Feng Liu

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Date of Birth	2 November 1990
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Summary

Research Goal – I am a machine learning researcher with research interests in trustworthy machine learning and hypothesis testing. My long-term goal is to develop trustworthy intelligent systems that can learn reliable knowledge from massive related but different domains automatically. Researching trustworthy machine learning and hypothesis testing is the first step for achieving my long-term goal.

Current Position and Degree – I am currently an ARC DECRA Fellow and an Assistant Professor in Machine Learning at the School of Computing and Information Systems, The University of Melbourne, Australia. I am also a Visiting Scientist at RIKEN-AIP, Japan, and a Visting Fellow at the Australian Artificial Intelligence Institute, University of Technology Sydney (UTS). I was the recipient of the Australian Laureate postdoctoral fellowship. I received my Ph.D. degree in computer science at UTS in 2020.

Professional Activities – I am the organizer of the Workshop on Weakly Supervised Learning (2021 and 2022). I have served as an area chair (AC) for top-tier machine learning conferences ICML, NeurIPS, and ICLR, a senior program committee (SPC) member for AAAI, IJCAI, ECAI, AJCAI. I also serve as an Editor for ACM Transactions on Probabilistic Machine Learning, Associate Editor for the International Journal of Machine Learning and Cybernetics, Action Editor for Neural Networks, and reviewer for many academic journals, such as JMLR, IEEE-TPAMI, and so on. I received the Outstanding Reviewer Award of NeurIPS (2021) and the Outstanding Reviewer Award of ICLR (2021) for outstanding service.

International Collaborations – I am a visiting research scientist with the AI Residency Program at RIKEN Center for Advanced Intelligence Project (RIKEN-AIP), working with Prof. Masashi Sugiyama (Japan) and Dr. Gang Niu (Japan). I visited Gatsby Computational Neuroscience Unit at UCL and worked on the hypothesis testing project with Prof. Arthur Gretton (UK), Dr. Danica J. Sutherland (USA), and Dr. Wenkai Xu (UK). Currently, I actively work with them. I also worked with Prof Kun Zhang (MBZUAI and CMU) on causal discovery project with the tools I developed in the field of statistical hypothesis testing.

Publications and Awards – I have 100 academic publications including 1 book, 38 peer-reviewed journal papers (including 14 ERA Tier A* papers/31 JCR Q1 papers/7 highly-cited papers), and 61 peer-reviewed CORE Tier A*/A conference papers (including 50 top-tier machine-learning and artificial-intelligence conference papers: 14 NeurIPS (**three spotlight papers**, **two oral papers**, **one outstanding paper**), 23 ICML (**one spotlight paper**, **one oral paper**), 6 ICLR (**two spotlight papers**), 1 KDD, 1 WWW, 2 AAAI, 3 IJCAI). These publications have received over 4,400 citations (Source: Google Scholar). My *h-index* is 35 and *i10-index* is 61. I received the **ARC Discovery Early Career Researcher Award (2024)**, the Best Research-in-Progress Paper Runner-up Award of ECIS (2023), the **Outstanding Paper Award of NeurIPS (2022)**, the Outstanding Reviewer Award of NeurIPS (2021), the Outstanding Reviewer Award of ICLR (2021), UTS Best Thesis Award (Dean's list, 2021), and the Best Student Paper Award of FUZZ-IEEE (2019).

Teaching and Supervision – I have experience as lecturers and subject coordinators at The University of Melbourne. I have (co-)supervised twenty-six research students, including twenty-one PhD students, two master students, and one undergraduate students. Until now, they have completed **44** academic papers, where **22** papers have been published in CORE Tier **A*** conferences or CORE&ERA Tier **A*/A** journals.

Grants – As leading chief investigator/chief investigators, I have eight projects, and the total amount of the projects is **5.42 million** Australian Dollars (including **one ARC DP project**, **one ARC DECRA project**, **one NSF-CSIRO project**, **one CSIRO Next Generation project**, and **one DSTG project**).

