

Xinxiang Guo

PH.D. STUDENT IN SYSTEMS THEORY · RESEARCHER IN GAME THEORY AND OPTIMIZATION

Haidian District, Beijing, China

☎ +86 152 6352 4208 | ✉ guoxinxiang@amss.ac.cn | 🏠 xinxiang-guo.github.io/ | 🎓 Xinxiang Guo

Education

University of Chinese Academy of Sciences

PH.D. IN SYSTEMS THEORY, MATHEMATICS, ADVISED BY PROF. YIFEN MU

Sep 2023 – Jun 2026

Beijing

National University of Singapore

EXCHANGE RESEARCH STUDENT IN ECONOMICS, VISITING PROF. YINGKAI LI

Jul 2025 – Jan 2026

Singapore

University of Chinese Academy of Sciences

M.S. IN COMPUTATIONAL MATHEMATICS, MATHEMATICS, ADVISED BY PROF. YIFEN MU

Sep 2020 – Jun 2023

Beijing

Jilin University

B.S. IN INFORMATION AND COMPUTING SCIENCE, MATHEMATICS, ADVISED BY PROF. RUI WANG

Sep 2016 – Jun 2020

Changchun, Jilin

Interests

My research interests lie at the intersection of game-theoretic learning, optimization theory, and algorithmic game theory. I focus on the asymptotic behavior of learning dynamics in two-player zero-sum games, particularly under heterogeneous or alternating update schemes.

I am also interested in the problem of opponent exploitation in repeated games, as well as the theory and applications of mean-field games and auction mechanisms.

Publications

- **Guo X**, Mu Y, Yang X. Periodicity in hedge-myopic system and an asymmetric NE-solving paradigm for two-player zero-sum games. *Dynamic Games and Applications*, 2025
- **Guo X**, Mu Y, Yang X. Periodicity in dynamical games driven by Hedge and myopic best response. *CDC 2024*
- **Guo X**, Mu Y. Regularized minimax-V learning in markov games. *FAW 2025*
- **Guo X**, Mu Y. Taking myopic best response against Hedge. *CCC 2023*
- **Guo X**, Mu Y. DTHBR: An asymmetric NE-solving paradigm. *CCC 2025* (Accepted)
- **Guo X**, Mu Y. Optimal strategy against Hedge. *arXiv:2312.09472*, 2023.
- **Guo X**, Zhang J et al. Last-iterate convergence via alternating dynamics. *NeurIPS 2025* (Submitted)
- Zhang J, **Guo X** (Co-first Author) et al. Heterogeneous learning in time-varying games. *AAAI 2026* (Submitted)

Conferences

- IEEE CDC 2024, Milano, Dec 2024
- GAMES 2024, Beijing
- ICM 2022 "Game Theory and Applications", Online
- Chinese Control Conference 2024, 2023, 2022

Honors & Awards

- UCAS Outstanding Student: 2021, 2023, 2025
- National Scholarship for Master Students: Sep 2022