ZHUORAN LI

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EDUCATION

Tsinghua University B.S in Department of Electronic Engineering
August 2016 - July 2020
Tsinghua University B.S in School of Economics and Management (Second Major)
August 2017 - July 2020
Tsinghua University Ph.D in Institute for Interdisciplinary Information Sciences
August 2020 - present
Ph.D. Advisor: Professor Longbo Huang

ACEDEMIC

Research Topic

· Deep reinforcement learning (Multi-agent RL, Offline RL, Diffusion Policy).
· Generative models, including diffusion models, flow models and large language models (RLHF, Post-training, AIGC).
· Theory including optimization theory, reinforcement learning theory, and distributed optimization.
· Network Optimization, i.e., network scheduling, network planning.

Representative Papers

· Zhuoran Li, Hai Zhong, Xun Wang, Qingxin Xia, Lihua Zhang, Longbo Huang. Diffusing to Coordinate: Efficient Online Multi-Agent Diffusion Policies[C]. ICML, 2026.

· Zhuoran Li, Xun Wang, Hai Zhong, Qingxin Xia, Lihua Zhang, Longbo Huang. OM2P: Offline Multi-Agent Mean-Flow Policy[C]. AAMAS, 2026.

· Zhuoran Li, Ruishuo Chen, Hai Zhong, Longbo Huang. Offline Diffusion Policy for Multi-User Delay-Constrained Scheduling[J]. IEEE Transactions on Mobile Computing, 2026.

· Xun Wang†, Zhuoran Li†, Longbo Huang. Beyond Static Populations: Efficient Delay-Constrained Scheduling for Dynamic Users via Deep Reinforcement Learning[C]. MobiHoc, 2025. († means Co-first authors)

· Zhuoran Li, Xing Wang, Ling Pan, Lin Zhu, Zhendong Wang, Junlan Feng, Chao Deng, Longbo Huang. Network topology optimization via deep reinforcement learning[J]. IEEE Transactions on Communications, 2023.

Accepted Papers

· Zhuoran Li, Hai Zhong, Xun Wang, Qingxin Xia, Lihua Zhang, Longbo Huang. Diffusing to Coordinate: Efficient Online Multi-Agent Diffusion Policies[C]. ICML, 2026.

· Hai Zhong, Xun Wang, Zhuoran Li, Longbo Huang. Reparameterization Proximal Policy Optimization[C]. ICML, 2026.

· Hai Zhong, Zhuoran Li, Xun Wang, Longbo Huang. Reparameterization Flow Policy Optimization[C]. ICML, 2026.

· Ruishuo Chen, Yu Chen, Zhuoran Li, Longbo Huang. PowerFlow: Unlocking the Dual Nature of LLMs via Principled Distribution Matching[C]. ICML, 2026.

· Ruishuo Chen, Xun Wang, Rui Hu, Zhuoran Li, Longbo Huang. Beyond the Proxy: Trajectory-Distilled Guidance for Offline GFlowNet Training[C]. ICML, 2026.

· Zhuoran Li, Ling Pan, Jiatai Huang, Longbo Huang. Improving Generalization and Data Efficiency with Diffusion in Offline Multi-agent RL[J]. Transactions on Machine Learning Research, 2026.

· Zhuoran Li, Ruishuo Chen, Hai Zhong, Longbo Huang. Offline Diffusion Policy for Multi-User Delay-Constrained Scheduling[J]. IEEE Transactions on Mobile Computing, 2026.

· Zhuoran Li, Xun Wang, Hai Zhong, Qingxin Xia, Lihua Zhang, Longbo Huang. OM2P: Offline Multi-Agent Mean-Flow Policy[C]. AAMAS, 2026.

· Xun Wang†, Zhuoran Li†, Longbo Huang. Beyond Static Populations: Efficient Delay-Constrained Scheduling for Dynamic Users via Deep Reinforcement Learning[C]. MobiHoc, 2025. († means Co-first authors)

· Rui Hu, Yifan Zhang, Zhuoran Li, Longbo Huang. Beyond Squared Error: Exploring Loss Design for Enhanced Training of Generative Flow Networks[C]. ICLR, 2025. (Spotlight, 5.1% of the submitted paper)

· Hai Zhong, Xun Wang, Zhuoran Li, Longbo Huang. Offline-to-Online Multi-Agent Reinforcement Learning with Offline Value Function Memory and Sequential Exploration[C]. AAMAS, 2025.

· Pihe Hu, Shaolong Li, Zhuoran Li, Ling Pan, Longbo Huang. Value-Based Deep Multi-Agent Reinforcement Learning with Dynamic Sparse Training[C]. NeurIPS, 2024.

