Xinyan Liang

(IEEE/ACM/CCF/CSIG/CAA Member, Doctoral Supervisor)

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University homepage •Google Scholar Profile •GitHub

Biography

I am currently an associate professor affiliated with the Institute of Big Data Science and Industry, at Shanxi University. My primary research interests focus on Multi-view/Multi-modal Learning, Trustworthy Machining Learning, Federated Learning, Continual Learning, Granular Computing, Clustering Analysis, Unsupervised Representation Learning, and Signal Processing. I obtained the Ph.D degree of Computer Science and Technology from Shanxi University in 2022. I have published more than 70 papers on the TOP journals and conferences, such as IEEE TPAMI, IEEE TIP, IEEE TEVC, IEEE TFS, IEEE TCSVT, Pattern Recognition, ICML, NeurIPS, ICLR, AAAI, IJCAI, KDD, ICCV and ACM MM. In addition, I am the Area Chair of ICLR'26 and NeurIPS'26. I served as the reviewer of more than 30 international journals and conferences, including Nature Communications, IEEE TPAMI, TNNLS, TIP, ICML, NeurIPS, AAAI, IJCAI, CVPR, ACM MM, etc.

Research Interest

Multi-view/Multi-modal Learning, Trustworthy Analysis, Neural Architecture Search, Continual Learning, Granular Computing, Federated Learning, Clustering Analysis, Unsupervised Learning, and Large Model Evaluation

Education

- **Shanxi University** **Taiyuan, Shanxi, China**
  Computer Science and Technology, Ph.D. *2014 – 2022*
  Dissertation: Theory and Method for Multi-Modal Data Fusion
  Adviser: Yuhua Qian
- **Shanxi University** **Taiyuan, Shanxi, China**
  Computer Science and Technology, B.A. *2010 – 2014*

Professional Experiences

- **Shanxi University** **Taiyuan, Shanxi, China**
  Associate Professor *2024.12 – now*
- **Shanxi University** **Taiyuan, Shanxi, China**
  Assistant Professor *2022.08 – 2024.12*
  - Conducted fundamental and applied research in computer vision, signal processing and deep learning.
  - Theoretical fields: Multi-view learning theory.
  - Applied fields: Multi-modal learning, unsupervised representation learning and clustering.

Awards and Honors

- ACM Rising Star Award, ACM Taiyuan, 2024.
- Talent Outstanding Young Scholars of Shanxi Province, Shanxi Province, 2026.
- Shanxi Province Outstanding Ph.D. Dissertation Award, Shanxi Province, 2022.
- The "Wenying Young Scholars" Talent Program, Shanxi University, 2024.
- Best Paper Award in the 2025 China Granular Computing and Knowledge Discovery (CGCKD 2025), China, 28 -Jul.-2025.
- Gold Reviewer Award, ICML 2026

Academic Services

- **Associate Editor**: **Pattern Recognition** (2026-Now)
- **Guest Editor: Automated Software Engineering**[CCF-B, CAS Rank 1], 2026, Intelligent Techniques for Automated Code Review and Software Quality Evaluation
- **Area Chair**: **International Conference on Learning Representations** (ICLR 2026, 27)
- **Area Chair**: **Annual Conference on Neural Information Processing Systems** (NeurIPS 2026)
- **Area Chair**: **Annual Conference on Neural Information Processing Systems** (ICML2026)
- **Special Session Chair**: 2026 IEEE International Conference on Multimedia and Expo (ICME 2026): **Special Session** on "Multimedia-Oriented Neural Architecture Search for Efficient and Scalable Media Analysis"
- **Workshop Co-Chairs**: BIBM 2026[CCF-B]: AutoML for Medical Data Analysis and Healthcare Intelligence (AutoMLMDA)
- **Invited Speaker**: 2025 CSIG Young Scientists Conference (YSC 2025) at Qingdao, China,6-Nov.-2025
- **Invited Speaker**: 2025 Annual Youth Academic Symposium of the Second Section of Cross-Disciplinary Research of National Natural Science Foundation (NNAF 2025) at Nanjing, China,18-Sep.-2025
- **Invited Speaker**: 2024 China Granular Computing and Knowledge Discovery (CGCKD 2024) at Lianyungang, China,18-Jul.-2024
- **Invited Speaker**: 2022 China Granular Computing and Knowledge Discovery (CGCKD 2022) at Xining, China,18-Aug.-2022
- **Spotlight Paper**: 2024 Chinese Congress on Image and Graphics (CCIG 2024) at Xian, China, 23-May-2024
- **Reviewer**: Nature Communications, IEEE TPAMI, TIP, TKDE, TNNLS, TMM, TCSVT, TGRS, Information Fusion, Pattern Recognition, Neural Networks, Artificial Intelligence Review, Information Processing & Management, Knowledge-Based Systems, International Journal of Machine Learning and Cybernetics, MultiMedia Tools and Applications, Cognitive Computation.
- **Technical Committee**: ICML, NeurIPS, CVPR, ECCV, ACM MM, AAAI, IJCAI, ICDM, PAKDD, PRCV, CCDM, PRAI
- **Member**: IEEE/ACM/CCF/CSIG Member
- **Committee**: CSIG-Big Visual Data, CCF-MM

