

# Lihe Li

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Last updated: June 20, 2026

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## Research Interests

My research interest is Reinforcement Learning (RL), especially in Multi-agent Reinforcement Learning (MARL) that enables agents efficiently, robustly and safely coordinate with other agents and even humans.

## Education

**University of Texas at Austin**, Austin, TX, United States 2026.08 - present  
PhD Student in Computer Science

**Nanjing University**, Nanjing, Jiangsu, China 2023.09 - 2026.6  
Master Student in Computer Science and Technology  
Advisor: Prof. Yang Yu

**Nanjing University**, Nanjing, Jiangsu, China 2019.09 - 2023.07  
Undergraduate Student in Artificial Intelligence  
Advisor: Prof. Yang Yu

## Selected Publications

### **Boosting Offline MARL under Imbalanced Datasets via Compositional Diffusion Models.**

Lihe Li, Shenghe Hu, Bingxuan Lan, Yuqi Bian, Huan Zhang, Ming Zhao, Chongjie Zhang, Lei Yuan, Yang Yu. In *The 25th International Conference on Autonomous Agents and Multi-Agent Systems (AAMAS), 2026*.

### **LLM-Assisted Semantically Diverse Teammate Generation for Efficient Multi-agent Coordination.**

Lihe Li, Lei Yuan, Pengsen Liu, Tao Jiang, Yang Yu. In *The 42nd International Conference on Machine Learning (ICML), 2025*.

### **Continual Multi-Objective Reinforcement Learning via Reward Model Rehearsal.**

Lihe Li, Ruotong Chen, Ziqian Zhang, Zhichao Wu, Yi-Chen Li, Cong Guan, Yang Yu, Lei Yuan. In *The 33rd International Joint Conference on Artificial Intelligence (IJCAI), 2024*.

### **Learning to Coordinate with Anyone**

Lei Yuan, Lihe Li, Ziqian Zhang, Feng Chen, Tianyi Zhang, Cong Guan, Yang Yu, Zhi-Hua Zhou. In *The Fifth Distributed Artificial Intelligence Conference (DAI), Best Paper Award, 2023*.

### **Multi-agent Continual Coordination via Progressive Task Contextualization**

Lei Yuan, Lihe Li, Ziqian Zhang, Fuxiang Zhang, Cong Guan, Yang Yu. In *IEEE Transactions on Neural Networks and Learning Systems (TNNLS)*.

### **A Survey of Progress on Cooperative Multi-agent Reinforcement Learning in Open Environment**

Lei Yuan, Ziqian Zhang, Lihe Li, Cong Guan, Yang Yu. In *arxiv:2312.01058*.

### **Adaptable Safe Policy Learning from Multi-task Data with Constraint Prioritized Decision Transformer**

Ruiqi Xue, Ziqian Zhang, Lihe Li, Cong Guan, Lei Yuan, Yang Yu. In *Advances in Neural Information Processing Systems 39 (NeurIPS), 2025*.

### **Learning to Reuse Policies in State Evolvable Environments.**

Ziqian Zhang Bohan Yang Lihe Li, Yuqi Bian, Ruiqi Xue, Feng Chen, Yi-Chen Li, Lei Yuan, Yang Yu. In *The 42nd International Conference on Machine Learning (ICML), 2025*.

### **Efficient Multi-agent Offline Coordination via Diffusion-based Trajectory Stitching.**

Lei Yuan, Yuqi Bian, **Lihe Li**, Ziqian Zhang, Cong Guan, Yang Yu. In *The 13th International Conference on Learning Representations (ICLR)*, 2025.

**Multi-Agent Domain Calibration with a Handful of Offline Data.**

Tao Jiang Lei Yuan **Lihe Li**, Cong Guan, Zongzhang Zhang, Yang Yu. In *Advances in Neural Information Processing Systems 38 (NeurIPS)*, 2024.

**Multi-agent In-context Coordination via Decentralized Memory Retrieval**

Tao Jiang, Zichuan Lin, **Lihe Li**, Yi-Chen Li, Cong Guan, Lei Yuan, Zongzhang Zhang, Yang Yu, Deheng Ye. In *Proceedings of the 40th AAAI Conference on Artificial Intelligence (AAAI), Oral Presentation*, 2026.

**Fast Teammate Adaptation in the Presence of Sudden Policy Change**

Ziqian Zhang Lei Yuan **Lihe Li**, Ke Xue, Chengxing Jia, Cong Guan, Chao Qian, Yang Yu. In *Proceedings of the 39th Conference on Uncertainty in Artificial Intelligence (UAI)*, 2023.

**Honors and Awards**

Outstanding Master’s Thesis of Nanjing University	2026
Outstanding Graduate of Nanjing University	2026
BYD Scholarship (CNY 20,000)	2025
First-Class Academic Scholarship (CNY 12,000)	2025
<b>National Scholarship</b> (CNY 20,000)	2024
First-Class Academic Scholarship (CNY 10,000)	2024
<b>Best Paper Award</b> of The Fifth Distributed Artificial Intelligence Conference (DAI 2023)	2023
Outstanding Bachelor’s Thesis of Nanjing University	2023
Outstanding Graduate of Nanjing University	2023
The Egret Scholarship (CNY 10,000)	2022
The People’s Scholarship	2020, 2021

**Services**

Reviewer for ICLR	2025, 2026
Reviewer for NeurIPS	2025, 2026
Reviewer for COLM	2025, 2026
Reviewer for ICML	2025

**Teaching**

Teaching Assistant of “Intro to AI”, Nanjing University	2024 Fall
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**Skills**

- Programming Skills: Python, MATLAB, C/C++, bash, HTML,  $\LaTeX$
- Language Skills: Mandarin (native), English (TOEFL 100: R 25, L 25, S 25, W 25), Cantonese (native)