· Qingsong Liu, Zhuoran Li, Zhixuan Fang. Smoothed Online Decision Making in Communication: Algorithms and Applications[J]. IEEE Transactions on Networking, 2024.

· Zhuoran Li, Pihe Hu, Longbo Huang. Offline Learning-based Multi-User Delay-Constrained Scheduling[C]. 2024 IEEE 21st International Conference on Mobile Ad-Hoc and Smart Systems (MASS).

· Zhuoran Li, Xing Wang, Ling Pan, Lin Zhu, Zhendong Wang, Junlan Feng, Chao Deng, Longbo Huang. Network topology optimization via deep reinforcement learning[J]. IEEE Transactions on Communications, 2023.

· Qingsong Liu, Zhuoran Li, Zhixuan Fang. Online convex optimization with switching costs: Algorithms and performance[C]. 2022 20th International Symposium on Modeling and Optimization in Mobile, Ad hoc, and Wireless Networks (WiOpt). IEEE, 2022: 1-8.

Submitting Papers

· Xun Wang, Zhuoran Li, Yanshan Lin, Hai Zhong, Longbo Huang. From Solo to Symphony: Orchestrating Multi-Agent Collaboration with Single-Agent Demos[J]. arXiv preprint arXiv:2511.02762, 2025.

· Xun Wang†, Zhuoran Li†, Hai Zhong, Longbo Huang. Few is More: Task-Efficient Skill-Discovery for Multi-Task Offline Multi-Agent Reinforcement Learning[J]. arXiv preprint arXiv:2502.08985, 2025. († means Co-first authors)

INTERNSHIP AND OTHER PROJECTS

Unsupervised monocular depth estimation

Jul.2019 - Sep.2019 *Summer Intern in Megvii*

· Real-time relative depth estimation in the paper "Digging into Self-Supervised Monocular Depth Prediction".

Certified robustness radius analysis

Nov.2019 - Jun.2020 *Bachelor's thesis*

· Theoretical analysis about the influence of certified robustness radius in adversarial learning.

Distributed online convex optimization via projection-free algorithms in time-varying network

Feb.2021 - Feb.2022

· Utilize approximate projection method in distributed environment to achieve a sublinear static regret and dynamic regret.

Low Precision Multi-agent Reinforcement Learning
May.2022 - Sep.2022

Offline Reinforcement Learning for Human Feedback in Large Language Models
May.2023 - Sep.2024

Consistency Policy in Offline Multi-agent Reinforcement Learning
Jan.2024 - Mar.2024

Improved Techniques in Sketch Graph Neural Networks
Jan.2024 - Mar.2024

Reinforcement Learning for Recommendation Systems

Nov.2025 - Now *Intern in ByteDance Inc.*

· Reinforcement Learning for Advertisement Recommendation.
· Generative Model Post-training using Reinforcement Learning.

SERVICE

Conference Reviewer:

NeurIPS 2024, 2025

CVPR 2026

ECCV 2026

ICLR 2024, 2025, 2026

ICML 2025, 2026

AAAI 2025

AISTATS 2022

AAMAS 2023

MM 2025, 2026 (including DB track)

KDD AI4Sciences Track, 2026

ACL ARR, 2025 May, 2026 January

Journal Reviewer

Pattern Recognition

Teaching Assistant:

2020-2021 Autumn Semester: Calculus (Undergraduate)

2020-2021 Spring Semester: Calculus (Undergraduate)

2021-2022 Spring Semester: Mathematics for Artificial Intelligence (Undergraduate, Instructor: Andrew Chi-Chih Yao)

2022-2023 Summer Semester: Algebra and Computation (Undergraduate)

2023-2024 Spring Semester: Stochastic Network Optimization (Graduate)

Other Activities:

2020-2025 Student Supervisor: IIIS, Yao Class, Tsinghua University

2022-2023 Vice President of Graduate Union: IIIS, Tsinghua University

2019-2020 Vice President of SAST EE: Electronic Engineering, Tsinghua University

HONORS AND AWARDS

Scholarship for National Encouragement, 2018,2019;

Scholarship for Outstanding Students, 2017;

Scholarship for Outstanding Students in Technological Innovation, 2018;

Scholarship for Outstanding Students in Social Work, 2018,2019,2021,2022;

Scholarship for Outstanding Students in Second-level, 2023,2024,2025;

Outstanding Prize (Highest award) in The Mathematics Contest in Modeling (MCM/ICM), 2018.

Outstanding Communist Youth League Member, Tsinghua University, 2022;

Outstanding Student Cadre, Tsinghua University, 2023.

Outstanding Undergraduate Counselor, Jiangnanxiang Award, Tsinghua University, 2025.

SKILLS

Programming tools: Python, C++, Matlab