Guo Jingxiang

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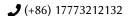
Education

National University of Singapore — Aug. 2025 – Present
Master of Computing in Artificial Intelligence — *Singapore*

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: Yao Mu — *Shanghai, China*
- Designed and implemented a GelSight Mini–driven vision–tactile digital-twin simulation framework for threaded structures, enhancing tactile feedback accuracy and virtual visualization.
- Developed a vision–tactile data collection and benchmarking pipeline to support training and evaluation of vision–language–action 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. 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]
3. 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).
4. 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. Accepted to ICML workshop @ Building Physically Plausible World Models[Web]
5. 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