Education

2016.7-2020.11 Doctoral Degree in Computer Science
- Title: *Towards Realistic Transfer Learning Methods: Theory and Algorithms*
- Supervisor: Prof. Guangquan Zhang, Dist. Prof. Jie Lu
- University: University of Technology Sydney, Australia

2013.8-2015.6 Master Degree in Probability Theory and Statistics (by Research)
- Title: *Time Series Interpolation and Prediction for the Electricity Market*
- Supervisor: Prof. Jianzhou Wang
- University: Lanzhou University, China
- Note: *Graduation in advance due to the research excellence (3 years for normal)*

2009.8-2013.6 Bachelor Degree in Pure Mathematics
- Lanzhou University, Lanzhou (China)

Research Positions

2022.06-*now* Lecturer (US Assistant Professor)
- The University of Melbourne, Australia
- A tenured teaching and research position in machine learning and data science

2021.07-*now* Visiting Scientist
- Imperfect Information Learning Team
- RIKEN Center for Advanced Intelligence Project, Japan
- Working with Prof Masashi Sugiyama and Prof Gang Niu

2020.5-2021.5 Australian Laureate Postdoctoral Fellowship - Working on Autonomous Learning
- Australian Artificial Intelligence Institute
- University of Technology Sydney, Australia
- Worked with Australian Laureate Fellow, Dist Prof Jie Lu

2019.8-2019.11 Visiting Researcher - Working on Non-parametric Two Sample Test with Deep Kernels
- Gatsby Computational Neuroscience Unit
- University College London (UCL), United Kingdom
- Worked with Prof Arthur Gretton (UCL, UK) and Dr Danica J. Sutherland (TTIC, USA)

2019.4-2019.7 Research Intern - Working on Robust Unsupervised Domain adaptation
- Imperfect Information Learning Team
- RIKEN Center for Advanced Intelligence Project, Japan
- Worked with Prof Masashi Sugiyama, Dr Gang Niu and Dr Bo Han

2015.8-2016.7 Research Assistant - Working on Time Series Interpolation and Prediction
- Statistical Science Institute, School of Statistics
- Dongbei University of Finance and Economics, China
- Worked with Prof Ping Jiang

2014.5-2014.8 Research Assistant - Working on Long-Term Wind Power Prediction
- State Key Laboratory of Numerical Modeling for Atmospheric Sciences and Geophysical Fluid Dynamics (LASG)
- The Institute of Atmospheric Physics (IAP), Chinese Academy of Science (CAS), China
- Worked with Senior Scientist Zhenhai Guo

Research Focus

- Trustworthy Machine Learning; Hypothesis Testing; Foundation Model Finetuning.

Teaching

I like to share my ideas with students. I am passionate about participating in educational activities.

- Subject Coordinator and lecturer, Statistical Machine Learning, COMP90051, The University of Melbourne (2024), ESS score: 4/5.
- Subject Coordinator and lecturer, Statistical Machine Learning, COMP90051, The University of Melbourne (2023), ESS score: 3.8/5.
- Lecturer, Probability for Statistics, MAST20006, The University of Melbourne (2023), ESS score: 4/5.
- Subject Coordinator and lecturer, Bayesian Statistical Learning, MAST90125, The University of Melbourne (2022), ESS score: 3.8/5.

I have interests and capability to teach subjects regarding machine learning or statistics related subjects.

