Hung Pham

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Education

2016–2019 **Ph.D. Robotics**, *NTU*, Singapore.

2011–2015 **Mechanical Engineering**, *NTU*, Singapore, *First class honours*.

Honnors and Awards

2011, 2013 NTU Mechanical Engineering Dean's List

2014 Winner of VTM Concept Design by Wincor Nixdorf

2011–2015 ASEAN undergraduate scholarship

2010 Silver Medal in Asian Physics Olympiad

Publications

Journal papers

J1, 2019 *Convex Controller Synthesis for Robot Contact*
Hung Pham, Quang-Cuong Pham
Accepted for publication at IEEE Robotics and Automation Letters.

J2, 2018 *A new approach to time-optimal path parameterization based on reachability analysis*
Hung Pham, Quang-Cuong Pham
IEEE Transactions on Robotics 34, Issue 3, June 2018.

J3, 2018 *Robotic manipulation of a rotating chain*
Hung Pham, Quang-Cuong Pham
IEEE Transactions on Robotics 34, Issue 1, Feb 2018.

J4, 2018 *Large-scale 3D printing by a team of mobile robots*
X. Zhang, M. Li, J.-H. Lim, Y. Weng, D. Tay, **Hung Pham**, Q.-C. Pham
Automation in Construction, vol. 95, 2018

Conference papers

C1, 2019 *Critically fast pick-and-place with suction cups*
Hung Pham, Quang-Cuong Pham
2019 IEEE International Conference on Robotics and Automation.

C2, 2018 *Time-Optimal Path Tracking via Reachability Analysis*
Hung Pham, Quang-Cuong Pham
2018 IEEE International Conference on Robotics and Automation.

C3, 2018 *Departure and Conflict Management in Multi-Robot Path Coordination*
Puttichai Lertkultanon, Yang Jingyi, **Hung Pham**, Quang-Cuong Pham
2018 IEEE International Conference on Robotics and Automation.

C4, 2017 *On the structure of the time-optimal path parameterization problem with third-order constraints*
Hung Pham, Quang-Cuong Pham
2017 IEEE International Conference on Robotics and Automation.

C5, 2016 *Robotic 3D-Printing for Building and Construction*
Hung Pham, Jian Hui Lim, Quang-Cuong Pham
International Conference on Progress in Additive Manufacturing

Experience

Professional services

Reviewer for 2019 IEEE International Conference on Robotics and Automation

Reviewer for IEEE Transaction of Robotics

Reviewer for IEEE Transactions on Control Systems Technology

Reviewer for IEEE Robotics & Automation Letters

Reviewer for 2018 IEEE/RSJ International Conference on Intelligent Robots and Systems

Reviewer for Mechanism and Machine Theory

Vocational

2019–present **Lead Robotics Engineer**, *Eureka Robotics*, Singapore.
Responsible for the design and development several major components of the Archimedes robot system including motion planning, force control and computer vision.

2015–2016 **Project Officer**, *NTU*, Singapore.
Responsible for conducting research and development in robotic motion planning.
Detailed achievements:
- Developed a robotic concrete 3D printing;
- Won second place in the Airbus Shopfloor Challenge Competition with CRI team.

Internships

2014–2015 **Engineer, Intern**, *Innovation Center*, Nanyang Technological University.
Designed mechanical layout for water-borne testing machines.

2014–2014 **Design Engineer, Intern**, *Dyson Singapore*.
Developed a component for a Dyson machine.
Utilized statistical methods to create a magnetic field analysis tool.

Skills

Software Engineering: Robotic development in Linux. Proficient with backend technologies such as Python, C++, ROS.

Robotics and Research: Expertise in time-optimal and robust robotic motion planning and control. Strong background in aplied mathematics (Linear Algebra, Optimization, Optimal Control) and Machine Learning.