

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

Research Assistant — Advisor: Yanjie Li

Jun 2022 – Jun 2024

Shenzhen, China

- We investigate the effect of logarithmic bases on policy gradient methods in deep reinforcement learning, introducing the Logarithmic Basis Policy Gradient (LBPG) and Adaptive LBPG algorithms.
- We propose a novel method to improve locomotion learning for a single quadruped robot using multi-agent deep reinforcement learning (MARL).

LinS Lab

Research Assistant — Advisor: Lin Shao

Jul 2024 – Present

Singapore

- We propose 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.
- We developed Mobot, a mobile manipulation robot, to serve as a platform for conducting dual-arm manipulation experiments in controlled environments.
- We developed a teleoperation data collection system to gather real-world data for training dexterous manipulation with multi-tactile fusion.

PUBLICATIONS

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**”. In submission.[\[Web\]](#)
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.[\[arXiv\]](#)
3. 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 for Cross-Embodiment Dexterous Grasping**”. ICRA 2025. CoRL 2024 @ MAPoDeL, **Best Robotics Paper Award** & Oral Presentation. CoRL 2024 @ LFDM, **Spotlight Presentation**. [\[Web\]](#)
4. Qi Liu, **Jingxiang Guo**, Zhongjian Qiao, Pengbin Chen, Jinxuan Zhu, Yanjie Li, “**Logarithmic Function Matters Policy Gradient Deep Reinforcement Learning**”. Accepted to DAI 2024 [\[Oral\]](#).
5. Lixin Xu, Zixuan Liu, Zhewei Gui, **Jingxiang Guo**, Zeyu Jiang, Zhixuan Xu, Chongkai Gao, Lin Shao, “**Learning Synergistic Dexterous Singulation in Cluttered Environments**”. In submission to IROS 2025.[\[arXiv\]](#)
6. 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.[\[Web\]](#)
7. Haonan Chen, Junxiao Li, Ruihai Wu, Yiwei Liu, Chongkai Gao, Zhixuan Xu, Yiwen Hou, **Jingxiang Guo**, Zhenyu Wei, Siang Chen, Chenting Wang, Shensi Xu, Jiaqi Huang, Weidong Wang, Lin Shao, “**MetaFold: Language-Guided Cross-Category Garment Folding Framework via Trajectory Generation and Foundation Model**”. In submission to IROS 2025.[\[Web\]](#)
8. Qi Liu, Jianqi Gao, Dongjie Zhu, Zhongjian Qiao, **Jingxiang Guo**, Pengbin Chen, Yanjie Li, “**Multi-Agent Target Assignment and Path Finding for Intelligent Warehouse: A Cooperative Multi-Agent Deep Reinforcement Learning Perspective**”. In submission to IROS 2025.
9. Kuntian Dai, **Jingxiang Guo**, Nengfeng Liu, Guanyu Hou, Jinbin Guo, Junkai Wang, Ruiquan Dong, “**Momentum Prediction for Tennis Matches Based on Counter-Factual Analysis and Multi-LGBM**”. National Patent, Published 2025.[\[Web\]](#)

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

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

Academic Service: Reviewer for ICRA 2025, RA-L

Programming Skills: Python, C/C++, MATLAB, HTML, CSS, Javascript

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

Interest: Experienced in trekking and climbing, forging a resilience will that stands unwavering