporal Heterogeneous Federated Learning for Time Series Classification with Multi-view Orthogonal Training. *ACM Multimedia 2024.* [CCF **A**] – a **top-tier** conference in artificial intelligence and multimedia.

Publications—Journal (+: Co-first author)

1. **Zhen Fang**, Yixuan Li, Feng Liu, Bo Han, Jie Lu, On the Learnability of Out-of-distribution Detection. *Journal of Machine Learning Research* (JMLR), published online, 2024. [CCF **A**] – the **top-tier** journal in machine learning (Ranking 1-3 among machine learning and artificial intelligence journals).

2. **Zhen Fang**, Jie Lu, Feng Liu, Guangquan Zhang, Semi-supervised Heterogeneous Domain Adaptation: Theory and Algorithm. *IEEE Transactions on Pattern Analysis and Machine Learning* (IEEE-TPAMI), to appear, 2022. [CCF **A**] – the **top-tier** journal in artificial intelligence with **impact factor 23.6** (Ranking 1-3 among machine learning and artificial intelligence journals).

3. **Zhen Fang**, Jie Lu, Feng Liu, Junyu Xuan, Guangquan Zhang. Open Set Domain Adaptation Theoretical Bound and Algorithm. *IEEE Transactions on Neural Networks and Learning Systems* (IEEE-TNNLS), to appear, 2021. [CCF **B**] – a **top-tier** journal in artificial intelligence with **impact factor 10.4**.

4. **Zhen Fang**, Jie Lu, Guangquan Zhang. An Extremely Simple Algorithm for Source Domain Reconstruction. *IEEE Transactions on Cybernetics* (IEEE-TCYB), to appear, 2023. [CCF **B**] – a **top-tier** journal in artificial intelligence with **impact factor 11.8**.

5. Li Zhong, **Zhen Fang**$^{+}$, Feng Liu, Bo Yuan, Guangquan Zhang, Jie Lu. Bridging the Theoretical Bound and Deep Algorithms for Open Set Domain Adaptation. *IEEE Transactions on Neural Networks and Learning Systems* (IEEE-TNNLS), to appear, 2020. [CCF **B**] – a **top-tier** journal in artificial intelligence with **impact factor 10.4**.

6. Jiahua Dong, Yang Cong, Gan Sun, **Zhen Fang** and Zhengming Ding. What, Where and How to Transfer: Knowledge Aggregation-Induced Transferability Perception for Unsupervised Domain Adaptation. *IEEE Transactions on Pattern Analysis and Machine Learning* (IEEE-TPAMI), to appear, 2021. [CCF **A**] – the **top-tier** journal in artificial intelligence with **impact factor 23.6** (Ranking 1-3 among machine learning and artificial intelligence journals).

7. Yiyang Zhang, Feng Liu, **Zhen Fang**, Bo Yuan, Guangquan Zhang, Jie Lu. Learning from a Complementary-label Source Domain: Theory and Algorithms. *IEEE Transactions on Neural Networks and Learning Systems* (IEEE-TNNLS). [CCF **B**] – a **top-tier** journal in artificial intelligence with **impact factor 10.4**.

8. Guangzhi Ma, Jie Lu, Feng Liu, **Zhen Fang**, Guangquan Zhang. Multi-class Classification with Fuzzy-feature Observations: Theory and Algorithms. *IEEE Transactions on Cybernetics* (IEEE-TCYB), accepted 2022. [CCF **B**] – a **top-tier** journal in artificial intelligence with **impact factor 11.8**.

9. Ningyuan Zhang, Jie Lu, Keqiuyin Li, **Zhen Fang**, Guangquan Zhang. Source-Free Unsupervised Domain Adaptation: Current research and future directions. *Neurocomputing*, accepted 2023, [CCF **C**].

10. Guangzhi Ma, Jie Lu, Feng Liu, **Zhen Fang**, Guangquan Zhang. Domain Adaptation with Interval-valued Observations: Theory and Algorithms. *IEEE Transactions on Fuzzy Systems* (IEEE-TFS), accepted 2024. [CCF **B**] – a **top-tier** journal in artificial intelligence with **impact factor 11.9**.

11. Kuo Shi, Jie Lu, **Zhen Fang**, Guangquan Zhang. Unsupervised Domain Adaptation Enhanced by Fuzzy Prompt Learning. *IEEE Transactions on Fuzzy Systems* (IEEE-TFS), accepted 2024. [CCF **B**] – a **top-tier** journal in artificial intelligence with **impact factor 11.9**.

12. Jun Nie, Yadan Luo, Shanshan Ye, Yonggang Zhang, Xinmei Tian, **Zhen Fang**. Out-of-Distribution Detection with Virtual Outlier Smoothing. *International Journal of Computer Vision* (IJCV), accepted 2024. [CCF **A**] – a **top-tier** journal in artificial intelligence and computer version with **impact factor 14.5**.