Kunyi Zhang

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Room 303, Institute of Cyber-system and Control, Zhejiang University, Hangzhou, China.

Education

Zhejiang University — Hangzhou, China

Ph.D. — *Electronic Information (Tutor: Fei Gao)* — 2020.4 - present

M.Eng. — *Control Science and Engineering (Tutor: Chao Xu)* — 2017.9 - 2020.3

East China University of Science and Technology — Shanghai, China

B.Eng. — *Mechanical Engineering* — 2012.9 - 2016.7

B.Sc. — *Applied Mathematics* — 2013.3 - 2016.7

Publications

- **Kunyi Zhang**, Chenxing Jiang, Sheng Yang, Teng Ma, Shaojie Shen, Chao Xu, Fei Gao, **WING: Wheel-Inertial-Neural Odometry with Ground Manifold Constraints**. Submitted to *IEEE International Conference on Robotics and Automation (ICRA), 2023*. [Paper | Video]
- **Kunyi Zhang**, Chenxing Jiang, Jinghang Li, Sheng Yang, Teng Ma, Chao Xu, Fei Gao, **DIDO: Deep Inertial Quadrotor Dynamical Odometry**. Published by *IEEE Robotics and Automation Letters (RA-L), 2022*. [Paper | Video | Code]
- **Kunyi Zhang**, Tiankai Yang, Ziming Ding, Sheng Yang, Teng Ma, Mingyang Li, Chao Xu, Fei Gao, **The Visual-Inertial- Dynamical Multirotor Dataset**. Published by *International Conference on Robotics and Automation (ICRA), 2022*. [Paper | Video | Code]
- Ziming Ding, Tiankai Yang, **Kunyi Zhang**, Chao Xu, Fei Gao, **VID-Fusion: Robust Visual-Inertial-Dynamics Odometry for Accurate External Force Estimation**. Published by *International Conference on Robotics and Automation (ICRA), 2021*. [Paper | Video | Code]

Internship

Alibaba DAMO Academy — Hangzhou, China

Localization and mapping group — *Autonomous Driving Lab* — 2022.1 - present

Projects

• Visual inertial odometry based on quadrotor dynamics	Leader	2020.4 - 2021.9
• State grid UAV long range power inspection solution	Member	2018.10 - 2020.6
• International aerial robotics competition	Member	2017.7 - 2018.8
• Fast target recognition and tracking technology for UAV	Member	2021.3 - 2021.6

Awards

- First Prize in the 2017 International Aerial Robot Competition;
- First Prize & Champion in the 2018 International Aerial Robot Competition;
- Second Prize in the 2018 "Huawei Cup" Graduate Mathematical Modeling Competition;
- Scholarship for the 2017-2018 academic year.

Skills

- Familiar with common Robotics development tools and environments such as C/C++, Python, ROS, Git, Linux, MATLAB, Python, and Mathematica;
- Familiar with MSF, MSCKF, VINS-MONO, ORB-SLAM, LIO-SAM, and other SLAM frameworks;
- Familiar with basic classical control theory, numerical optimization method, and optimization theory;
- Familiar with CAD, Pro-E, and other computer-aided design software;
- Capable of reading and translating literature independently and writing professional English.