CHENGRUI QU

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RESEARCH INTERESTS

- Theoretical Foundations of Decision-Making
- Multi-Agent Systems
- Reasoning Abilities of Large Language Models

EDUCATION

- **California Institute of Technology** *Sep. 2025 - Jun. 2030(expected)*
  PhD student at Computing+Mathematical Sciences Pasadena, CA, USA
  ◦ Advisor: Prof. Adam Wierman, Prof. Eric Mazumdar
- **California Institute of Technology** *Jun. 2024 - Sep. 2024*
  Summer Undergraduate Research Fellowships (SURF) Pasadena, CA, USA
  ◦ Advisor: Prof. Adam Wierman
- **Peking University** *Sep. 2021 - Jul. 2025*
  Major: Theoretical and Applied Mechanics (Applied Mathematics) Beijing, China
  ◦ B.Sc. (Honors), **Rank: 1/39**

PUBLICATIONS & PREPRINTS

- **C. Qu**, L. Shi, K. Panaganti, P. You, and A. Wierman. Hybrid Transfer Reinforcement Learning: Provable Sample Efficiency from Shifted-Dynamics Data, AISTATS 2025 (**Oral, top 2%**)
- K. Mukhi, **C. Qu**, P. You, and A. Abate. Robust Aggregation of Electric Vehicle Flexibility, ACM HSCC 2025 (**Best Poster Award** in DTU PES Summer School 2024)
- **C. Qu**, H. Jia and P. You. Decision-Dependent Distributionally Robust Optimization with Application to Dynamic Pricing, IEEE CDC 2025
- Y. As, **C. Qu**, B. Unger, D. Kang, M. Hart, L. Shi, S. Coros, A. Wierman and A. Krause. SPiDR: A Simple Approach for Zero-Shot Safety in Sim-to-Real Transfer, NeurIPS 2025
- **C. Qu**, K. Panaganti, C. Yeh, and A. Wierman. Distributionally Robust Cooperative Multi-Agent Reinforcement Learning via Robust Value Factorization. In Submission to ICLR 2026

ONGOING PROJECTS

- **Co-Training for Multi-Agent Large Language Model Systems** *2025*
  ***Instructors**: Prof. Laixi Shi, JHU; **Advisor**: Prof. Eric Mazumdar, Caltech*
  ◦ Designed a co-training framework for multi-agent large language model systems.

TEACHING EXPERIENCES

- **Principle of Economics (English taught)** *Spring 2024*
  TA, National School of Development, Peking University
- **International Trade (English taught)** *Spring 2024*
  TA, National School of Development, Peking University
- **Reinforcement Learning Reading Group** *Fall 2023-Spring 2024*
  Co-organizer, Peking University
- **Power System Reading Group** *Fall 2023-Spring 2024*
  Co-organizer, Peking University
- **Financial Economics Reading Group** *Summer 2022*
  Co-organizer, Peking University

HONORS AND AWARDS

- **Outstanding Graduate of Peking University** *2025*
- **Li Yanhong Scholarship (Top undergraduate student award)** *2024*
- **NSFC 1st Youth Student Basic Research Grant** *2023*
- **National Scholarship (Top undergraduate student award)** *2023*
- **Pacemaker to Merit Student, Peking University** *2023*
- **The First Prize in 14th National Zhou Peiyuan Mechanics Competition (Top 0.3%)** *2023*
- **Merit Student, Peking University** *2022*
- **The First Prize in 37th Chinese Physics Olympiad (Jiangsu Province)** *2020*
- **The First Prize in 34th Chinese Chemistry Olympiad (Jiangsu Province)** *2020*
- **The First Prize in 36th Chinese Maths Olympiad (Jiangsu Province)** *2020*

PROFESSIONAL SKILLS

Programming Skills: C++, Python, MATLAB, CUDA, Shell
Leadership: President of the Jiangsu Cultural Association, Peking University