Yansong Li
Curriculum Vitae

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RESEARCH INTERESTS

Reinforcement Learning; Learning Theory; Game Theory; Optimization and Control

EDUCATION

Ph.D. in Department of Electrical and Computer Engineering 06/2025
University of Illinois Chicago, Chicago, IL
Advisor: Shuo Han
Thesis: *TBD*

Bachelor in Department of Mathematics 07/2020
Southern University of Science and Technology, Shenzhen, China

PUBLICATIONS

Preprints

[1] Yansong Li, Zeyu Dong, and Shuo Han, "Bayes-Optimal, Robust, and Distributionally Robust Policies for Uncertain MDPs," Oct. 2024. DOI: 10.25417/uic.27138990.v1.

[2] Yansong Li, Zeyu Dong, and Shuo Han, "Removing Redundant Partner Policies May Be Unnecessary for Ad Hoc Teamwork," Oct. 2024. DOI: 10.25417/uic.27139116.v1.

Peer-Reviewed Conference Publications

[1] Zeyu Dong, Yimin Zhu, Yansong Li, Kevin Mahon, and Yu Sun, "Generalizing end-to-end autonomous driving in real-world environments using zero-shot LLMs," in *8th Annual Conference on Robot Learning*, 2024.

[2] Yansong Li and Shuo Han, "Efficient collaboration with unknown agents: Ignoring similar agents without checking similarity," in *Proceedings of the 23rd International Conference on Autonomous Agents and Multiagent Systems, AAMAS 2024, Auckland, New Zealand, May 6-10, 2024*, Mehdi Dastani, Jaime Simão Sichman, Natasha Alechina, and Virginia Dignum, Eds., International Foundation for Autonomous Agents and Multiagent Systems / ACM, 2024, pp. 2363–2365. DOI: 10.5555/3635637.3663161.

[3] Yansong Li and Shuo Han, "Solving strongly convex and smooth stackelberg games without modeling the follower," in *American Control Conference, ACC 2023, San Diego, CA, USA, May 31 - June 2, 2023*, IEEE, 2023, pp. 2332–2337. DOI: 10.23919/ACC55779.2023.10156010.

[4]   Yansong Li and Shuo Han, "Accelerating model-free policy optimization using model-based gradient: A composite optimization perspective," in *Learning for Dynamics and Control Conference, L4DC 2022, 23-24 June 2022, Stanford University, Stanford, CA, USA*, Roya Firoozi, Negar Mehr, Esen Yel, Rika Antonova, Jeannette Bohg, Mac Schwager, and Mykel J. Kochenderfer, Eds., ser. Proceedings of Machine Learning Research, vol. 168, PMLR, 2022, pp. 304–315.

CONTRIBUTIONS TO OPEN SOURCE PROJECTS

1. Contributor to `TeXmacs/Mogan`: A WYSIWYG editor that can type equations 10 times faster than LaTeX. See "A quick tour of TeXmacs" for a 3 mins short introduction.

2. Main Developer of `Goldfish Scheme`: A `Scheme` compiler based on `S7 Scheme` and `C++`. This compiler matches the speed and simplicity of `S7 Scheme` while offering improved support for the Microsoft Windows system. In `Goldfish Scheme`, we have implemented the complete set of features from R7RS and included many functionalities inspired by the `Python` standard library. `Goldfish Scheme` will be the foundation for `TeXmacs/Mogan` in the future.

TEACHING EXPERIENCE

Southern University of Science and Technology:
MA213-16   Calculus I (Tutorial, Fall 2020)
MA101B   Mathematical Analysis (Tutorial, Spring 2019)

PROFESSIONAL SERVICE

Reviewer

Conferences
International Conference on Learning Representations (ICLR)
IEEE Conference on Decision and Control (CDC)

INVITED TALKS

1. "Bayes-Optimal, Robust, and Distributionally Robust Policies for Uncertain MDPs", RINGS informal seminar, Rutgers University-New Brunswick, 08/2024.

2. "Efficient Collaboration with Unknown Agents: Ignoring Similar Agents without Checking Similarity", Digital Economy Lecture, Beijing Normal University & Hong Kong Baptist University United International College, 10/2023.

3. "Solving Strongly Convex and Smooth Stackelberg Games Without Modeling the Follower", 2023 American Control Conference, San Diego, 06/2023.