

# Yu Li

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## Education

### George Washington University

*Ph.D. Candidate in Electrical and Computer Engineering, GPA: 4.0/4.0*

Advisor: Prof. Tian Lan [🔗](#); Mentor: Prof. Zhengling Qi [🔗](#)

### Wuhan University, Hongyi Honor College

*B.Eng. in Microelectronics Science and Technology, GPA: 3.87/4.0*

Advisor: Prof. Cheng Lei [🔗](#) & Prof. Wei Liu [🔗](#)

### Washington, D.C.

*Aug 2025 – May 2029*

*(expected)*

### Wuhan, China

*Sept 2021 – Jun 2025*

## Research Interests

My research focuses on **LLM post-training** and **agent policy learning**, with specific interests in: (i) parameter-efficient fine-tuning (LoRA), (ii) preference alignment and reasoning for LLMs, (iii) agent reasoning, planning, and policy optimization.

## Preprints & Under Review

### [1] Right Meets Wrong: Bilateral Context Conditioning with Reward-Confidence Correction for GRPO

Yu Li, Tian Lan, Zhengling Qi

*Under review at International Conference on Machine Learning (ICML), 2026*

### [2] INSPO: Unlocking Intrinsic Self-Reflection for LLM Preference Optimization [🔗](#)

Yu Li, Tian Lan, Zhengling Qi

*Under review at International Conference on Machine Learning (ICML), 2026*

### [3] Reason in Chains, Learn in Trees: Self-Rectification and Grafting for Multi-turn Agent Policy Optimization

Yu Li, Sizhe Tang, Tian Lan

*Under review at Annual Meeting of the Association for Computational Linguistics (ACL), 2026*

### [4] MultiRefine-V: Multi-Turn Reinforcement Learning for Enhancing Verilog Code Synthesis

Qiu Feng Li, Yu Li, Shu Hong, Tian Lan, Weidong Cao

*Under review at Design Automation Conference (DAC), 2026*

### [5] CRAFT-LoRA: Content-Style Personalization via Rank-Constrained Adaptation and Training-Free Fusion

Yu Li, Yujun Cai, Chi Zhang

*Under review at IEEE/CVF Conference on Computer Vision and Pattern Recognition (CVPR), 2026. Review: 5/4/2*

### [6] Prada: Black-Box LLM Adaptation with Private Data on Devices [🔗](#)

Ziyao Wang, Yexiao He, Zheyu Shen, Yu Li, Guoheng Sun, Myungjin Lee, Ang Li

*arXiv preprint, 2025*

## Publications

C=Conference, J=Journal, †=Equal Contribution

### [C.1] KG-SAM: Injecting Anatomical Knowledge into Segment Anything Models via Conditional Random Fields

Yu Li, Da Chang, Xi Xiao

*IEEE International Conference on Acoustics, Speech and Signal Processing (ICASSP), 2026*

### [C.2] ACDZero: Graph-Embedding-Based Tree Search for Mastering Automated Cyber Defense

Yu Li†, Sizhe Tang†, Rongqian Chen, Fei Xu Yu, Guangyu Jiang, Mahdi Imani, Nathaniel D. Bastian, Tian Lan

*Intelligent Cloud Computing and Networking Workshop @ INFOCOM, 2026*

### [C.3] Calibrating and Rotating: A Unified Framework for Weight Conditioning in PEFT

Da Chang, Peng Xue, Yu Li, Yongxiang Liu, Pengxiang Xu, Shixun Zhang

*The 40th Annual AAAI Conference on Artificial Intelligence (AAAI), 2026*

### [C.4] DLoRA-TrOCR: Mixed Text Mode Optical Character Recognition Based On Transformer

Yu Li†, Da Chang†

*International Conference on Neural Information Processing (ICONIP), 2024*

### [C.5] ECG Classification with Dual Models: XGBoost Voting and Deep Learning with Attention

Yu Li, Yunhao Hu, Jie Chen, Binghao Wang, Wei Liu et al.

*International Conference on Advanced Computer Technology and Electronics, 2023*

**[J.1] Dual branch SAM-Transformer Fusion Network for Accurate Breast Ultrasound Image Segmentation**

**Yu Li, Jin Huang, Du Wang, Liye Mei, Cheng Lei et al.**

*Medical Physics, 2025*

**[J.2] SfMDiffusion: Self-supervised Monocular Depth Estimation in Endoscopy Based on Diffusion Models**

**Yu Li, Da Chang, Jin Huang, Du Wang, Liye Mei, Cheng Lei et al.**

*International Journal of Computer Assisted Radiology and Surgery, 2025*

**[J.3] Local Optimum Time-Reassigned Synchrosqueezing Transform for Bearing Fault Diagnosis**

**Site Lv, Shan Zeng, Yu Li, Ke Yang, Yulong Chen**

*IEEE Sensors Journal, 2024*

## Selected Awards & Honors

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- **Innova International Exchange Scholarship**, 6 recipients university-wide, ¥70,000. 2024
- **Innova Excellence Scholarship**, Top 3%, ¥10,000, twice. 2023, 2024
- **First-Class Scholarship**, Top 5%, ¥3,000, three times. 2022, 2023, 2024

## Academic Services

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- **Conference Reviewer:** ICML'26, CVPR'26, ICLR'26, AAAI'26, ICASSP'26
- **Journal Reviewer:** Neurocomputing, Frontiers in Oncology, IEEE Transactions on Networking

## Skills

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- **Languages:** English (TOEFL 105), Chinese (Native), Japanese (Basic)
- **ML/LLM Stack:** PyTorch, DeepSpeed, Flash Attention, vLLM, OpenRLHF, VERL, TRL
- **Tools & Platforms:** Linux/Ubuntu, Docker, Git, Weights & Biases, Cadence