JIAWEI TANG

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EDUCATION

The Hong Kong University of Science and Technology; GPA: 4.0/4.3 2019.9 - 2021.8

Master of Philosophy in Electronic & Computer Engineering *Supervisor:* ***Prof. Ling Shi***

The Hong Kong Polytechnic University; GPA: 3.56/4.0 2014.9 - 2019.6

BEng(Hons) in Electronic & Information Engineering

POSITION INTERESTS

- Robotics , Control(State Estimation and Optimal Control), Computer Vision, Reinforcement Learning

RESEARCH AND WORKING EXPERIENCE

Research Assistant at HKUST, *Supervisor:* ***Prof. Ling Shi*** 2019.9-present

- **Multi-robot Testbed for Cyber-Physical System**
  - Built the physical multi-robot testbed from scratch, including control, localization and state estimation.
  - Developed a ROS-based multi-robot digital twin system via Gazebo and RVIZ.
  - (In progress) Research on EKF-based LQG Desgin for Mobile Robots with Average-cost Constraints.
- **State Estimation and Optimal Control in Networked Control System**
  - Research on projection-based linear quadratic control for positive system (Paper submitted to TAC).
  - (In progress) Research on gradient-based sparse Kalman filter (Paper in revising).

Research Intern at RI, CMU, *Supervisor* ***Prof. Michael Kaess*** 2018.6-2018.8

- **Automatic Extrinsic Calibration System of a Camera and a 3D LiDAR**
  - Developed an efficient extrinsic calibration toolbox for camera and 3D LiDAR with a user-friendly GUI.
  - Improved the calibration accuracy and system robustness.

Capstone Project Student at PolyU, *Supervisor* ***Prof. Kenneth Lam*** 2018.9-2019.5

- **Low Resolution Face Recognition**
  - Addressed the low-resolution face recognition with conventional method and deep-learning method.
  - Conventional method: match the LR images with HR images using multidimensional scaling.
  - DL method: guide the LR images' training with the feature difference between HR and LR images.
  - Developed a web-based demonstration system with Flask, HTML, Javascript and CSS.

Power Electronics Intern at ASM Pacific Technology 2017.6-2018.5

- **Project 1**: Designed feed-forward & PID control algorithm for digital controlled laser diode driver.
- **Project 2**: Simulated the performance of capacitance sensor in measuring the liquid height with MATLAB.
- **Project 3**: Developed a metal length measurement system with ADI ultrasonic sensor.

ACTIVITIES

- Co-funder of Bright Building Project, voluntary service in Ya'an, China 2017.9 - 2018.9
- Team leader of Technology for Development,voluntary services in Phnom Penh, Cambodia 2015.1 - 2017.7

AWARD & SCHOLARSHIP

- Postgraduate Studentship, HKUST 2019.9-2021.8
- UG Summer Research Abroad Sponsorship, PolyU 2018.6
- Mingxi Outstanding Youth Award 2017.11
- HKSAR Government Scholarship Fund - Reaching Out Award 2016.6
- Best Sem GPA Award; Dean's List; Student Hall Scholarship ; ISAS Outreaching Award

SKILLS

- **Programming**: C++, Python, MATLAB, Java, HTML, JavaScript, LaTeX
- **Others**: Pytorch, ROS, Git, Arduino, Spice, PCB Fabrication