

MINGYU CHEN

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EDUCATION

Boston University

Ph.D in Electrical & Computer Engineering

MA, US

Sept. 2022 -

Huazhong University of Science and Technology

B.S.E in Telecommunication

Hubei, China

Sept. 2017 - Jun. 2021

PUBLICATIONS

1. (**NeurIPS 2024**) Chen, M., Pacchiano, A., & Zhang, X. State-free Reinforcement Learning. In The Thirty-eighth Annual Conference on Neural Information Processing Systems.
2. (**CDC 2024**) Sun, Z., Chen, M., & Baillieul, J. Koopman-based Deep Learning for Nonlinear System Estimation. In 2024 IEEE 63st Conference on Decision and Control. IEEE.
3. (**TON 2024**) Gong, X., Chen, M., Li, D., & Cao, Y. Delay-Optimal Distributed Computation Offloading in Wireless Edge Networks. IEEE/ACM Transactions on Networking.
4. (**COLT 2024**) Chen, M., & Zhang, X. Scale-free Adversarial Reinforcement Learning, In The Thirty Sixth Annual Conference on Learning Theory. PMLR.
5. (**CDC 2022**) Chen, M., & Qin, J. Scheduling and Pricing Non-Preemptive Electric Loads: A Convex Approach. In 2022 IEEE 61st Conference on Decision and Control. IEEE. **Outstanding Student Paper Prize**
6. (**TMC 2022**) Chen, M., Gong, X., & Cao, Y. Delay-optimal distributed edge computation offloading with correlated computation and communication workloads. IEEE Transactions on Mobile Computing.
7. (**On arXiv**) Chen, M., & Zhang, X. Improved Algorithms for Adversarial Bandits with Unbounded Losses.

In-submission projects

8. M.CHEN, Y.CHEN, W.SUN and X.ZHANG “Avoiding $\exp(R_{\max})$ scaling in RLHF through Preference-based Exploration”.

RESEARCH EXPERIENCE

Boston University

Research Assistant to Prof. Xuezhou Zhang

MA, USA

Sep. 2022 – Present

- **Scale-free MAB and RL:** Proposed a new scale-free algorithm for multi-armed bandits/Reinforcement learning. Improved previous understanding of the reward/loss scale in interactive decision making process [4, 7].
- **Parameter-free RL:** Developed RL algorithms that operate without requiring prior state space information of the environment. The first step to design RL algorithms that require no hyper-parameter tuning [1].
- **Exploration in RLHF:** Designed a new algorithm for online exploration in RLHF. First practical and provably sample-efficient online exploration algorithm for RLHF with large reward margin [8].

Purdue University

Research Assistant to Prof. Junjie QIN

Indiana, USA

Feb. 2021 – Sep. 2022

- **Scheduling and Pricing for Electric Loads:** Proposed a relaxation-based algorithm for the jobs scheduling problem for the landscape of electricity industry. Proposed a pricing mechanism that incentivizes jobs to report their true parameters and follow the instructions of the market [5].

PROFESSIONAL SERVICE

Conference Reviewer for:

- Neural Information Processing Systems (NIPS) 2023-2024;
- International Conference on Learning Representations (ICLR) 2024-2025.
- International Conference on Machine Learning (ICML) 2024-2025

AWARDS

- Boston University Dean’s Fellowships.
- IEEE 2023 Energy Systems TC Outstanding Student Paper Prize.