CHENDI QU

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EDUCATION

Ph.D., Shanghai Jiao Tong University *2021.9 - present*
Department of Automation ◇ Advised by Prof. Jianping He

B.E., Tsinghua University *2017.9 - 2021.6*
Department of Automation ◇ Advised by Prof. Yilin Mo

RESEARCH INTEREST

I focus on optimal control, optimization, reinforcement learning and their intersections, with applications on robotics. My recent work studies the control intention inference and imitation from demonstration, including the inverse optimal control and inverse reinforcement learning.

SELECTED PUBLICATIONS (J=JOURNAL, C=CONFERENCE, S=SUBMITTED)

[J1] **C. Qu**, J. He and X. Duan, "Control Law Learning based on LQR Reconstruction with Inverse Optimal Control", **IEEE Transactions on Automatic Control (TAC)**, 2024.

[J2] **C. Qu**, J. He, J. Li, X. Duan and Y. Mo, "Optimal Control for Mobile Agents Considering State Unpredictability", **IEEE Transactions on Automatic Control (TAC)**, 2023.

[C3] **C. Qu**, J. He, X. Duan and J. Chen, "Inverse Reinforcement Learning with Unknown Reward Model based on Structural Risk Minimization", 2025 IEEE Conference on Decision and Control **(CDC)**, to appear.

[C4] **C. Qu**, J. He, X. Duan and S. Wu, "Control Input Inference of Mobile Agents under Unknown Objective", **IFAC** World Congress 2023, Yokohama, Japan, 2023.

[C5] **C. Qu**, J. He and J. Li, "Multi-period Optimal Control for Mobile Agents Considering State Unpredictability", IEEE VTC2022-Fall, London, UK, 2022.

[C6] **C. Qu**, J. He, J. Li, C. Fang and Y. Mo, "Moving Target Interception Considering Dynamic Environment", American Control Conference **(ACC)**, Atlanta, USA, 2022.

[S7] **C. Qu**, J. He and X. Duan, "3DIOC: Direct Data-Driven Inverse Optimal Control for LTI Systems", submitted to **Automatica**, under review.

[S8] **C. Qu**, J. He, J. Li and X. Duan, "Optimal Unpredictable Control for Linear Systems", submitted to **Automatica**, 2nd round review.

INTERNSHIP

Intern (Industry) - AgiBot *2025.9 - present*
Mentored by Dr. Jianlan Luo
- VLA post-training and RL fine-tuning on GO-1.

Visiting PhD - University of California, San Diego *2024.8 - 2024.11*
Advised by Prof. Yang Zheng
- Direct data-driven control and Koopman theory for nonlinear MPC.

Summer Research Intern - University of California, Berkeley *2020.6 - 2020.8*
Advised by Prof. Xiaolong Wang
- Multi-task reinforcement learning based on auxiliary task gradient.

TECHNICAL STRENGTHS

Programming: C/C++, C#, MATLAB, Python; **Others:** SQLite, ROS + Gazebo

SERVICE

- **Reviewer** for Automatica, IEEE TAC, TCNS, TASE, TVT, IROS 2024, ACC 2025, CDC 2025.
- **Teaching Assistant** - Control Theory, Shanghai Jiao Tong University *2021.9 - 2025.6*

AWARDS

2024 IEEE CSS Graduate Collaboration Fellowship Award (top 10 worldwide), 2024 SJTU Zhengyang SEIEE Scholarship (4 PhDs/year)