Advising

- As a **main supervisor** (on-going supervision):
  Mr. Zhi-Jian Zhou (PhD@UniMelb), on the topic: Advanced Statistical Hypothesis Testing;
  Mr. Muxing Li (PhD@UniMelb), on the topic: Privacy-leakage Evaluation for Generative Models;
  Mr. Ruijiang Dong (PhD@UniMelb), on the topic: Foundation-model-based transfer learning;
  Mr. Jinhao Li (PhD@UniMelb), on the topic: Foundation-model-based transfer learning;
  Mr. Jiacheng Zhang (PhD@UniMelb), on the topic: Trustworthy machine learning;
  Miss Chengyi Cai (PhD@UniMelb), on the topic: Foundation-model-based transfer learning;
  Mr. Xunye Tian (PhD@UniMelb), on the topic: Data-adaptive Hypothesis Testing;
  Mr. Yiyi Guo (PhD@UniMelb), on the topic: Machine learning for Meteorology.
- As a **co-supervisor** (on-going supervision):
  Mr. Wenjie Wang (PhD@UniMelb), on the topic: Learning causal representations;
  Mr. Guangzheng Hu (PhD@UniMelb), on the topic: Statistical learning with noisy labels;
  Miss Xinyu Su (PhD@UniMelb), on the topic: Machine learning for transportation;
  Mr. Qizhou Wang (PhD@HKBU), on the topic: Trustworthy machine learning;
  Mr. Haoang Chi (Visiting PhD@HKBU), on the topic: Foundation-model-based transfer learning;
  Miss Xue Jiang (PhD@HKBU), on the topic: Trustworthy machine learning;
  Mr. Shuhai Zhang (Visiting PhD@HKBU), on the topic: Trustworthy machine learning;
  Mr. Xiong Peng (PhD@HKBU), on the topic: Trustworthy machine learning;
  Mr. Guangzhi Ma (PhD@UTS), on the topic: Learning from imprecise observations;
  Mr. Ke Liu (PhD@ZJU), on the topic: Image generation and representation;
  Mr. Hongduan Tian (PhD@HKBU), on the topic: Few-shot learning;
  Miss Yongfeng Zhang (PhD@HKPolyU), on the topic: Foundation-model-based transfer learning.
- As a **co-supervisor** (completed supervision):
  Mr. Ning Ma (PhD@ZJU), on the topic: Domain generalization;
  Mr. Yicheng Wang (PhD@XJTU), on the topic: Novel-class discovery;
  Miss Chenghong Zhou (PhD@HKBU), on the topic: Open-world segmentation;
  Miss Yiyang Zhang (Visiting Master@UTS), on the topic: Towards realistic transfer learning;
  Mr. Li Zhong (Visiting Master@UTS), on the topic: Towards realistic transfer learning;
  Mr. Ruize Gao (Undergraduate RA@HKBU), on the topic: Trustworthy machine learning.

Grants Regarding Responsible AI

- **RESILIENCE: Graph Representation Learning for Fair Teaming in Crisis Response**

Chief Investigators	- Yizhou Sun, Ying Ding, Yi Zhang, **Feng Liu**.
Duration	- 2023.06∼2026.06
Amount	- *approximate* AUD$1,500,000
Supported by	- National Science Foundation (NSF) and CSIRO
Grant No.	- 2303037

- **AI-empowered privacy and ethics risk assessment tool**

  Chief Investigators - George Tian, Yi Zhang, Yiliao Song, **Feng Liu**.
  Duration - 2022.07∼2023.07
  Amount - AUD$15,000
  Supported by - The University of Technology Sydney
  Grant No. - PRO2215246

Grants Regarding Trustworthy Machine Learning

- **Adversarial Reinforcement Learning: Attacks and Defences**

  Chief Investigators - Ben Rubinstein, Andrew Cullen, Chris Leckie, Sarah Erfani,
  Chief Investigators - Tansu Alpcan, **Feng Liu**.
  Duration - 2024.01∼2026.7
  Amount - AUD$1,250,188
  Supported by - Defence Science and Technology Group (DSTG)
  Grant No. - 11447

- **Trustworthy Hypothesis Transfer Learning**

  Chief Investigators - **Feng Liu**.
  Duration - 2024.01∼2026.12
  Amount - AUD$436,847 + AUD$50,000 (Support from Uni)
  Supported by - Australian Research Council (ARC)
  Grant No. - DE240101089

- **Advanced Machine Learning via Bi-level Optimization**

  Chief Investigators - Guangquan Zhang, **Feng Liu**, Hua Zuo.
  Duration - 2023.01∼2025.12
  Amount - AUD$480,000
  Supported by - Australian Research Council (ARC)
  Grant No. - DP230101540

Grants Regarding AI for Science

- **Artificial intelligence-driven, context-aware wearables for falls prevention in the real world**

  Chief Investigators - Justin Fong, Scott Starkey, Liuhua Peng, **Feng Liu**, Ying Tan
  Chief Investigators - Marcus Waston, Gavin Williams, Andrew Ronchi, Nitish Mathew.
  Duration - 2025.7∼2027.7
  Amount - AUD$376,359
  Supported by - Australia's Economic Accelerator (AEA) Ignite Program
  Grant No. - IG240100565

- **AI for Next Generation Food & Waste Systems**

  Chief Investigators - Andy Song, Benu Adhikari, Samantha Richardson, Huong Ha,
  Chief Investigators - Wei Xiang, **Feng Liu**.
  Duration - 2024.4∼2027.10
  Amount - AUD$1,200,000
  Supported by - CSIRO Next Generation Graduated Program
  Grant No. - TBA

