

Fangqiang Ding

Website: toytiny.github.io
Google Scholar: Fangqiang Ding

Email: F.Ding-1@sms.ed.ac.uk
Address: Edinburgh, United Kingdom

EDUCATION EXPERIENCE

- University of Edinburgh** Edinburgh, United Kingdom
 - Ph.D. Student - Robotics and Autonomous System* *September 2021 - June 2025 (Expected)*
 - Scholarship:** School of Informatics fully-funded CDT-RAS Scholarship
 - Research Topic:** 4D Radar Scene Understanding
 - Supervisor:** Dr. Chris Xiaoxuan Lu (Assistant Professor @ School of Informatics, University of Edinburgh)
- Tsinghua University** Beijing, China
 - Visiting Student - UAV Lab, Department of Automation* *August 2020 - September 2020*
 - Supervisor:** Dr. Geng Lu (Associate Professor @ Department of Automation, Tsinghua University)
- Tongji University** Shanghai, China
 - Bachelor of Engineering - Mechanical Engineering; GPA: 4.73 (2/130)* *September 2017 - July 2021*
 - Supervisor:** Dr. Changhong Fu (Associate Professor @ School of Mechanical Engineering, Tongji University)

RESEARCH INTEREST

- Past:** Visual Object Tracking, Image Processing, UAV Self-localization
- Present:** 4D Automotive Radar, Scene Flow Estimation, Object Detection & Tracking

RESEARCH PROJECTS

- 4D Automotive Radar Scene Perception** University of Edinburgh
 - Ph.D. Student* *September 2021 - Present*
 - Detail:** Develop robust spatial and motion perception algorithms based on emerging 4D Automotive radar.
 - Outcome:** One paper accepted by both IEEE RA-L and IROS'22.
- Real-Time and Robust UAV Tracker** Tongji University
 - Undergraduate Student* *May 2019 - January 2021*
 - Detail:** Present novel algorithms to solve task-specific issues in UAV object tracking, such as background distractor, object shape variance, darkness, temporal continuity, without sacrificing the real-time performance.
 - Outcome:** Papers published by top-tier robotics (IROS/ICRA) and computer vision conference (CVPR), and relevant journals (IEEE TMM/EAAI) and magazine (IEEE GRSM).
- Monocular UAV Indoor Self-Localization** Tsinghua University
 - Visiting Student* *August 2020 - September 2020*
 - Detail:** Apply visual tracker to UAV self-localization under air-ground robot coordination scenarios and design a benchmark for evaluation of different methods on proposed new task.
 - Outcome:** Paper published by relevant top-tier journal (IEEE TIE).

SELECTED PUBLICATIONS

- Fangqiang Ding**, Zhijun Pan, Yimin Deng, Jianning Deng, Chris Xiaoxuan Lu. *Self-Supervised Scene Flow Estimation with 4-D Automotive Radar* (RA-L & IROS'22) [link]
- Fangqiang Ding**, Changhong Fu, Yiming Li, Jin Jin and Chen Feng. *Automatic Failure Recovery and Re-Initialization for Online UAV Tracking with Joint Scale and Aspect Ratio Optimization* (IROS'20) [link]
- Changhong Fu, **Fangqiang Ding**, Yiming Li, Jin Jin and Chen Feng. *Learning Dynamic Regression with Automatic Distractor Repression for Real-Time UAV Tracking* (EAAI) [link]
- Yiming Li, Changhong Fu, **Fangqiang Ding**, Ziyuan Huang and Geng Lu. *AutoTrack: Towards High-Performance Visual Tracking for UAV with Automatic Spatio-Temporal Regularization* (CVPR'20) [link]
- Changhong Fu, Bowen Li, **Fangqiang Ding**, Fulin Li and Geng Lu. *Correlation Filter for Unmanned Aerial Vehicle-Based Aerial Tracking: A Review and Experimental Evaluation* (GRSM) [link]

HONORS AND AWARDS

- Grand Prize of the "Challenge Cup" Competition in Shanghai - June, 2021
- Shanghai Outstanding Graduate - May, 2021
- Academic Star in Tongji Univeristy - November, 2020
- National Scholarship - September, 2019
- National Scholarship - September, 2018
- First Prize of Tongji Mathematics Competition - June, 2018
- First Prize of Shanghai Graphics Innovation Design Competition - May, 2018

ACADEMIC SERVICE

- Reviewer:** IROS'20 & IROS'21 & IROS'22
- Teaching Assistant:**
 - Introduction to Vision and Robotics (2021-2022)* (University of Edinburgh)
 - Introduction to Mobile Robotics (2022-2023)* (University of Edinburgh)