



Chen FENG

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Ph.D. Candidate

Robotics & Deep Learning

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EDUCATION

•The Hong Kong University of Science and Technology

2021.09-Present

Ph.D. Candidate, Electronic and Computer Engineering

Supervisor: Prof. Shaojie SHEN

•Harbin Institute of Technology

2017.08-2021.06

Bachelor of Engineering, Mechatronics Engineering

Supervisor: Prof. Lijun ZHAO

EXPERIENCE

•Megvii Research

2021.05-2021.09

Research Intern

Beijing, China

– Trajectory Prediction & Lane Detection working with Hangning ZHOU and Dr. Chi ZHANG.

•Harbin Institute of Technology Competition Robotics Team (HITCRT)

2019.08-2020.08

Vice Captain

Harbin, China

– Robot Vision Technical Support & Achieved 2020 DJI RoboMaster National First Prize.

PUBLICATIONS

•FALCON: Fast Autonomous Aerial Exploration using Coverage Path Guidance

IEEE Transactions on Robotics (T-RO), 2024

– Yichen Zhang*, Xinyi Chen*, **Chen Feng**, Boyu Zhou, and Shaojie Shen

•FC-Hetero: Fast and Autonomous Aerial Reconstruction Using a LiDAR-Visual Heterogeneous Multi-UAV System

IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS), 2024 (Oral)

– Mingjie Zhang*, **Chen Feng***(co-first), Zengzhi Li, Guiyong Zheng, Yiming Luo, Zhu Wang, Jinni Zhou, Shaojie Shen, and Boyu Zhou

•OmniNxt: A Fully Open-source and Compact Aerial Robot with Omnidirectional Visual Perception

IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS), 2024 (Oral)

– Peize Liu, **Chen Feng**[†](corresponding author), Yang Xu, Yan Ning, Hao Xu[†], and Shaojie Shen

•MASSTAR: A Multi-Modal Large-Scale Scene Dataset with a Versatile Toolchain for Surface Prediction and Completion

Tech Report, 2024

– Guiyong Zheng*, Jinqi Jiang*, **Chen Feng***(co-first), Shaojie Shen, and Boyu Zhou

•FC-Planner: A Skeleton-guided Planning Framework for Fast Aerial Coverage of Complex 3D Scenes

IEEE International Conference on Robotics and Automation (ICRA), 2024 (Best Paper Award on UAV Finalists)

– **Chen Feng**, Haojia Li, Mingjie Zhang, Xinyi Chen, Boyu Zhou, and Shaojie Shen

•Star-Searcher: A Complete and Efficient Aerial System for Autonomous Target Search in Complex Unknown Environments

IEEE Robotics and Automation Letters (RA-L), 2024

– Yiming Luo, Zixuan Zhuang, Neng Pan, **Chen Feng**, Shaojie Shen, Fei Gao, Hui Cheng, and Boyu Zhou

•MacFormer: Map-Agent Coupled Transformer for Real-time and Robust Trajectory Prediction

IEEE Robotics and Automation Letters (RA-L), 2023

– **Chen Feng**, Hangning Zhou, Huadong Lin, Zhigang Zhang, Ziyao Xu, Chi Zhang, Boyu Zhou, and Shaojie Shen

•AutoTrans: A Complete Planning and Control Framework for Autonomous UAV Payload Transportation

IEEE Robotics and Automation Letters (RA-L), 2023

– Haojia Li, Haokun Wang, **Chen Feng**, Fei Gao, Boyu Zhou, and Shaojie Shen

•PredRecon: A Prediction-boosted Planning Framework for Fast and High-quality Autonomous Aerial Reconstruction

IEEE International Conference on Robotics and Automation (ICRA), 2023

– **Chen Feng**, Haojia Li, Fei Gao, Boyu Zhou, and Shaojie Shen

•TENET: Transformer Encoding Network for Effective Temporal Flow on Motion Prediction

IEEE/CVF Computer Vision and Pattern Recognition Conference Workshop on Autonomous Driving (CVPRW), 2022

– Yuting Wang*, Hangning Zhou*, Zhigang Zhang*, **Chen Feng**, Huadong Lin, Chaoifei Gao, Yizhi Tang, Zhenting Zhao, Shiyu Zhang, Jie Guo, Xuefeng Wang, Ziyao Xu, and Chi Zhang

TECHNICAL SKILLS

Languages: English (Fluent)/Chinese (Native)

Programming Tools: Python/C++/Matlab

Frameworks: PyTorch/MegEngine/ROS/Linux

SERVICE

- Reviewer:** ICRA, IROS, RA-L, CVPR
- Teaching Assistant:** ELEC1100 Introduction to Electro-Robot Design (HKUST 2023 Fall),
ELEC5660 Introduction to Aerial Robots (HKUST 2024 Spring)

SELECTED AWARDS

- ICRA 2024 Best UAV Paper Award Finalist** - IEEE *2024.05*
- Outstanding Graduate** - Harbin Institute of Technology *2021.06*
- ABU ROBOCON Robotics Competition First Prize** - Asia Broadcasting Union *2020.08*
- RoboMaster National First Prize** - DJI *2019.08 & 2020.08*
- Outstanding Student** - Harbin Institute of Technology *2018.12*
- National Scholarship** - Ministry of Education, PRC *2018.12*