- **Production Optimisation for more Sustainable Wineries and Breweries**

  Chief Investigators - Tingru Cui, Lu Aye, Philip Christopher **Feng Liu**.
  Duration - 2024.1∼2024.12
  Amount - AUD$28,000
  Supported by - The University of Melbourne

- **Research on Key problem of Photovoltaics power**

  Chief Investigator - **Feng Liu**, Weiwei Qi, Hao Kang
  Duration - 2012.03∼2013.01
  Amount - RMB$20,000 (AUD$4,000)
  Supported by - National Undergraduate Innovation Discovery Project
  Grant No. - 201210730105

Professional Service

- **Member** of the Institute of Electrical and Electronics Engineers (IEEE) and IEEE Computational Intelligence Society (CIS)

- **Conferences Organising Committee**
  Program Co-Chairs (**Leading**): Australasian Joint Conference on Artificial Intelligence (AJCAI 2026)
  Local Co-chairs: Australasian Joint Conference on Artificial Intelligence (AJCAI 2024)
  Sponsorship Co-chairs: Australasian Joint Conference on Artificial Intelligence (AJCAI 2023)
  Workshops Co-chairs: International Workshop on Weakly Supervised Learning 2023
  Workshops Co-chairs (**Leading**): ACML 2022 Workshop on Weakly Supervised Learning
  Workshops Co-chairs: ACML 2021 Workshop on Weakly Supervised Learning
  Session Chairs: Representation Learning (Part I) session, two tutorial sessions in ICML 2024
  Session Chairs: Oral Session 2D in ICLR 2024
  Session Chairs: Federated Learning and Transfer Learning in ACML 2021
  Session Chairs: Federated Learning and Transfer Learning in ACML 2021
  Session Chairs: Classification and Regression 2/2 in ECAI 2020
  Session Chairs: Dimensionality Reduction and Manifold Learning in IJCAI 2020

- **Conferences Area Chair/Senior Program Committee**
  Neural Information Processing Systems (**NeurIPS**)
  International Conference on Machine Learning (**ICML**)
  International Conference on Learning Representations (**ICLR**)
  International Conference on Artificial Intelligence and Statistics (**AISTATS**)
  Association for Computing Machinery (ACM) Multimedia (**ACMMM**)
  AAAI Conference on Artificial Intelligence (**AAAI**)
  International Joint Conference on Artificial Intelligence (**IJCAI**)
  European Conference on Artificial Intelligence (**ECAI**)
  Australasian Joint Conference on Artificial Intelligence (**AJCAI**)
  Chinese Conference on Pattern Recognition and Computer Vision (**PRCV**)

- **Conference Program Committee**
  Neural Information Processing Systems (**NeurIPS**)
  International Conference on Machine Learning (**ICML**)
  International Conference on Learning Representations (**ICLR**)
  International Conference on Artificial Intelligence and Statistics (**AISTATS**)
  Conference on Uncertainty in Artificial Intelligence (**UAI**)
  ACM SIGKDD Conference on Knowledge Discovery and Data Mining (**KDD**)
  Asian Conference on Machine Learning (**ACML**)
  AAAI Conference on Artificial Intelligence (**AAAI**)
  International Joint Conference on Artificial Intelligence (**IJCAI**)

- **Journal Editor**
  Editor Board Member, Machine Learning Journal
  Action Editor, Neural Networks
  Associate Editor, ACM Transactions on Probabilistic Machine Learning
  Associate Editor, International Journal of Machine Learning and Cybernetics

- **Journal Reviewer**
  Journal of Machine Learning Research
  Foundations and Trends® in Machine Learning
  Transactions on Machine Learning Research

Machine Learning Journal
IEEE Transactions on Pattern Analysis and Machine Intelligence

- **Funding Reviewer**
  Australian Research Council – Discovery Projects
  Australian Research Council – Linkage Projects
  Australian Research Council – Future Fellowship Projects
  Australian Research Council – Discovery Early Career Researcher Award

Publications (* Corresponding author, †Equal contribution)

I have 100 academic publications including 1 book, 38 peer-reviewed journal papers (including 14 ERA Tier A* papers/31 JCR Q1 papers/7 highly-cited papers), and 61 peer-reviewed CORE Tier A*/A conference papers (including 50 top-tier machine-learning and artificial-intelligence conference papers: 14 NeurIPS (**three spotlight papers**, **two oral papers**, **one outstanding paper**), 23 ICML (**one spotlight paper**, **one oral paper**), 6 ICLR (**two spotlight papers**), 1 KDD, 1 WWW, 2 AAAI, 3 IJCAI). These publications have received over 4,400 citations (Source: Google Scholar). My *h-index* is 35 and *i10-index* is 61. I received the Best Research-in-Progress Paper Runner-up Award of ECIS (2023), the Outstanding Paper Award of NeurIPS (2022), and the Best Student Paper Award of FUZZ-IEEE (2019).

