Bo Liu

Phone: (+86) 1315-987-6808
Email: 17b904042@stu.hit.edu.cn

Address: No.92, West Dazhi Street, Nan Gang District, Harbin, China

哈爾濱工業大學
Harbin Institution of Technology

Personal Statement

I have studied in Harbin Institution of Technology (HIT) since 2013. In 2017, I obtained a Bachelor degree with a major in control science and engineering. Nowadays, I am pursuing a doctor's degree with research area of heterogeneous robot system dynamic task planning and control supervised by Prof. Changhong Wang. During this period, I participated in several research projects of the Ph.D. supervisor. While learning the core task planning and control architecture, I also improved my engineering ability and mastered important tools such as single smart UAV path planning algorithm, C++, Python, Robot Operating System (ROS). Recently, I am enthusiastic about the problems on dynamic task assignment and path planning which could be used in partially observable heterogeneous robots system.

English

✧ PETS5 ✧ CET-6

Research Skills

- **Interests:**
  Path planning (A*, JPS, RRT, MDP, minimum snap etc.), Optimization
  Robot Learning, Reinforcement Learning,
  UAV, Pixhawk Autopilot and MAVLink
- **Programming Languages:**
  C++, MATLAB, PYTHON
- **Tools/ Software:**
  Robot Operating System, Git, TensorFlow, Rviz

Educational Background

✧	2013.9-2017.7	Harbin Institution of Technology	Control Science and Engineering	Bachelor
✧	2017.9-now	Harbin Institution of Technology	Control Science and Engineering	Doctor

Awards (Recent Two Years)

★ Champion of Intelligent UAV Cluster System Competition (over 50 teams participated), 2018. (Team Leader)
★ Winning prize of the Global (China) MathWorks Minidorne Competitions for college students, 2019

Project Experience (Finished in Recent Two Years)

✓ **Development of UAV Collaborative cluster system in unknown environment.** I am responsible for targets assignment and path planning for UAVs. April 2018- July 2018
✓ **Parrot mini drone path recognition and tracking using Simulink.** I am the supervisor of the project and I am responsible for project design and control algorithms. September 2019- November 2019
✓ **Smart UAV landing on moving UGV platform.** I am responsible for project design and control algorithms, in cooperation with Zhaozhe Wang. June 2018- March 2019

Teaching

➢ **Teaching Assistant,** Motion Planning for Mobile Robotics, By Fei Gao (HKUST), Shenlanxueyuan, 2019.09-Present

Hobbies

✧ Model Airplane (2nd Prize of Aero Sports Federation of China)
✧ Running (PB for Half-Marathons: 2hours and 4minutes)
✧ Table-tennis and tennis