CHEUNG Hiu Ching, Athena

Master of Philosophy
Aeronautical and Aviation Engineering
The Hong Kong Polytechnic University

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Education

- **The Hong Kong Polytechnic University (HKPolyU)** *2022-now*

Master of Philosophy (Passed Confirmation of Registration) CGPA: 3.48/4.30

- Thesis title: Design and Control of a Soft Aerial Vehicle for Conducting Aerial Grasping
- Supervised by Prof. Chih-yung WEN (AAE) and co-supervised by Dr Henry K. CHU (ME)
- affiliated with the MAV/UAV Lab (AIRo Lab)

- **The Hong Kong Polytechnic University** *2018-2022*

Bachelor of Engineering (Honours) in Mechanical Engineering GPA: 3.50/4.30

- Dean list (2019/2020)
- Computer Programming (C++): A+; Engineering Management: A; Engineering Design: A

Publication

- **H. C. Cheung**, C.-W. Chang, B. Jiang, C.-Y. Wen, and H. K. Chu, "A modular pneumatic soft gripper design for aerial grasping and landing," http://arxiv.org/abs/2311.00390 (preprint, submitted to ***IEEE RoboSoft 2024***)
- C.-W. Chang, L.-Y. Lo, **H. C. Cheung**, Y. Feng, A.-S. Yang, C.-Y. Wen, and W. Zhou, "Proactive guidance for accurate uav landing on a dynamic platform: A visual– inertial approach," ***Sensors***, vol. 22, no. 1, p. 404, 2022.

Awards and Scholarship

- **HKSAR Government Scholarship Fund - Endeavour Merit Award** *2018/19 - 2022/23*
- **The Hong Kong Jockey Club Scholarships – Undergraduate Scholarship**
  - The Hong Kong Jockey Club *2019/20 - 2021/22*
- **BEA Inspiring Student Scholarship**
  -Bank of East Asia *2019/20*
- **Best Engineering Design Award** The Robocon 2019 Hong Kong Contest
  - Hong Kong Science and Technology Parks Corporation *2019*
- **HKSAR Government Scholarship Fund - Talent Development Scholarship** *2018/19 -2019/20*
- **Two Champion; Four 1st Runner-up; Three 2nd Runner-up** International Robotic Olympic 2017
  - Hong Kong Robotic Olympic Association *2017*
- **(Senior Group) Second Prize; Best Design Award** Fun Science Competition 2017 "Stay right there"
  - Hong Kong Science Museum *2017*
- **Hong Kong Top 10 Outstanding Teens Award** Hong Kong Outstanding Teens Election
  - Hong Kong Playground Association *2016*

Work Experience

- **The Hong Kong Polytechnic University** *May 2023 - now*

Project Technical Assistant (Part-time) | Supervisor: Prof. Chih-yung WEN MAV/UAV Laboratory

– Has associated with the research project "Research Centre for Unmanned Autonomous Systems" (P0046487)
– Providing technical support for 3D printing
– Providing technical support for mechatronics design

- **Hong Kong Center for Construction Robotics** *Jan 2023 - Jun 2023*

Research Assistant (Part-time)

– Provided technical support for 3D printing
– Designed the mechanical structure of products and drawing the 3D CAD drawings

- **The Hong Kong Polytechnic University** *Sep 2022 - May 2023*

Project Assistant (Part-time) | Supervisor: Prof. Chih-yung WEN MAV/UAV Laboratory

– Had associated with the research project "Research Centre for Unmanned Autonomous Systems" (P0046487)
– Provided technical support for composite manufacturing (Carbon fiber airframes)
– Provided technical support for 3D printing

- **Hong Kong Center for Construction Robotics** *Jun 2022 - Aug 2022*

  Student Helper (Full-time)
  - Joined one of the existing start-up teams, which is focusing on construction robots
  - Designed the mechanical structure of products and drawing the 3D CAD drawings

- **The Hong Kong Polytechnic University** *Aug 2021 - May 2022*

  Student Assistant (Part-time) | Supervisor: Prof. Chih-yung WEN MAV/UAV Laboratory
  - Had associated with the research project "Trial: Development of Vertical Take-Off and Landing (VTOL) Unmanned Aerial Vehicle (UAV) for Air Quality Monitoring in Greater Bay Area" (K-ZPJU)
  - Provided technical support for 3D printing
  - Designed the mechanical structure of a movable landing platform for UAVs and controlled its movement with Arduino programming

- **The Hong Kong Polytechnic University** *Dec 2020 - Jul 2021*

  Student Assistant (Part-time and Full-time) | Supervisor: Dr Henry Kar Hang CHU Biomimetic Robotics Laboratory
  - Applied vision-based control for a robot arm (UR5)
  - Conducted system calibration to ensure precise control
  - Incorporated deep learning techniques, specifically Convolutional Neural Networks (CNN), for grasping random objects.

Technical Skills and Interests

Languages: English, Cantonese, Mandarin
CAD & CFD: AutoCAD, CorelDRAW, Fusion 360, SOLIDWORKS, Ansys Fluent
Programming language libraries & Frameworks: Arduino, C++, Python, ROS, OpenCV, ArduPilot, PX4, TensorFlow