

CHENGRUI QU

+1-626-648-7283 | cqu@caltech.edu | crqu.github.io

1200 E California Blvd, Pasadena, CA, 91125

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

- 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, 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%**)
- 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](#), ICLR 2026
- C. Qu, Y. Zhang, N. Lanzetti, and E. Mazumdar. [Training Generalizable Collaborative Agents via Strategic Risk Aversion](#). In submission to ICML 2026
- Y. Yang, C. Qu, M. Wen, L. Shi, Y. Wen, W. Zhang, A. Wierman, and S. Gu. [Understanding Agent Scaling in LLM-Based Multi-Agent Systems via Diversity](#). In submission to ICML 2026
- H. Zhao, C. Qu, and P. You. [Beyond Pessimism: Distributionally Optimistic Optimization for Learning under Adversarial Contamination](#). In submission to ICML 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.
 - Developed a multi-agent co-training pipeline based on verl.

TEACHING EXPERIENCES

- **Principle of Economics** Spring 2024
TA, National School of Development, Peking University
- **International Trade** Spring 2024
TA, National School of Development, Peking University
- **Reinforcement Learning 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