Hien Bui

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Research Focus: Leveraging understanding of contact dynamics to explore data-efficient learning frameworks, including model-based reinforcement learning and imitation learning, for contact-rich robot manipulation tasks.

TECHNICAL SKILLS

Programming Languages: Python, C/C++
Robotics Software: Drake, Mujoco, ROS, OpenRAVE
Robots: Denso, Franka Panda, TriFinger
Developer Tools: Git, Linux, Docker, VS Code, IntelliJ
Libraries: Pytorch, JAX, NumPy, Matplotlib, CasADi

EDUCATION

University of Pennsylvania   Philadelphia, PA
Ph.D. Student in Robotics at GRASP Lab   Aug. 2021 – Present
Advisor: Michael Posa

Nanyang Technological University   Singapore
Bachelor's Degree in Mechanical Engineering with Highest Distinction   Aug. 2014 – May 2018

PUBLICATIONS

Enhancing Task Performance of Learned Simplified Models via Reinforcement Learning

Hien Bui, Michael Posa. *IEEE International Conference on Robotics and Automation (ICRA 2024)*

Reinforcement Learning for Reduced-order Models of Legged Robots

Yu-Ming Chen, **Hien Bui**, Michael Posa. *IEEE International Conference on Robotics and Automation (ICRA 2024)*

An Ultra-Lightweight and Living Legged Robot

Tat Thang Vo Doan, **Hien Bui**, Melvin Y.W. Tan, and Hirotaka Sato. *Soft Robotics (SoRo 2018)*

INDUSTRIAL EXPERIENCE

Robotics Engineer (Founding Engineer)   Singapore
Eureka Robotics   July 2018 – June 2021

- Designed, integrated, and deployed multiple award-winning high-accuracy and high-agility robotics systems, including Archimedes Robot, the first industrially-deployed robot to achieve 80-micron accuracy in an unstructured environment
- Implemented various high-performance motion planning and control algorithms for robot manipulation tasks

TEACHING EXPERIENCE

Teaching Assistant   University of Pennsylvania
MEAM 5170 Control And Optimization With Applications In Robotics   Fall 2023

Teaching Assistant   University of Pennsylvania
MEAM 5200 Introduction to Robotics   Spring 2023

AWARDS AND HONORS

Graduate Research Fellowship   University of Pennsylvania, 2021
Gold Medal in National Robot Olympiad   Singapore, 2016
Bronze Medal in the 43rd International Physics Olympiad   Estonia, 2012
Bronze Medal in the 13th Asian Physics Olympiad   India, 2012