Rui Peng

PhD Candidate · Robotics Researcher

Haking Wong Building (LG02), The University of Hong Kong, Hong Kong

☐ (+852) 9074-5441 | ✉ pengrui-rio@connect.hku.hk | 🏠 pengrui-rio.github.io

Education

The University of Hong Kong (HKU)   *Hong Kong, China*
PhD in Mechanical Engineering   *Dec. 2020 - Present*

Wuhan University (WHU)   *Wuhan, China*
M.S. in Electronics and Communication Engineering   *Sep. 2018 - Jun. 2020*

Wuhan University (WHU)   *Wuhan, China*
B.S. in Control and Measurement Engineering   *Sep. 2014 - Jun. 2018*

Research & Work Experience

Adaptive Robotic Controls Lab (Leaded by Dr. Peng Lu)   *The University of Hong Kong, Hong Kong, China*

PhD Candidate   *Jul. 2020 - Present*
- [J] **R. Peng**, Y. Wang and P. Lu, "Flying Elephant Trunk: A dexterous and compliant aerial manipulator for complex cluttered and constrained environments," in Science Robotics (under review).
- [J] **R. Peng**, Y. Wang and P. Lu, "AeCoM: An Aerial Continuum Manipulator With IMU-Based Kinematic Modeling and Tendon-Slacking Prevention," in IEEE Transactions on Systems, Man, and Cybernetics: Systems, vol. 53, no. 8, pp. 4740-4752, Aug. 2023.
- [C] **R. Peng**, X. Chen and P. Lu, "A Motion De-Coupled Aerial Robotic Manipulator for Better Inspection", 2021 International Conference on Intelligent Robots and Systems (IROS).
- [C] **R. Peng** and P. Lu, "Fast Adaptive Complementary Filter for Quadrotor Attitude Estimation During Aggressive Maneuvers," 2021 International Conference on Unmanned Aircraft Systems (ICUAS).

Robotics and Machine Intelligence Lab (Leaded by Dr. David Navarro-Alarcon)   *The Hong Kong Polytechnic University, Hong Kong, China*

Research Assistant   *Jul. 2019 - Jun. 2020*
- [J] **R. Peng**, P. Zhou, M. Xu, V. W. Wu and D. Navarro-Alarcon, "Path Planning with Automatic Seam Extraction over Point Cloud Models for Robotic Arc Welding," in IEEE Robotics and Automation Letters (RA-L), vol. 6, no. 3, pp. 5002-5009, July 2021.
- [C] **R. Peng**, D. Navarro-Alarcon, V. Wu and W. Yang, "A Point Cloud-Based Method for Automatic Groove Detection and Trajectory Generation of Robotic Arc Welding Tasks," 2020 International Conference on Ubiquitous Robots (UR).

Signal Processing Lab (Leaded by Prof. Wen Yang)   *Wuhan University, Wuhan, China*

MSc Student   *Sep. 2017 - Jun. 2019*
- Development of a UAV-Detection Unmanned Vehicle.
- [J] Shijie Lin, Jinwang Wang, **Rui Peng**, Wen Yang. "Development of an Autonomous Unmanned Aerial Manipulator Based on a Real-Time Oriented-Object Detection Method[J]". Sensors, 2019, 19(10): 2396.

Sinnovation Ventures AI Institute   *Nanjing, China*

Internship   *Jan. 2019*
- Vision-based Simulation System for Autonomous Driving.

DJ-Innovations Company   *Shenzhen, China*

Robotics Software Engineer   *Oct. 2017 - Feb. 2018*
- Development of Manipulative Mobile Robots.

Texas-Instruments Electronics Lab   *Wuhan University, Wuhan, China*

BSc Student   *Oct. 2016 - Sep. 2017*
- Development of Versatile Robotic Control systems for 2017 National Undergraduate Electronics Design Contest.

(ABU) Robot Competition Base   *Wuhan University, Wuhan, China*

BSc Student   *Aug. 2015 - Sep. 2016*
- Development of Mobile Robots for 2016 ABU Robocon Contest.

Honors & Awards

Competition Awards

2019	**Province First Team Prize in Central China**, 14th National Postgraduate Electronics Design Contest	*Wuhan, China*
2018	**Finalist (Top 6th)**, ICRA 2018 DJI RoboMaster AI Challenge	*Brisbane, Australia*
2017	**Meritorious Winner (Top 8.88%)**, 2017 American Interdisciplinary Contest In Modeling	*Wuhan, China*
2017	**National First Prize in Control Group (National Top 10th)**, 2017 National Undergraduate Electronics Design Contest	*Wuhan, China*
2016	**National First Team Prize (China Division Top 8th)**, 15th National Undergraduate Robot Contest · ABU Robocon	*Wuhan, China*

Personal Honors

2020	**2020 Outstanding Postgraduate Student Certificate**,	*Wuhan, China*
2018	**2018 Outstanding Undergraduate Student Certificate**,	*Wuhan, China*
2018	**2018 Excellent Thesis of Bachelor's Degree**,	*Wuhan, China*
2017	**Recommended as a postgraduate student without examination in 2017 (master study started on Sep. 2018)**,	*Wuhan, China*

Skills

Programming	C, C++, Python
Robotics	UR manipulator, Continuum Robot, Multi-rotor, Mobile Robot
Others	Ubuntu, Keil, Altium Designer, ROS, OpenCV, PCL, Tensorflow, Pytorch, Inkscape, Veusz, Solidworks, Latex
Languages	Chinese, English, Japanese