



**Chen FENG**

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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 (HITCART)

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 (Conditionally accepted)

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

### •SOAR: Simultaneous Exploration and Photographing with Heterogeneous UAVs for Fast Autonomous Reconstruction

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<sup>†</sup>**(corresponding author), Yang Xu, Yan Ning, Hao Xu<sup>†</sup>, 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, Chaoqi 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, T-ITS
- Teaching Assistant: ELEC1100 Introduction to Electro-Robot Design (HKUST 2023 Fall), ELEC5660 Introduction to Aerial Robots (HKUST 2024 Spring)

TALKS

- Fast and Autonomous Aerial Coverage and Reconstruction of Large-scale Scenes - TechBeat 2024.06

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