Ten Representative works:

1. **Feng Liu**†, Wenkai Xu†, Jie Lu, Danica J. Sutherland.
   Meta Two-Sample Testing: Learning Kernels for Testing with Limited Data.
   In *Advances in Neural Information Processing Systems* (**NeurIPS**), 2021.

2. **Feng Liu**†, Wenkai Xu†, Jie Lu, Guangquan Zhang, Arthur Gretton, Danica J. Sutherland.
   Learning Deep Kernels for Nonparametric Two-Sample Test.
   In *Proceedings of the 37th International Conference on Machine Learning* (**ICML**), 2020.

3. Xue Jiang, **Feng Liu**, Zhen Fang, Hong Chen, Tongliang Liu, Feng Zheng, Bo Han.
   Negative Label Guided OOD Detection with Pretrained Vision-Language Models.
   In *International Conference on Learning Representations* (**ICLR**), 2024.
   [Spotlight]

4. Qizhou Wang†, **Feng Liu**†, Yonggang Zhang, Jing Zhang, Chen Gong, Tongliang Liu, Bo Han.
   Watermarking for Out-of-distribution Detection.
   In *Advances in Neural Information Processing Systems* (**NeurIPS**), 2022.
   [Spotlight]

5. Haoang Chi†, **Feng Liu**†, Bo Han, Wenjing Yang, Long Lan, Tongliang Liu, Gang Niu, Mingyuan Zhou, Masashi Sugiyama.
   Meta Discovery: Learning to Discover Novel Classes given Very Limited Data.
   In *International Conference on Learning Representations* (**ICLR**), 2022.
   [Spotlight]

6. Jiahan Zhang, Qi Wei, **Feng Liu**, Lei Feng.
   Candidate Pseudolabel Learning: Enhancing Vision-Language Models by Prompt Tuning with Unlabeled Data.
   In *International Conference on Machine Learning* (**ICML**), 2024.
   [Oral]

7. Chengyi Cai, Zesheng Ye, Lei Feng, Jianzhong Qi, **Feng Liu**.
   Bayesian-Guided Label Mapping for Visual Reprogramming.
   In *Advances in Neural Information Processing Systems* (**NeurIPS**), 2024.
   [Oral]

8. Chengyi Cai, Zesheng Ye, Lei Feng, Jianzhong Qi, **Feng Liu**.
   Sample-specific Masks for Visual Reprogramming-based Prompting.
   In *International Conference on Machine Learning* (**ICML**), 2024.
   [Spotlight]

9. Zhen Fang, Yixuan Li, Jie Lu, Jiahua Dong, Bo Han, **Feng Liu**.
Is Out-of-distribution Detection Learnable?.
In *Advances in Neural Information Processing Systems* (**NeurIPS**), 2022.
[Oral, Outstanding Paper]

10. Xiaoxu Guo, Fanghe Lin, Juan Song, Sun Di, Li Lin, Zhixing Zhong, Zhaorun Wu, Xiaoyu Wang, Yingkun Zhang, Jin Li, Huimin Zhang, **Feng Liu***, Jia Song, Chaoyong Yang.
Deep transfer learning enables lesion tracing of circulating tumor cells,
Nature Communications, 2022.

Book:

1. Bo Han, Jiangchao Yao, Tongliang Liu, Bo Li, Sanmi Koyejo, **Feng Liu**.
Trustworthy Machine Learning: From Data to Models.
Now Publishers, 2025.

Conference papers:

2. Rena Gao, Xuetong Wu, Siwen Luo, Caren Han, **Feng Liu**.
'No' Matters: Out-of-Distribution Detection in Multimodality Multi-Turn Interactive Dialogue.
In *Annual Meeting of the Association for Computational Linguistics* (**ACL**), Findings, 2025.

