

GUO JINGXIANG

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EDUCATION

Harbin Institute of Technology, Shenzhen

Bachelor of Engineering in Automation — GPA: 3.7/4.0 (Ranking: Top 20%)

Sep. 2021 – Jul. 2025

Shenzhen, China

National University of Singapore

NGNE Program

Jul. 2024 – May. 2025

Singapore

RESEARCH EXPERIENCE

RLGroup Lab, HITsz

Research Assistant — Advisor: Yanjie Li

Oct 2022 – Jun 2024

Shenzhen, China

- Investigated the effect of logarithmic bases on policy gradient methods in deep reinforcement learning, introducing the Logarithmic Basis Policy Gradient (LBPG) and Adaptive LBPG algorithms.
- Propose a novel method to improve locomotion learning for a single quadruped robot using Multi-agent Reinforcement Learning.

LinS Lab, NUS

Research Assistant — Advisor: Lin Shao

Jul 2024 – May 2025

Singapore

- Proposed a novel representation, $\mathcal{D}(\mathcal{R}, \mathcal{O})$, tailored for dexterous grasping tasks. This interaction-centric formulation transcends conventional and object-centric paradigms, facilitating robust generalization across diverse robots, objects, and environments.
- Developed a user-friendly teleoperation data collection system to gather real-world data for training dexterous manipulation.

ScaleLab, SJTU

Research Intern — Advisor: Prof. Yao Mu

May 2025 – Present

Shanghai, China

- Designed and implemented a GelSight Mini vision-tactile driven digital-twin simulation system for threaded structures, enhancing tactile feedback accuracy and visualization in virtual environments.
- Developing a vision-tactile data collection and benchmarking pipeline to support the training and evaluation of VLA models.

PUBLICATIONS (SELECTED)

- Jingxiang Guo***, Jiayu Luo*, Zhenyu Wei*, Yiwen Hou, Zhixuan Xu, Xiaoyi Lin, Chongkai Gao, Lin Shao, "TelePreview: A User-Friendly Teleoperation System with Virtual Arm Assistance for Enhanced Effectiveness". Accepted to ICRA 2025 Workshop on Human-Centric Multilateral Teleoperation, **Best Paper Award** & **Spotlight Presentation**. [Web] [arXiv]
- Qi Liu*, **Jingxiang Guo***, Sixu Lin, Shuaikang Ma, Jinxuan Zhu, Yanjie Li, "MASQ: Multi-Agent Reinforcement Learning for Single Quadruped Robot Locomotion". In submission to IROS 2025. [arXiv] [Video] [Press]
- Qi Liu, **Jingxiang Guo**, Zhongjian Qiao, Pengbin Chen, Jinxuan Zhu, Yanjie Li, "Logarithmic Function Matters Policy Gradient Deep Reinforcement Learning". Accepted to DAI 2024 (Oral).
- Haonan Chen*, Bangjun Wang*, **Jingxiang Guo***, Tianrui Zhang, Yiwen Hou, Xuchuan Huang, Chenrui Tie, Lin Shao, "World4Omni: A Zero-Shot Framework from Image Generation World Model to Robotic Manipulation". In submission to NeurIPS 2025. [Web]
- Zhenyu Wei*, Zhixuan Xu*, **Jingxiang Guo**, Yiwen Hou, Chongkai Gao, Zhehao Cai, Jiayu Luo, Lin Shao, " $\mathcal{D}(\mathcal{R}, \mathcal{O})$ Grasp: A Unified Representation of Robot and Object Interaction for Cross-Embodiment Dexterous Grasping". ICRA 2025 (**Best Paper Award** on Robot Manipulation and Locomotion); CoRL 2024 @ MAPoDeL, **Best Robotics Paper Award** & **Oral Presentation**; CoRL 2024 @ LFDm, **Spotlight Presentation**. [Web] [arXiv]
- Chenrui Tie, Shengxiang Sun, Jinxuan Zhu, Yiwei Liu, **Jingxiang Guo**, Yue Hu, Haonan Chen, Juntong Chen, Ruihai Wu, Lin Shao, "Manual2Skill: Learning to Read Manuals and Acquire Robotic Skills for Furniture Assembly Using Vision-Language Models". Accepted to RSS 2025. [Web] [arXiv]

AWARDS

Best Robotics Paper Award in CoRL 2024 @ MAPoDeL

Nov 2024

National First Prize in RoboMaster University Championship (RMUC)

Mar 2023

National First Prize in The 6th China Intelligent Robots Innovation Competition

Jul 2023

Provincial First Prize in China Undergraduate Mathematical Contest in Modeling (CUMCM)

Sep 2023

Honorable Mention in Mathematical Contest in Modeling (MCM)

Mar 2023

MISCELLANEOUS

Languages: English (IELTS 7.5, GRE 321), Chinese (Native)

Academic Service: Reviewer for ICRA 2025, RA-L, IROS 2025, CVPR 2025

Programming: Python, C/C++, MATLAB, HTML, CSS, JavaScript

Tools: SOLIDWORKS, ROS, PCB Design, STM32, Arduino, WebXR, \LaTeX

Interests: Trekking and climbing