

Jiahui Yang

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EDUCATIONS

Carnegie Mellon University (CMU), Pittsburgh, USA <i>M.Sc. in Robotics, School of Computer Science</i>	<i>Aug 2023 - Present</i> GPA 4.14/4.0
Massachusetts Institute of Technology (MIT), Cambridge, USA <i>Exchange Student, School of Engineering</i>	<i>Aug 2021 - Jun 2022</i> GPA 5.0/5.0
Southern University of Science and Technology (SUSTech), Shenzhen, China <i>B.Eng. in Robotics Engineering (Summa Cum Laude), College of Engineering</i>	<i>Aug 2019 - Jun 2023</i> GPA: 3.94/4.0 Rank: 1/66

PUBLICATIONS

* denotes equal contribution

- [1] Deep Reactive Policy: Learning Reactive Manipulator Motion Planning for Dynamic Environments
Jiahui Yang*, Jason Jingzhou Liu*, Yulong Li, Youssef Khaky, Kenneth Shaw, Deepak Pathak
Conference on Robot Learning (CoRL) 2025 [[Website](#)] [[PDF](#)]
Best Paper Award at LeaPRiDE Workshop
- [2] Neural MP: A Generalist Neural Motion Planner
Murtaza Dalal*, Jiahui Yang*, Russell Mendonca, Youssef Khaky, Ruslan Salakhutdinov, Deepak Pathak
International Conference on Intelligent Robots and Systems (IROS) 2025 [[Website](#)] [[PDF](#)]
Best Student Paper Award Winner, Best Paper Award Finalist
- [3] Bimanual Dexterity for Complex Tasks
Kenneth Shaw*, Yulong Li*, Jiahui Yang, Mohan Kumar Srirama, Ray Liu, Haoyu Xiong,
Russell Mendonca†, Deepak Pathak†
Conference on Robot Learning (CoRL) 2024 [[Website](#)] [[PDF](#)]
- [4] A lightweight high-voltage boost circuit for soft-actuated micro-aerial-robots
Zhijian Ren, Jiahui Yang, Suhan Kim, Yi-Hsuan Hsiao, Jeffrey Lang, Yufeng Chen
IEEE International Conference on Robotics and Automation (ICRA) 2023 [[PDF](#)]
- [5] Coordinated Defense Allocation in Reach-Avoid Scenarios with Efficient Online Optimization
Junwei Liu, Zikai Ouyang, Jiahui Yang, Hua Chen, Haibo Lu, Wei Zhang
arXiv 2023 [[PDF](#)]
- [6] Parallel connecting rod mode switching parallel clamp coupling self-adaptive robot finger device
Jiahui Yang, Wenzeng Zhang
China Invention Patent CN11395411B [[PDF](#)]

RESEARCH EXPERIENCES

- Research Assistant at CMU** Pittsburgh, USA
Advisor: Prof. Deepak Pathakd and Prof. Ruslan Salakhutdinov Oct 2023 - Present
- **Neural MP: A Generalist Neural Motion Planner**
 - Developed a pipeline of generating large-scale collision-free motion trajectories and distilled them into a generalist neural motion planner, which outperforms SOTA sampling, optimization and learning based planning methods by 23%, 17% and 79%. The policy achieved 95.83% success rate on evaluation tasks and could generalize to a broad set of unseen real-world environments. Co-first-authored paper selected as Best Student Paper Winner at IROS 2025.
 - **Deep Reactive Policy**
 - Building on Neural MP, further refined the learning pipeline by incorporating a locally reactive controller

for online finetuning, leading to substantial performance gains over the pretrained model. This produced a more robust and highly reactive motion planner. First-authored paper accepted to CoRL 2025.

- **Dexterous Bimanual Teleoperation System for Complex Tasks**
- Developed an extremely dexterous, low-cost, low-latency and portable bimanual teleoperation system which relies on motion capture gloves and teacher arms. Co-authored paper accepted to CoRL 2024.

Research Assistant at Soft and Micro Robotics Laboratory (SMRL), MIT

Cambridge, USA

Advisor: Prof. Kevin Chen

Jan 2022 - Jun 2022

- **A lightweight high-voltage boost circuit for soft-actuated micro aerial robots**

- Developed a lightweight (120mg) power circuit to convert 7.7V DC input into a 600V and 400Hz output for driving a 300mg aerial robot. Co-authored paper accepted to ICRA 2023.

Summer Intern at Zhang lab, Tsinghua University

Beijing, China

Advisor: Prof. Wenzeng Zhang

Jun 2021 - Aug 2021

- **Dual-Mode Underactuated Robot Gripper Design**

- Proposed a dual-mode robot gripper that can switch between parallel pinching mode and coupled grasping mode, enabled it to handle diverse manipulation scenarios. Published as an invention patent.

Research Assistant at Control & Learning for Robotics and Autonomy Lab (CLEAR)

Shenzhen, China

Advisor: Prof. Wei Zhang

Aug 2020 - May 2023

- **Wheel-Legged Hybrid Robot Locomotion (Bachelor's Thesis)**

- Developed control framework for the wheel-legged quadrupedal robot to maneuver in wheel-foot mode and point-foot mode to tackle different locomotion environments.

- **Coordinated Defense Allocation in Reach-Avoid Scenarios with Efficient Online Optimization**

- Investigated a dual-layer online optimization strategy for defender robots operating in multiplayer reach-avoid games within general convex environments.

HONORS AND AWARDS

Best Student Paper Award, IROS 2025

Oct 2025

Best Paper Award Finalist, IROS 2025

Oct 2025

Best Paper Award, LeaPRiDE Workshop IROS 2025

Sep 2025

Top 10 Summa Cum Laude Graduates, College of Engineering, SUSTech (Top 1%)

Jun 2023

Best student of the year in Zhicheng College, SUSTech (Top 0.5%)

Sep 2022

MIT & SUSTech Special Student Scholarship, MIT & SUSTech (\$ 72,500, Top 0.1%)

Sep 2021

Finalist Prize in ICM competition (Top 1% among 26,000 teams)

Jan 2021

First Class Merit Scholarship, SUSTech (Top 5%)

Sep 2020 & Sep 2021

Excellence Freshman Scholarship, SUSTech

Sep 2019

SKILLS

Programming: Python, C++, C, JAVA, HTML

Tools: ROS, Pytorch, Matlab, PyBullet, IsaacGym, IsaacSim, MuJoCo, Git, LATEX

Hardware: Solidworks, Arduino, Altium Designer, Laser-cutting, 3D Printing, Soldering