# Kunyi Zhang

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## Education

**Zhejiang University** — Hangzhou, China

*Ph.D.* — *Electronic Information (Tutor: Fei Gao)* — 2020.02 - 2023.09

*M.Eng.* — *Control Science and Engineering (Tutor: Chao Xu)* — 2017.09 - 2020.02

**East China University of Science and Technology** — Shanghai, China

*B.Eng.* — *Mechanical Engineering* — 2012.09 - 2016.07

*B.Sc.* — *Applied Mathematics* — 2013.03 - 2016.07

## 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* — 2022.01 - 2022.11

## Projects

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|---|---|---|
| • Visual inertial odometry based on quadrotor dynamics | Leader | 2020.04 - 2021.09 |
| • State grid UAV long range power inspection solution | Member | 2018.10 - 2020.06 |
| • International aerial robotics competition | Member | 2017.07 - 2018.08 |
| • Fast target recognition and tracking technology for UAV | Member | 2021.03 - 2021.06 |

## 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.