Hongjie **Wu**

PH.D. CANDIDATE · SICHUAN UNIVERSITY

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"Rome was not built in a day."

Summary

I am a third-year PhD student at the Data Intelligence and Computing Art Lab College of Computer Science, Sichuan University, China, and the Engineering Research Center of Machine Learning and Industry Intelligence, Education Ministry of China, under the guidance of Prof. Jiancheng Lv.

My research interests include generative models (more focus on diffusion models), computer vision, efficient AI, multi-modal learning, and broad deep learning topics in general. I am a highly diligent and self-motivated research student.

Education

Sichuan University — *Chengdu, China*

PH.D. CANDIDATE IN SOFTWARE ENGINEERING — *Sept. 2022 - Current*

- **Supervisor:** Jiancheng Lv
- **Honor:** Top 10 Student Collectives, Ph.D. Innovation Scholarship, NPIC Scholarship, The Star of Graduate Students, Outstanding Ph.D. Student of Sichuan University

Sichuan University — *Chengdu, China*

MASTER IN COMPUTER TECHNOLOGY — *Sept. 2019 - Jun. 2022*

- **Supervisor:** Jiancheng Lv
- **Honor:** Outstanding Graduates of Sichuan Province, The Academic Star of Graduate Students, First-class University Scholarship, Outstanding Graduates of Sichuan University

Sichuan University — *Chengdu, China*

BACHELOR IN COMPUTER SCIENCE AND TECHNOLOGY — *Sept. 2014 - Jun. 2018*

- **Supervisor:** Lei Zhang

Publications/ Manuscripts

RESEARCH AREA I: DIFFUSION MODEL

Enhancing Diffusion Model Stability for Image Restoration via Gradient Management
Hongjie Wu, Mingqin Zhang, Linchao He, Ji-Zhe Zhou, Jiancheng Lv
Proceedings of the 33rd ACM International Conference on Multimedia ***(ACM MM)***, 2025

Diffusion Posterior Proximal Sampling for Image Restoration
Hongjie Wu, Linchao He, Mingqin Zhang, Dongdong Chen, Kunming Luo, Mengting Luo, Ji-Zhe Zhou, Hu Chen, Jiancheng Lv
Proceedings of the 32st ACM International Conference on Multimedia ***(ACM MM) Oral presentation***, 2024

Fast and Stable Diffusion Inverse Solver with History Gradient Update
Linchao He, Hongyu Yan, Mengting Luo, **Hongjie Wu**, Kunming Luo, Wang Wang, Wenchao Du, Hu Chen, Hongyu Yang, Yi Zhang, Jiancheng Lv
arXiv preprint arXiv:2307.12070. 2023

RESEARCH AREA II: MULTI-VIEW LEARNING

Multi-view subspace clustering on topological manifold
Shudong Huang*, **Hongjie Wu*** (co-first), Yazhou Ren, Ivor Tsang, Zenglin Xu, Wentao Feng, Jiancheng Lv
Advances in Neural Information Processing Systems ***(NeurIPS) Spotlight presentation*** pp. 25883–25894. 2022

Pure graph-guided multi-view subspace clustering
Hongjie Wu, Shudong Huang, Chenwei Tang, Yancheng Zhang, Jiancheng Lv
Pattern Recognition p. 109187. Elsevier, 2023

Metric multi-view graph clustering
Yuze Tan, Yixi Liu, **Hongjie Wu**, Jiancheng Lv, Shudong Huang
Proceedings of the AAAI Conference on Artificial Intelligence ***(AAAI)***, 2023

Preserving Local and Global Information: An Effective Metric-based Subspace Clustering
Yixi Liu, Yuze Tan, **Hongjie Wu**, Shudong Huang, Yazhou Ren, Jiancheng Lv
Proceedings of the 31st ACM International Conference on Multimedia ***(ACM MM)***, 2023

Euclidean Distance Is Not Your Swiss Army Knife
Yuze Tan, Yixi Liu, **Hongjie Wu**, Shudong Huang, Zenglin Xu, Ivor Tsang, Jiancheng Lv
IEEE Transactions on Knowledge and Data Engineering ***(TKDE)***. 2024

Multi-view graph clustering by adaptive manifold learning
Peng Zhao*, **Hongjie Wu*** (co-first), Shudong Huang
Mathematics p. 1821. MDPI, 2022

Research area III: Deep learning applications

Automatic cataract detection with multi-task learning
Hongjie Wu, Jiancheng Lv, Jian Wang
International Joint Conference on Neural Networks (IJCNN), 2021

ST-CA YOLOv5: Improved YOLOv5 based on Swin Transformer and coordinate attention for surface defect detection
Wen Yang, **Hongjie Wu**, Chenwei Tang, Jiancheng Lv
International Joint Conference on Neural Networks (IJCNN), 2023

Self-supervised Domain Adaptation with Significance-Oriented Masking for Pelvic Organ Prolapse detection
Shichang Li, **Hongjie Wu**, Chenwei Tang, Dongdong Chen, Yueyue Chen, Ling Mei, Fan Yang, Jiancheng Lv
Pattern Recognition Letters. 2024

Honors & Awards

2025	**Suzhou Industrial Park Scholarship,** granted by Suzhou Industrial Park	*China*
2024	**Top 10 Student Collectives (team leader),** granted by Sichuan University	*China*
2023	**Ph.D. Innovation Scholarship,** granted by Ministry of Education	*China*
2023	**NPIC Scholarship (first-class),** granted by NPIC	*China*
2023	**Outstanding Ph.D. Student of Sichuan University,** granted by Sichuan University	*China*
2022	**The Academic Star of Graduate Students,** granted by Sichuan University	*China*
2022	**Outstanding Graduate Students of Sichuan Province,** granted by Sichuan Province	*China*
2021	**Outstanding Graduates of University,** granted by Sichuan University	*China*
2021	**First-class University Scholarship,** granted by Ministry of Education	*China*

Professional Services

2025- **Program Committee Member,** AAAI Conference on Artificial Intelligence
2025- **Reviewer,** The Journal of Supercomputing
2025- **Reviewer,** IEEE Transactions on Image Processing (TIP)
2025- **Reviewer,** Knowledge-Based Systems (KBS)
2024- **Reviewer,** Big Data Mining and Analytics
2024- **Reviewer,** ACM International Conference on Multimedia (ACM MM)
2024- **Reviewer,** International Joint Conference on Neural Networks (IJCNN)
2023- **Reviewer,** Journal of Computer Research and Development
2023- **Reviewer,** Pattern Recognition

Interests

Running Running provides me with a profound sense of mental and physical well-being and contentment.
Reading I love reading books, for they ignite my imagination and broaden my knowledge and understanding of the world.
Watching Movies I like to watch movies in my free time, which have been a captivating source of entertainment and fascination for me.
Cooking I am good at cooking Sichuan cuisine (perhaps), and preparing delicious meals gives me a great sense of achievement.