3. Xinyu Su, **Feng Liu**, Yanchuan Chang, Egemen Tanin, Majid Sarvi, Jianzhong Qi.
DualCast: A Model to Disentangle Aperiodic Events from Traffic Series.
In *International Joint Conference on Artificial Intelligence* (**IJCAI**), 2025.

4. Jie Yang, Wei Chen, **Feng Liu**, Peng Zhou, Zhongli Wang, Xinyan Liang, Bingbing Jiang.
Multi-view Clustering via Multi-granularity Ensemble.
In *International Joint Conference on Artificial Intelligence* (**IJCAI**), 2025.

5. Xunye Tian, Liuhua Peng, Zhijian Zhou, Mingming Gong, Arthur Gretton, **Feng Liu**.
A Unified Data Representation Learning for Non-parametric Two-sample Testing.
In *The Conference on Uncertainty in Artificial Intelligence* (**UAI**), 2025.

6. Guangzheng Hu, **Feng Liu**, Mingming Gong, Guanghui Wang, Liuhua Peng.
Learning Imbalanced Data with Beneficial Label Noise.
In *International Conference on Machine Learning* (**ICML**), 2025.

7. Jiacheng Zhang, Benjamin I. P. Rubinstein, Jingfeng Zhang, **Feng Liu**.
One Stone, Two Birds: Enhancing Adversarial Defense Through the Lens of Distributional Discrepancy.
In *International Conference on Machine Learning* (**ICML**), 2025.

8. Yuhao Sun, Jiacheng Zhang, Zesheng Ye, Chaowei Xiao, **Feng Liu**.
Sample-specific Noise Injection for Diffusion-based Adversarial Purification.
In *International Conference on Machine Learning* (**ICML**), 2025.

9. Chengyi Cai, Zesheng Ye, Lei Feng, Jianzhong Qi, **Feng Liu**.
Understanding Model Reprogramming for CLIP via Decoupling Visual Prompts.
In *International Conference on Machine Learning* (**ICML**), 2025.

10. Yue Wang, Qizhou Wang, **Feng Liu**, Wei Huang, Yali Du, Xiaojiang Du, Bo Han.
GRU: Mitigating the Trade-off between Unlearning and Retention for LLMs.
In *International Conference on Machine Learning* (**ICML**), 2025.

11. Shuo He, Zhifang Zhang, **Feng Liu**, Roy Lee, Bo An, Lei Feng.
A Closer Look at Backdoor Attacks on CLIP.
In *International Conference on Machine Learning* (**ICML**), 2025.

12. Kunda Yan, Min Zhang, Sen Cui, Zikun Qu, Bo Jiang, **Feng Liu**, Changshui Zhang.
CALM: Consensus-Aware Localized Merging for Multi-Task Learning.
In *International Conference on Machine Learning* (**ICML**), 2025.

13. Yuwei Niu, Shuo He, Qi Wei, Zongyu Wu, **Feng Liu**, Lei Feng.
Test-Time Multimodal Backdoor Detection by Contrastive Prompting.
In *International Conference on Machine Learning* (**ICML**), 2025.

14. Xin Cheng, Jiabo Ye, Haiyang Xu, Ming Yan, Ji Zhang, **Feng Liu**, Fei Huang, Lei Feng.
Exploiting Presentative Feature Distributions for Parameter-Efficient Continual Learning of Large Language Models.
In *International Conference on Machine Learning* (**ICML**), 2025.

15. Bikang Pan, Qun Li, Xiaoying Tang, Wei Huang, Zhen Fang, **Feng Liu**, Jingya Wang, Jingyi Yu, Ye Shi.
NLPrompt: Noise-Label Prompt Learning for Vision-Language Models.
In *IEEE/CVF Conference on Computer Vision and Pattern Recognition* (**CVPR**), 2025.
[Highlight]

16. Zewei Shi, Ruoxi Sun, Jieshan Chen, Jiamou Sun, Minhui Xue, Yansong Gao, **Feng Liu**, Xingliang Yuan.
50 Shades of Deceptive Patterns: A Unified Taxonomy, Multimodal Detection, and Security Implications.
In *ACM Web Conference* (**WWW**), 2025.
[Oral] [NDSS'25 Poster]

17. Yiliao Song, Zhenqiao Yuan, Shuhai Zhang, Zhen Fang, Jun Yu, **Feng Liu**.
Deep Kernel Relative Test for Machine-generated Text Detection.
In *International Conference on Learning Representations* (**ICLR**), 2025.

