JIAWEI TANG

https://garyandtang.github.io/

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EDUCATION

- **The Hong Kong University of Science and Technology** *Supervisor: Prof. Ling Shi*
  PhD in Electronic & Computer Engineering *Sept. 2022 – present*

- **The Hong Kong University of Science and Technology** *Supervisor: Prof. Ling Shi*
  MPhil in Electronic & Computer Engineering *Sept. 2019 – Aug. 2021*

- **The Hong Kong Polytechnic University** *Supervisor: Prof. Kenneth Lam*
  BEng(Hons) in Electronic & Information Engineering *Sept. 2014 – Aug. 2019*

RESEARCH INTERESTS

- Numerical methods on trajectory optimization and optimal control, learning-based control, MPC.

EXPERIENCE

- **Noah's Ark Lab, Huawei** Hong Kong
  Research Intern *Jun. 2023 - Present*
  - **Robotic Learning**: Developing learning-based planning and control system for dexterous manipulation.
- **Autonomous Driving Solution, Huawei** Shanghai
  Software Engineer *Oct. 2021 - Aug. 2022*
  - **Navigation System**: Served as a C++ software and contributed to Huawei's self-developed navigation engine.
- **The Robotics Institute Carnegie Mellon University** Pittsburgh
  Research Intern *Jun. 2018 - Aug. 2018*
  - **Robotic Perception**: Built an automatic extrinsic calibration system of a camera and a 3D LiDAR.
- **ASM Pacific Technology** Hong Kong
  Hardware Intern *Jun. 2018 - Aug. 2018*
  - **Power electronics**: Worked on digital-controlled driver testing and performance simulation.

PUBLICATIONS

- **[M2]**: **Jiawei Tang**, Yuxing Zhong, Nachuan Yang, Jiming Chen, Ling Shi, "Consistent Direct Collocation Methods for Continuous-Time Trajectory Optimization." Submitted to *IEEE 62nd Conference on Decision and Control*.
- **[M1]**: Nachuan Yang, Yuzhe Li, **Jiawei Tang**, Guodong Shi, Ling Shi, "Log-Barrier Search for Structural Linear Quadratic Regulators." Submitted to *IEEE Transactions on Automatic Control(TAC)*.
- **[J2]**: Yuxing Zhong, **Jiawei Tang**, Nachuan Yang, Dawei Shi, Ling Shi, "Event-triggered Sensor Scheduling for Remote State Estimation with Error-Detecting Code." *IEEE Control Systems Letters (L-CSS)*.
- **[J1]**: Nachuan Yang, **Jiawei Tang**, Yik Ben Wong, Yuzhe Li, Ling Shi, "Linear Quadratic Control of Positive Systems: A Projection-Based Approach." *IEEE Transactions on Automatic Control(TAC)*.
- **[C3]**: **Jiawei Tang**, Yik Ben Wong, Zhengyu Fu, Nachuan Yang, Sil Kwong Tse, Winnie Leung, Ling Shi, "Motion Planning for Mobile Robots with Noise: A Probabilistic MPC Approach." *IEEE 13th Asian Control Conference*, 2022.
- **[C2]**: Nachuan Yang, **Jiawei Tang**, Yuzhe Li, Ling Shi, "LQR Design for Discrete-Time Positive Systems: A First-Order Method." *IEEE 61st Conference on Decision and Control*, 2022.
- **[C1]**: Sil Kwong Tse, Yik Ben Wong, **Jiawei Tang**, Peihu Duan, Suk Wai Winnie Leung, Ling Shi, "Relative State Formation-based Warehouse Multi-robot Collaborative Parcel Moving", *ICPS* 2021.

PROJECTS

- **Advanced motion control algorithms for UGV high-accuracy trajectory following**: Sept. 2022 - Feb. 2023
- **ROS-based multi-robot system [Team organization]**: Jan. 2021 - Jul. 2021
- **Perception, Planning, and Control for Quadrotor [code]**: Feb. 2021 - May. 2021
- **Learning-based low-resolution face recognition [code]**: Sept. 2018 - May. 2019

SKILLS

- **Programming**: C++, Python, MATLAB, LaTeX **Others**: Pytorch, ROS, Git, Arduino, Spice