Fundings

1. Natural Science Foundation of China (NSFC General Program), 2027.01-2030.12.
2. Natural Science Foundation of China (NSFC Major Program Sub-Topic), 2025.01-2029.12.
3. Natural Science Foundation of China (NSFC Youth Program), 2023.01-2025.12.
4. Shanxi Province Outstanding Youth Science Fund Program, 2026.01-2028.12.
5. The Science and Technology Major Project of Shanxi, 2023.01-2025.12.
6. The Open Funding Programs of State Key Laboratory of AI Safety, 2025.09-2025.12.

Publications-Journal

- **Mining association patterns from neighborhood insight**
  Honghong Cheng, Yuhua Qian, Xinyan Liang, Jiye Liang, Qinghua Zhang, IEEE TPAMI 2026
- **Multi-view causal feature selection**
  Zhaolong Ling, Dongliang Liang, Xinyan Liang, Xingyu Wu, Peng Zhou, Kui Yu, Xindong Wu, IEEE TPAMI 2026
- **AF: An association-based fusion method for multi-modal classification**
  Xinyan Liang, Yuhua Qian, Qian Guo, Honghong Cheng, Jiye Liang, IEEE TPAMI 2022
- **Multi-branch tree-based fusion neural architecture search with zero-cost screen for multi-modal classification**
  Qian Guo, Quanchen Su, Xinyan Liang(Corresponding author), Yuhua Qian, Nan Li and Zhihua Cui, IEEE TIP 2026
- **EvoAMC: Evolutionary fusion with knowledge learning for automatic modulation classification**
  Xinyan Liang, Xin Tang, Dongning Li, Yuhua Qian, Jinpeng Yuan, Linjie Zhang and Yaohui Zheng, IEEE TEVC 2026