18. Chengyi Cai, Zesheng Ye, Lei Feng, Jianzhong Qi, **Feng Liu**.
Attribute-based Visual Reprogramming with Vision Language Models.
In *International Conference on Learning Representations* (**ICLR**), 2025.

19. Shengjie Zhou, Xin Cheng, Haiyang Xu, Ming Yan, Tao Xiang, **Feng Liu**, Lei Feng.
Endowing Visual Reprogramming with Adversarial Robustness.
In *International Conference on Learning Representations* (**ICLR**), 2025.

20. Zihao Luo, Xilie Xu, **Feng Liu**, Yun Sing Koh, Di Wang, Jingfeng Zhang.
Privacy-Preserving Low-Rank Adaptation against Membership Inference Attacks for Latent Diffusion Models.
In *AAAI Conference on Artificial Intelligence* (**AAAI**), 2025.
[Best Paper Award of AAAI Colorai Workshop]

21. Hongduan Tian, **Feng Liu**, Zhanke Zhou, Tongliang Liu, Chengqi Zhang, Bo Han.
Mind the Gap Between Prototypes and Images in Cross-domain Finetuning.
In *Advances in Neural Information Processing Systems* (**NeurIPS**), 2024.

22. Chengyi Cai, Zesheng Ye, Lei Feng, Jianzhong Qi, **Feng Liu**.
Bayesian-Guided Label Mapping for Visual Reprogramming.
In *Advances in Neural Information Processing Systems* (**NeurIPS**), 2024.
[Oral]

23. Xiong Peng, Bo Han, **Feng Liu**, Tongliang Liu, Mingyuan Zhou.
Pseudo-Private Data Guided Model Inversion Attacks.
In *Advances in Neural Information Processing Systems* (**NeurIPS**), 2024.

24. Haoang Chi, He Li, Wenjing Yang, **Feng Liu**, Long Lan, Xiaoguang Ren, Tongliang Liu, Bo Han
Unveiling Causal Reasoning in Large Language Models: Reality or Mirage?
In *Advances in Neural Information Processing Systems* (**NeurIPS**), 2024.

25. Dongting Hu, Huan Fu, Jiaxian Guo, Liuhua Peng, Tingjin Chu, **Feng Liu**, Tongliang Liu, Mingming Gong
In-N-Out: Lifting 2D Diffusion Prior for 3D Object Removal via Tuning-Free Latents Alignment.
In *Advances in Neural Information Processing Systems* (**NeurIPS**), 2024.

26. Hongduan Tian, **Feng Liu**, Tongliang Liu, Bo Du, Yiu-ming Cheung, Bo Han.
MOKD: Cross-domain Finetuning for Few-shot Classification via Maximizing Optimized Kernel Dependence.
In *International Conference on Machine Learning* (**ICML**), 2024.

27. Jiacheng Zhang, **Feng Liu**, Dawei Zhou, Jingfeng Zhang, Tongliang Liu
Improving Accuracy-robustness Trade-off via Pixel Reweighted Adversarial Training.
In *International Conference on Machine Learning* (**ICML**), 2024.

28. Chengyi Cai, Zesheng Ye, Lei Feng, Jianzhong Qi, **Feng Liu**.
Sample-specific Masks for Visual Reprogramming-based Prompting.
In *International Conference on Machine Learning* (**ICML**), 2024.
[Spotlight]

29. Jinhao Li, Haopeng Li, Sarah M. Erfani, Lei Feng, James Bailey, **Feng Liu**.
Visual-Text Cross Alignment: Refining the Similarity Score in Vision-Language Models.
In *International Conference on Machine Learning* (**ICML**), 2024.

30. Jiahan Zhang, Qi Wei, **Feng Liu**, Lei Feng.
Candidate Pseudolabel Learning: Enhancing Vision-Language Models by Prompt Tuning with Unlabeled Data.
In *International Conference on Machine Learning* (**ICML**), 2024.
[Oral]

31. Wenjie Wang, Biwei Huang, **Feng Liu**, Xinge You, Tongliang Liu, Kun Zhang, Mingming Gong.
Optimal Kernel Choice for Score Function-based Causal Discovery.
In *International Conference on Machine Learning* (**ICML**), 2024.

