Zhen Fang

UTS Profile https://profiles.uts.edu.au/Zhen.Fang
Google Scholar https://scholar.google.com/citations?user=OzD6WJcAAAAJ&hl=en
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Current and Previous Appointments

Nov, 2023 – Present
Lecturer at Australian Artificial Intelligence Institute (AAII), University of Technology Sydney (UTS)

Feb, 2023 – Nov, 2023
Lecturer (Research Intensive) at AAII, UTS
Supervisor: Prof. Jie Lu (Officer of the Order of Australia and Australian Laureate Fellow in AI)
Project: ARC Laureate

Jul, 2021 – Feb, 2023
Postdoctoral Researcher at AAII, UTS
Supervisor: Prof. Jie Lu
Project: ARC Laureate

Jan, 2018 – Nov, 2021
PhD Student in Computer Science: Artificial Intelligence and Machine Learning
Supervisor: 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
University: Xiamen University, China

Sep, 2010 – Jul, 2014
Undergraduate Student in Pure Mathematic
University: Lanzhou University, China

Key Research Achievements

ARC Discovery Early Career Researcher Award 2025

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.
- 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 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 2023 Australasian AI Emerging Researcher Award

AJCAI 2023 Outstanding Service Award

NeurIPS 2025 Top Area Chair

Research Leadership

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

Invited Talks

"Out-of-distribution Detection: Theory and Algorithm", University of Macau, 05 September, 2024

"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 and Application", International Conference on Nano Bio Intelligence, 18 June, 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

Professional Activities

Area Chair of ACMMM 2024-2025, **Area Chair** of NeurIPS 2024-2025, **Area Chair** of ICLR 2025, **Area Chair** of ICML 2026, **Editorial Board** of Neural Networks and **Associate Editor** of Knowledge-based Systems.

Journal Reviewers for IEEE-TPAMI, IJCV, IEEE-TIP, IEEE-TNNLS, IEEE-TFS, IEEE-TCYB, NEUNET, KBS, ect. **Conference Program Committee Members** for NeurIPS 2022-2023, ICML 2022-2024, ICLR 2023-2024, AAAI 2022-2025, IJCAI 2022-2024, CVPR 2022-2023, ICCV 2023, etc.

Publication

Since 2019, Zhen has published **over 65** high-quality academic papers. These include **15** articles in top-tier AI journals: **1 Neural Networks**, **2 IEEE-TPAMI, 1 JMLR, 1 IEEE-TKDE, 2 IJCV, 4 IEEE-TNNLS, 2 IEEE-TFS and 2 IEEE-TCYB**; and **38** in top-tier AI conferences: **10 NeurIPS, 10 ICLR, 5 ICML, 3 ICCV, 3 CVPR, 1 AAAI, 1 IJCAI, 2 KDD and 3 ACMMM**. According to Google Scholar, he has received **2400+** citations.

Ten Career-Best Research Outputs

[1] **Zhen Fang,** Jie Lu, Feng Liu, Guangquan Zhang 2023, Semi-Supervised Heterogeneous Domain Adaptation: Theory and Algorithms, IEEE Transactions on Pattern Analysis and Machine Intelligence (IEEE-TPAMI).

[2] **Zhen Fang,** Sharon Li, Jie Lu, Jiahua Dong, Bo Han, Feng Liu 2022, Is Out-of-Distribution Detection Learnable?, Proceedings of the 36th Conference on Neural Information Processing Systems (**NeurIPS Outstanding Paper Award**).

[3] **Zhen Fang,** Jie Lu, Anjin Liu, Feng Liu, Guangquan Zhang 2021, Learning Bounds for Open-Set Learning, Proceedings of the 38th International Conference on Machine Learning (ICML 2021).

[4] **Zhen Fang,** Jie Lu, Feng Liu, Junyu Xuan, Guangquan Zhang 2021, Open Set Domain Adaptation: Theoretical Bound and Algorithm, IEEE Transactions on Neural Networks and Learning Systems (IEEE-TNNLS).

[5] **Zhen Fang,** Jie Lu,Guangquan Zhang 2023, An Extremely Simple Algorithm for Source Domain Reconstruction, IEEE Transactions on Cybernetics (IEEE-TCYB).

[6] **Zhen Fang,** Sharon Li, Feng Liu, Bo Han, Jie Lu 2024, On the Learnability of Out-of-distribution Detection, Journal of Machine Learning Research (JMLR).

[7] Changdae Oh, **Zhen Fang,** Shawn Im, Xuefeng Du, Sharon Li 2025, Understanding Multimodal LLMs Under Distribution Shifts: An Information-Theoretic Approach, International Conference on Machine Learning (ICML 2025).

[8] Yongxin Deng, **Zhen Fang,** Sharon Li, Ling Chen 2026, Beyond In-Domain Detection: SpikeScore for Cross-Domain Hallucination Detection, International Conference on Learning Representations (ICLR 2026).

[9] Bo Peng, Jie Lu, Guangquan Zhang, **Zhen Fang** 2025, On the Provable Importance of Gradients for Language-Assisted Image Clustering, International Conference on Computer Vision (ICCV 2025 **Highlight**).

[10] Bo Peng, **Zhen Fang,** Guangquan Zhang, Jie Lu 2024, Knowledge Distillation with Auxiliary Variable, International Conference on Machine Learning (ICML 2024).