- **Learning invariant grasping features via scene prototypes and structure priors in robotic manipulation**
  Lu Chen, Chaofan Yang, Zeyu Wang, Yuwei Wang, Xinyan Liang(Corresponding author), Yuhua Qian, IEEE TASE 2025.
- **Evolutionary deep fusion method and its application in chemical structure recognition**
  Xinyan Liang, Qian Guo, Yuhua Qian, Weiping Ding, Qingfu Zhang, IEEE TEVC 2021
- **A data representation method using distance correlation**
  Xinyan Liang, Yuhua Qian, Qian Guo, Keyin Zheng, Frontiers of Computer Science 2025
- **LogicNAS: Multi-view neural architecture search method for image sequence logic prediction**
  Qian Guo, Shiwu Sun, Xinyan Liang, Yuhua Qian, Zhihua Cui, IEEE TETCI 2025.
- **Multi-scale features are effective for multi-modal classification: An architecture search viewpoint**
  Pinhan Fu, Xinyan Liang(Co-first author), Yuhua Qian, Qian Guo, Yayu Zhang, Qin Huang, IEEE TCSVT 2025.
- **FASTEN: Fuzzy neural support vector machine for classification**
  Zhian Yuan, Yuhua Qian, Xinyan Liang, Yi Kou, Chenping Hou, Qinghua Hu, IEEE TFS 2025
- **Scalable fuzzy clustering with collaborative structure learning and preservation**
  Bingbing Jiang, Chenglong Zhang, Zhongli Wang, Xinyan Liang, Peng Zhou, Liang Du, Qinghua Zhang, Weiping Ding, Yi Liu, IEEE TFS 2025
- **Feature subspace learning-based binary differential evolution algorithm for unsupervised feature selection**
  Tao Li, Yuhua Qian, Feijiang Li, Xinyan Liang, Zhi-hui Zhan, IEEE TBD 2025
- **3D portrait stylization with adaptive semantic editing based on GAN latent codes**
  Yantao Song, Xiangchong Jia, Jieru Jia, Yudong Liang, Xinyan Liang(Corresponding author), Pattern Recognition 2025
- **Robust distributed Rydberg sensing under heterogeneous noise via evidential multi-view learning**
  Li Zhang, Xinyan Liang(Corresponding author), Yuhua Qian, Jinpeng Yuan, Linjie Zhang, Dong-Sheng Ding and Feng Li, Information Fusion 2027
- **Illumination-adaptive feature enhancement for low-light object detection**
  Jiajia Lu, Yuhua Qian, Wenping Zheng, Xinyan Liang, Keqi Wang, Zhian Yuan, Pattern Recognition 2026
- **ESSR: Evolving sparse sharing representation for multi-task learning**
  Yayu Zhang, Yuhua Qian, Guoshuai Ma, Xinyan Liang, Guoqing Liu, Qingfu Zhang, Ke Tang, IEEE TEVC 2024
- **AWLloss: Speaker verification based on the quality and difficulty of speech**
  Qian Liu, Xia Zhang, Xinyan Liang, Yuhua Qian, Shanshan Yao, IEEE SPL 2023
- **Auto-attention mechanism for multi-view deep embedding clustering**
  Bassoma Diallo, Jie Hu, Tianrui Li, Ghufran Ahmad Khan, Xinyan Liang, Hongjun Wang, Pattern Recognition 2023
- **GLRM: Logical pattern mining in the case of inconsistent data distribution based on multigranulation strategy**
  Qian Guo, Yuhua Qian, Xinyan Liang, International Journal of Approximate Reasoning 2017
- **Local rough set: A solution to rough data analysis in big data**
  Yuhua Qian, Xinyan Liang, Qi Wang, Jiye Liang, Bing Liu, Andrzej Skowron, Yiyu Yao, Jianmin Ma, Chuangyin Dang, International Journal of Approximate Reasoning 2018
- **Local multigranulation decision-theoretic rough sets**
  Yuhua Qian, Xinyan Liang, Guoping Lin, Qian Guo, Jiye Liang, International Journal of Approximate Reasoning 2017
- **Local neighborhood rough set**
  Qi Wang, Yuhua Qian, Xinyan Liang, Qian Guo, Jiye Liang, Knowledge-Based Systems 2018

Publications-Conferences

- **GFD-EMVC: Evolutionary multi-view classification with label noise via gradient and feature dual-perception**
  Shuai Li, Xinyan Liang (Corresponding author), Yuhua Qian, Li Lv, ICML2026 Spotlight
- **Incomplete multi-view clustering via neighborhood-conditioned diffusion**
  Qian Guo, Gaohui Zuo, Bingbing Jiang, Guangrui Fan, Zhihua Cui, Xinyan Liang (Corresponding author), Jianjian Ding, ICML2026 Spotlight
- **EvoFMVC: Trusted federated multi-view clustering with evolutionary fusion**
  Li Zhang, Pinhan Fu, Li Lv, Qian Guo, Liang Du, Xinyan Liang (Corresponding author), AAAI 2026 Oral
- **Uncertainty-guided view-strength-aware feature utilization for multi-view classification**
  Li Lv, Qian Guo, Li Zhang, Liang Du, Bingbing Jiang, Lu Chen, Xinyan Liang (Corresponding author), AAAI 2026