32. Xue Jiang, **Feng Liu**, Zhen Fang, Hong Chen, Tongliang Liu, Feng Zheng, Bo Han.
Negative Label Guided OOD Detection with Pretrained Vision-Language Models.
In *International Conference on Learning Representations* (**ICLR**), 2024.
[Spotlight]

33. Xilie Xu, Jingfeng Zhang, **Feng Liu**, Masashi Sugiyama, Mohan Kankanhalli.
Efficient Adversarial Contrastive Learning via Robustness-Aware Coreset Selection.
In *Advances in Neural Information Processing Systems* (**NeurIPS**), 2023.
[Spotlight]

34. Xilie Xu, Jingfeng Zhang, **Feng Liu**, Masashi Sugiyama, Mohan Kankanhalli.
Enhancing Adversarial Contrastive Learning via Adversarial Invariant Regularization.
In *Advances in Neural Information Processing Systems* (**NeurIPS**), 2023.

35. Haotian Zheng, Qizhou Wang, Zhen Fang, Xiaobo Xia, **Feng Liu**, Tongliang Liu, Bo Han.
Out-of-distribution Detection Learning with Unreliable Out-of-distribution Sources.
In *Advances in Neural Information Processing Systems* (**NeurIPS**), 2023.

36. Qizhou Wang, Zhen Fang, Yonggang Zhang, **Feng Liu**, Yixuan Li, Bo Han.
Learning to Augment Distributions for Out-of-distribution Detection.
In *Advances in Neural Information Processing Systems* (**NeurIPS**), 2023.

37. Tingru Cui, Yixuan Li, Kaiping Chen, James Bailey, **Feng Liu**.
Designing Fair AI Systems: Exploring the Interaction of Explainable AI and Task Objectivity on Users' Fairness Perception.
In *Pacific Asia Conference on Information Systems* (**PACIS**), 2023.

38. Ruijiang Dong†, **Feng Liu**†, Haoang Chi, Tongliang Liu, Mingming Gong, Gang Niu, Masashi Sugiyama, Bo Han.
Diversity-enhancing Generative Network for Few-shot Hypothesis Adaptation.
In *International Conference on Machine Learning* (**ICML**), 2023.

39. Shuhai Zhang†, **Feng Liu**†, Jiahao Yang, Yifan Yang, Changsheng Li, Bo Han, Mingkui Tan.
Detecting Adversarial Data by Probing Multiple Perturbations Using Expected Perturbation Score.
In *International Conference on Machine Learning* (**ICML**), 2023.

40. Xue Jiang, **Feng Liu**, Zhen Fang, Hong Chen, Tongliang Liu, Feng Zheng, Bo Han.
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Honors and Awards

- **2024** – **(Top 2%)** Top 2% of the world's most cited scientists in 2023
- **2023** – FEIT Excellence Award in Early Career Research in University of Melbourne
- **2023** – **(Top 2%)** Top 2% of the world's most cited scientists in 2022
- **2023** – **(200 per year across all disciplines in Australia)** ARC Discovery Early Career Researcher Award
- **2023** – **(Top** 5**%)** Best Reseach-in-progress Paper Award of ECIS: 2nd Runner Up
- **2022** – **(Top** 0.1**%) NeurIPS** Outstanding Paper
- **2021** – **(Top** 8**%)** Outstanding Reviewer Award of **NeurIPS** 2021

- **2021** – **(Top** 10**%)** Outstanding Reviewer Award of ICLR 2021
- **2021** – **(12 in each faculty)** UTS Best Thesis Award (Dean's list)
- **2020** – **(Top** 10**%)** AAII Day Best Student Paper Award (2020)
- **2019** – **(Top 5)** UTS-FEIT HDR Research Excellence Award (2019)
- **2019** – **(Top 1)** Best student paper award from IEEE International Conference on Fuzzy Systems (*one paper per year over 500 more accepted papers*).
- **2014** – **(Top 5%)** Miyoshi Post-Graduate Award
- **2011** – **(Top 5%)** First-class Award scholarship of Research and Innovation of Lanzhou University.
- **2011** – **(Top 5%)** Meritorious Winner in the International Mathematical Contest in Modelling.