YUNHAI HAN

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EDUCATION BACKGROUND

Georgia Institute of Technology 06/2022 - present
Ph.D. in Robotics

Advisor: Harish Ravichandar

University of California, San Diego (UCSD) 09/2019 - 06/2021
M.S. in Mechanical Engineering *GPA: 3.846/4.00*

· **Relevant Course:** Robotics

Yanshan University 09/2015 - 07/2019
B.S. in Mechanical Engineering *GPA: 3.761/4.5, Major GPA: 3.804/4.5*

· **Relevant Course:** Mechatronics *Ranking:* 2^{nd} of 594 (First six semesters)

FILED OF INTERESTS

Structured Learning for Dexterous Manipulation, Tactile Sensing for Manipulation

PUBLICATIONS

- Yang. Z, **Han. Y**, Ravichandar. H, "AsymDex: Leveraging Asymmetry and Relative Motion in Learning Bimanual Dexterity", Poster at CoRL 2024 Workshop WCBM
- Kim. J, **Han. Y**, Ravichandar. H, Ha. S, "Learning Koopman Dynamics for Safe Legged Locomotion with Reinforcement Learning-based Controller", Under Review by ICRA 2025
- Chen. H, Abuduweili. A*, Agrawal. A*, **Han. Y***, Ravichandar. H, Liu. C, Ichnowski. J, "KOROL: Learning Visualizable Object Feature with Koopman Operator Rollout for Manipulation" (* Equal Contribution), Poster at CoRL 2024
- **Han. Y**, Chen. Z, Kyle. W, Ravichandar. H, "Learning Prehensile Dexterity by Imitating and Emulating State-only Observations", IEEE Robotics and Automation Letters
- Yu. K*, **Han. Y***, Wang. Q, Saxena. V, Xu. D, Zhao. Y , "MimicTouch": Leveraging Multi-modal Human Tactile Demonstrations for Contact-rich Manipulation" (* Equal Contribution; Yu is my master student advisee), Poster at CoRL 2024 & **Best Paper Award** at NeurIPS Touch Processing Workshop & Poster at CoRL 2023 Deployable Workshop
- **Han. Y**, Xie. M, Zhao. Y, Ravichandar. H, "On the Utility of Koopman Operator Theory in Learning Dexterous Manipulation Skills", **Oral Presentation** at CoRL 2023 (acceptance rate: 6.6%)
- **Han. Y***, Yu. K*, Batra. R, Boyd. N, Mehta. C, Zhao. T, She. Y, Hutchinson. S, Zhao. Y, "Learning Generalizable Vision-Tactile Robotic Grasping Strategy for Deformable Objects via Transformer", IEEE/ASME Transactions on Mechatronics
- M. E. Cao, J. Warnke, **Han. Y**, Ni. Xinpei, Zhao. Y, Coogan. S, "Leveraging Heterogeneous Capabilities in Multi-Agent Systems for Environmental Conflict Resolution", SSRR, 2022
- **Han. Y**, Boyd. N, Ni. Xinpei, Zhao. Y, "Multi-Robot Collaboration with Heterogeneous Capabilities", ACC, 2022

- **Han. Y** and Martínez. S, "A Numerical Verification Framework for Differential Privacy in Estimation", L-CSS & ACC, 2022
- Christensen. I. H, Paz. D, H. Zhang, D. Meyer, Hao. X, **Han. Y**, Liu. Y, Andrew. L , Z. Zhong, S. Tang, "Autonomous Vehicles for Micro-Mobility", Autonomous Intelligent System
- Liu. F, Li. Z, **Han. Y**, J Lu, F Richter and M. C. YIP, "*Real-to-Sim* Registration of Deformable Soft Tissue with Position-Based Dynamics for Surgical Robot Autonomy", ICRA, 2021
- **Han. Y**, Liu. Y, Paz. D, and Christensen. I. H, "Auto-calibration Method Using Stop Signs for Urban Autonomous Driving Applications", ICRA, 2021
- **Han. Y**, Liu. F and M. C. YIP, "A 2D Surgical Simulation Framework for Tool-Tissue Interaction", IROS 2020 Workshop

HONORS

Georgia Tech IRIM Robotics PhD Fellowship
National Scholarship from Chinese Ministry of Education

PROFESSIONAL SERVICE

GT RoboGrad Executive Board - Research VP
Conference Session Chair - ACC
Conference Reviewer - ICRA AIM IROS ACC SSRR ICLR ICML
Journal Reviewer - RA-L OJ-CSYS

TEACHING EXPERIENCE

MAE145: Robotic Estimation & Planning Winter. 2021
Teaching Assistant
MAE146: Introduction to ML Algorithms Spring. 2021
Teaching Assistant

WORKING EXPERIENCE

Georgia Institute of Technology Summer. 2021 - Spring. 2022
Research Assistant

TECHNICAL SKILLS

Programming	C/C++, Python, MATLAB/Simulink
Tool	PyTorch, STM32, ROS, Drake, Git, Linux, LaTeX
Language	Proficient in English and Chinese