



Hoang Minh Chung

Academic resume

EDUCATION

Nanyang Technological Singapore 2013 - 2017

First-class Honor – B.Eng. (Aerospace Engineering)

High school of Mathematics & Science 2009 - 2012

(National University of Singapore)

Distinction – (Honors in Mathematics & Physics)

RESEARCH

Research staff 2017 - Present

Nanyang Technological University

- Visual-inertial Simultaneous Localization & Mapping (VI-SLAM)
- Autonomous localization and navigation for UAV
- Mentor undergraduate students and guide final-year projects

URECA research student 2014 - 2017

Nanyang Technological University




- URECA is an NTU research program for First-class undergraduate
- *Best Poster Award* for EEE category, URECA 2017
- 2014-15:
 - Design, construct and test fly VTOL fixed-wing UAV
- 2015-16:
 - Implement 2D laser-based SLAM and navigation
 - Deployed on autonomous X8 multi-copter
- 2016-17:
 - Implement 2D laser-based SLAM and navigation
 - Deployed on autonomous X8 multi-copter

Student advanced research project (ARP) 2011 - 2012

NUS High School & Nanyang Technological University

- Investigating behaviors of bio-inspired corrugated airfoils
- Awarded *Research Commendation Award* by NUS High School
- Awarded *Merit* at Singapore Science & Engineering Fair

PUBLICATIONS

- Chen Wang, Minh-Chung Hoang, Lihua Xie and Junsong Yuan (2018) **Non-iterative RGB-D-inertial Odometry**. Submitted to IJRR. 
- Kexin G., Chung H.M., Thien-Minh N., Abdul Hanif Z, Lihua X., Rodney. T (2018) **Simultaneous Infrastructure-free Cooperative Relative Localization and Distributed Formation Control of UAVs**. Submitted to ICRA 2018 
- New T.H., Chan Y.X., Koh G.C., Chung H.M., and Shi. S (2013) **Effects of corrugated aerofoil surface features on flow separation control**. AIAA Journal doi.org/10.2514/1.J052398 

SCHOLARSHIP

A*STAR Young Researcher Attachment Program 2009 - 2012

OTHER ACADEMIC ACTIVITIES

- Singapore Underwater Robot Challenge (Supervisor) 2017
- Maritime RobotX Competition (Software team lead) 2016
- Singapore Amazing Flying Machine (Team leader) 2014 - 2016
- Thailand Autonomous UAV Challenge (Team leader) 2014
- AIAA Student Design-Build Fly (Team leader) 2013 - 2014
- Singapore Space Challenge (Team leader) 2011 - 2012

PERSONAL DETAILS

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RESEARCH AREAS

Computer Vision

- Localization & Mapping
- Place recognition
- Applied machine learning

Robotics

- Mobile robots
- Unmanned aerial vehicle
- Autonomous navigation

RELEVANT SKILLS

Computing

- C, C++, Python, Java
- Ubuntu Linux

Computer vision, Machine learning

- Visual-inertial SLAM algorithms
- OpenCV, TensorFlow

Robotics

- Robot Operating System (ROS)
- Pixhawk and Ardupilot
- Various robot hardware



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Non-academic supplementary

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SELECTED AWARDS / ACHIEVEMENTS

- | | |
|--|------------------|
| URECA Poster Competition | 2017 |
| Best poster award for EEE category | |
| Singapore Amazing Flying Machine | 2016 |
| Silver Medal (Autonomous Category) | |
| NUS High School Graduation | 2012 |
| Research Commendation Award
Leadership Commendation Award | |
| Singapore Space Challenge | 2011-2012 |
| 2011: Overall Champion
2012: Overall Champion & Best Creativity | |
| Singapore Science & Engineering Fair | 2011-2012 |
| 2011 & 2012: Merit Awards | |
| Singapore Physics Olympiad | 2012 |
| Bronze Medal | |
| Singapore Junior Physics Olympiad | 2010 |
| Silver Medal | |

INDUSTRIAL EXPERIENCES

- | | |
|---|-------------|
| Vector Aerospace Asia Pte. Ltd. | 2016 |
| Intern (Operation division) | |
| <ul style="list-style-type: none">Analyzing the process of repair and overhaul of engine Pratt & Whitney PW150ADesigned workflow and implemented VBA scripts to improve daily data managementImproved database management | |
| HOPE Technik Pte. Ltd. | 2015 |
| Intern (Unmanned vehicle division) | |
| <ul style="list-style-type: none">Maintained electrical and mechanical systems of unmanned special ground vehiclesMaintained and constructed wheeled robot chassis and autonomous quad-copter | |
| A*STAR Singapore | 2010 |
| Intern (Institute of Micro Electronics) | |
| <ul style="list-style-type: none">Studied and optimized fabrication process for electro-mechanical micro mirrors | |



SOCIAL ACTIVITIES

- | | |
|---|------------------|
| NTU Aerospace Society | 2014-2016 |
| 2014: Business manager
2015-16: Vice president | |
| NUS High School Badminton team | 2009-2012 |
| 2012: Team Captain | |