Oral

- **Signal enhancement via multi-view dynamic representation and alignment-aware fusion**
  Zikun Jin, Yuhua Qian, Xinyan Liang, Jiaqian Zhang, Jinpeng Yuan, Shen Hu, Haijun Geng, AAAI 2026
- **From modality suppression to synergistic routing for balanced multimodal learning**
  Kaixiang Song, Ruihan Zhen, Xinyan Liang (Corresponding author), AAAI 2026 Oral
- **Improving evolutionary multi-view classification via eliminating individual fitness bias**
  Xinyan Liang, Shuai Li, Qian Guo, Yuhua Qian, Bingbing Jiang, Tingjin Luo, Liang Du, NeurIPS 2025 Spotlight
- **Trusted multi-view classification with expert knowledge constraints**
  Xinyan Liang, Shijie Wang, Yuhua Qian, Qian Guo, Liang Du, Bingbing Jiang, Tingjin Luo, Feijiang Li, ICML 2025 Spotlight
- **Adversarial graph fusion for incomplete multi-view semi-supervised learning with tensorial imputation**
  Zhangqi Jiang, Tingjin Luo, Xu Yang, Xinyan Liang, NeurIPS 2025
- **Stabilizing sample similarity in representation via mitigating random consistency**
  Jieting Wang, Zelong Zhang, Feijiang Li, Yuhua Qian, Xinyan Liang, ICML 2025
- **View-association-guided dynamic multi-view classification**
  Xinyan Liang, Li Lv, Qian Guo, Bingbing Jiang, Feijiang Li, Liang Du, Lu Chen, IJCAI 2025 Oral
- **An association-based fusion method for speech enhancement**
  Shijie Wang, Qian Guo, Lu Chen, Liang Du, Zikun Jin, Zhiyan Yuan, Xinyan Liang (Corresponding author), IJCAI 2025 Oral
- **Multi-view clustering via multi-granularity ensemble**
  Jie Yang, Wei Chen, Feng Liu, Peng Zhou, Zhongli Wang, Xinyan Liang (Co-Corresponding author), Bingbing Jiang*, IJCAI 2025 Oral
- **A fast neural architecture search method for multi-modal classification via knowledge sharing**
  Zhihua Cui, Shiwu Sun, Qian Guo, Xinyan Liang, Yuhua Qian, Zhixia Zhang, IJCAI 2025 Oral
- **A multi-view fusion approach for enhancing speech signals via short-time fractional fourier transform**
  Zikun Jin, Yuhua Qian, Xinyan Liang, Haijun Geng, IJCAI 2025 Oral
- **PASD: A pixel-adaptive swarm dynamics approach for unsupervised low-light image enhancement**
  Shuai Jin, Yuhua Qian, Feijiang Li, Guoqing Liu, Xinyan Liang, ICCV 2025
- **DC-NAS: Divide-and-conquer neural architecture search for multi-modal classification**
  Xinyan Liang, Pinhan Fu, Qian Guo, Keyin Zheng, Yuhua Qian, AAAI 2024 Oral
- **Deep incomplete multi-view learning network with insufficient label information**
  Zhangqi Jiang, Tingjin Luo, Xinyan Liang, AAAI 2024
- **Core-structures-guided multi-modal classification neural architecture search**
  Pinhan Fu, Xinyan Liang, Tingjin Luo, Qian Guo, Yayu Zhang, Yuhua Qian, IJCAI 2024
- **Efficient multi-view unsupervised feature selection with adaptive structure learning and inference**
  Chenglong Zhang, Yang Fang, Xinyan Liang, Han Zhang, Peng Zhou, Xingyu Wu, Jie Yang, Bingbing Jiang, Weiguo Sheng, IJCAI 2024
- **A progressive skip reasoning fusion method for multi-modal classification**
  Qian Guo, Xinyan Liang (Corresponding author), Yuhua Qian, Zhihua Cui, Jie Wen, ACM MM 2024
- **CoMO-NAS: Core-structures-guided multi-objective neural architecture search for multi-modal classification**
  Pinhan Fu, Xinyan Liang, Yuhua Qian, Qian Guo, Zhifang Wei, Wen Li, ACM MM 2024
- **Scalable multi-view unsupervised feature selection with structure learning and fusion**
  Chenglong Zhang, Xinyan Liang, Peng Zhou, Zhaolong Ling, Yingwei Zhang, Xingyu Wu, Weiguo Sheng, Bingbing Jiang, ACM MM 2024