Guo Jingxiang

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Education

Harbin Institute of Technology, Shenzhen **Sep. 2021 – Jul. 2025**
Bachelor of Engineering in Automation — GPA: 3.7/4.0 (Ranking: Top 20%) *Shenzhen, China*

National University of Singapore **Jul. 2024 – May. 2025**
NGNE Program *Singapore*

Research Experience

RLGroup Lab, HITsz **Oct 2022 – Jun 2024**
Research Assistant — Advisor: Yanjie Li *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 **Jul 2024 – May 2025**
Research Assistant — Advisor: Lin Shao *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 **May 2025 – Present**
Research Intern — Advisor: Prof. Yao Mu *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)

1. **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]
2. 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]
3. 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]
4. 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]
5. 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). [Code]
6. Chenrui Tie, Shengxiang Sun, Jinxuan Zhu, Yiwei Liu, **Jingxiang Guo**, Yue Hu, Haonan Chen, Junting 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