Yipeng PAN

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EDUCATION

China University of Mining and Technology (211)

Sep 2015 – Jul 2019

B.Eng. in Electronic Engineering

GPA: 85 / 100 (Top 15%, Recommended Admission to Postgraduate)

The University of Hong Kong

Sep 2023 – TBC.

Ph.D. in Computer Science (Robotics)

Supervisor: Dr. Jia Pan

Prof. Anthony G.O. Yeh (Academician, Chinese Academy of Sciences)

CAREER

HKUST iLab

Position: Research Assistant

Director: Prof. Weisheng Lu

Apr 2021 – Nov 2021

Nov 2022 – Mar 2023

HKUST HKCRC Dec 2021 – Oct 2022

Position: Research Assistant Director: Prof. Zexiang Li

HKU TransGP Apr 2023 – TBC.

Position: Research Assistant Director: Prof. Norman C. Tien

SKILLS

Coding: C / C++ / Java / Python

GUI: Qt (C++), Android (Java), IOS (Objective - C)

Cooperation: Git

Computer Vision: OpenCV, Halcon

Robotics: Linux Shell, ROS

Mechanics: AutoCAD, SolidWorks, 3D Printing

Electronics: Verilog HDL (FPGA), STM32 (HAL, STD), Arduino, PCB Layout (SMT)

Word: LaTeX. Markdown

AWARDS

Gold Award, Hong Kong ICT Awards (Smart Logistics)	2022
2 nd Prize, National Electronic Design Competition	2017
National Encouragement Scholarship, Ministry of Education	2018
Honorable Mentions, Mathematical Contest in Modeling	2018
1 st Prize, Provincial Electronic Design Competition	2017
2 nd Prize, Provincial Electronic Design Competition	2018

2 nd Prize, Postgraduate Electronic Design Competition	2019
School Excellent Graduation Design	2019
1 st Prize, School Electronic Design Competition	2019
Second Class Scholarship	2017

PROJECTS

SELECTED:

◆ Tracking Drone (Second Prize winner in National Electronic Design Competition)

The drone can autonomously take off, hover and land. It can also automatically track and follow a remote-control car (by learning to follow targets of different colors).

♦ i-Core (Funded by ITF2020 (ITP/029/20LP)

With the goal of improving the management of building processes and supply chains, the system will organize data collected from IMU, GPS, UWB, and other sensors into a specific format. Subsequently, this data will be uploaded to a universal platform integrating BIM, Blockchain, etc.

♦ LiDAR SLAM Synchronization Board (Start-up Project)

This board is designed to synchronize peripheral sensors, including LiDAR, IMU, cameras, and motor encoders, Consequently, to improve the effectiveness of LiDAR SLAM.

PS: Entire Portfolio & Demos: http://pyp1024.cf/

PUBLICATIONS

[1] Chen, Junjie & Lu, Weisheng & Pan, Yipeng & Fu, Yonglin. (2024). Building "RoboAvatar": Industry Foundation Classes–Based Digital Representation of Robots in the Built Environment. Journal of Computing in Civil Engineering.

[2] Lu, Liang, Yinqiang Zhang, Peng Zhou, Jiaming Qi, Yipeng Pan, Changhong Fu, and Jia Pan. "Semantics-Aware Receding Horizon Planner for Object-Centric Active Mapping." *IEEE Robotics and Automation Letters* (2024).

[3] Chen, Junjie & Fu, Yonglin & Lu, Weisheng & Pan, Yipeng. (2023). Augmented reality-enabled human-robot collaboration to balance construction waste sorting efficiency and occupational safety and health. Journal of environmental management.

[4] Lu, Weisheng & Chen, Junjie & Fu, Yonglin & Pan, Yipeng & Ghansah, Frank. (2023). Digital twin-enabled human-robot collaborative teaming towards sustainable and healthy built environments. Journal of Cleaner Production.