Jinzhou Li

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Research interests

My research focuses on robot dexterous manipulation and multimodal learning. I build systems that combine sensing, control, and learning so that robots can perform complex manipulation tasks in a more human-like way. A key part of my work is tactile and force sensing, with an emphasis on compliance, enabling policies to reason about contact and improve dexterity beyond what current purely vision-based policies can achieve.

Education

2025 – Present **Duke University** – Durham, NC
Ph.D Student in Robotics
Advisor: Prof. Xianyi, Cheng.

2022 – 2023 **Cornell University** – Ithaca, NY
M.Eng in Systems Engineering
Advisor: Prof. Maha, Haji.

2017 – 2021 **University of Vermont** – Burlington, VT
B.S. in Computer Science

Publications

Conference Paper (* denotes equal contribution):

c7. **OPENTOUCH: Bringing Full-Hand Touch to Real-World Interaction**
Yuxin Ray Song*, **Jinzhou Li***, Rao Fu*, Devin Murphy, Kaichen Zhou, Rishi Shiv, Yaqi Li, Haoyu Xiong, Crystal Elaine Owens, Yilun Du, Yiyue Luo, Xianyi Cheng, Antonio Torralba, Wojciech Matusik, Paul Pu Liang
Technical Report.
[Project Page] [Paper]

c6. **TwinAligner: Visual and Physical Real2Sim2Real All-in-one for Robotic Manipulation**
Hongwei Fan*, Hang Dai*, Jiyao Zhang*, **Jinzhou Li**, Qiyang Yan, Yujie Zhao, Xuanyu Lai, Hao Tang, Hao Dong
Under Review.

c5. **Hierarchical Policy: Multi-Frequency Action Chunking across Hierarchical Temporal Resolutions for Robotic Imitation Learning**
Jiyao Zhang, Zimu Han, Junhan Wang, Xionghao Wu, Shihong Lin, **Jinzhou Li**, Hongwei Fan, Ruihai Wu, Dongjiang Li, Hao Dong
Under Review.

c4. **ClutterDexGrasp: A System for General Closed-Loop Dexterous Grasping in Cluttered Scenes**
Zeyuan Chen*, Qiyang Yan*, Yuanpei Chen*, Jiyao Zhang, Tianhao Wu, Zihan Ding, **Jinzhou Li**, Yaodong Yang, Hao Dong.
The Conference on Robot Learning (CoRL), 2025. ***(Oral~5%)***
[Project Page] [Paper]

c3. **Adaptive Visual-Tactile Fusion with Predictive Force Attention for Dexterous Manipulation**
Jinzhou Li*, Tianhao Wu*, Jiyao Zhang, Zeyuan Chen, Haotian Jin, Mingdong Wu, Yujun Shen, Yaodong Yang, Hao Dong
IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS), 2025.
[Project Page] [Paper]

c2. **SimLauncher: Launching Sample-Efficient Robotic Reinforcement Learning via Simulation Pre-training**
Mingdong Wu*, Lehong Wu*, Yizhuo Wu*, Weiyao Huang, Hongwei Fan, Zheyuan Hu, Haoran Geng, **Jinzhou Li**, Jiahe Ying, Long Yang, Yuanpei Chen, Hao Dong.
IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS), 2025.
[Project Page] [Paper]

c1. **Canonical Representation and Force-Based Pretraining of 3D Dexterous Visuo-Tactile Policy Learning**
Tianhao Wu, **Jinzhou Li***, Jiyao Zhang*, Mingdong Wu, Hao Dong.
IEEE International Conference on Robotics and Automation (ICRA), 2025.
[Project Page] [Paper]

Research experience

2025 – Present **Robot Dexterity Lab, Duke**
Advisor: Prof. Xianyi, Cheng.
1) Compliance Learning
2) Contact Transfer Learning

2025 **Multisensory Intelligence Group, Media Lab, MIT**
Advisor: Dr. Kaichen, Zhou. & Prof. Paul, Liang.
1) Egocentric human contact in the wild [c7]
2) Visuo-Tactile Benchmark

2024 – 2025 **PKU-Agibot Joint Lab, CFCS, Peking University**
Advisor: Prof. Hao, Dong.
1) Tactile Dexterous Manipulation [c1, c3]
2) Sim2Real/Real2Sim2Real [c4, c6]
3) Imitation Learning Policy [c1,c3, c5]

2022 – 2023 **Cornell University, SEA Lab & MIT, Engineering System Lab**
Advisors: Prof. Maha, Haji. & Prof. Daniel, Hasting.
1) System of Systems Concept for Effective Oceans to Near Space Observation
2) Hybrid Agent-Based Model and Discrete Event Simulation to Optimize AUV Fleet Operations

Honors and scholarships

2017 – 2021 Merit Scholars Award
Awarded for academic excellence; $5,000 per semester.

Teaching experience

Fall 2023 **Cornell University**
Teaching Assistant, Meta CS 4782: Intro to Deep Learning

Industry experience

2024 – 2025 **Agibot Inc.** – Research Intern

2021 **SenseTime Inc.** – Product Intern (Edge Computing)

Service

Reviewer
ICRA (2024, 2025, 2026)

Technical skills

Programming languages
Python, C++, Rust

Software
LaTeX, Git, ROS, PyTorch, Unreal Engine, IssacGym

Robot Experience
Leap Hand, Hello Robot, Franka, Aloha, Flexiv, UR5