

# Chenrui Tie

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## EDUCATION

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### National University of Singapore, Singapore

PhD Student in Computer Science

Aug 2024 - present

### Peking University, Beijing, China

Bachelor of Intelligence Science and Technology

Sept 2019 - June 2024

## SELECTED PUBLICATIONS

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\* denotes equal contribution

- [1] Jinxuan Zhu\*, **Chenrui Tie\***, Xinyi Cao\*, Lin Shao, et al. "AdaptPNP: Integrating Prehensile and Non-Prehensile Skills for Adaptive Robotic Manipulation" IEEE International Conference on Robotics and Automation (ICRA) 2026 [[Project](#)] [[Paper](#)]
- [2] **Chenrui Tie\***, Shengxiang Sun\*, Lin Shao, et al. "Manual2Skill++: Connector-Aware General Robotic Assembly from Instruction Manuals via Vision-Language Models" IEEE International Conference on Robotics and Automation (ICRA) 2026 [[Project](#)] [[Paper](#)]
- [3] **Chenrui Tie\***, Shengxiang Sun\*, Lin Shao, et al. "Manual2Skill: Learning to Read Manuals and Acquire Robotic Skills for Furniture Assembly Using Vision-Language Models" Robotics: Science and Systems(RSS) 2025 [[Project](#)] [[Paper](#)]
- [4] **Chenrui Tie\***, Yue Chen\*, Ruihai Wu\*, Hao Dong, et al. "ET-SEED: Efficient Trajectory-level SE(3) Equivariant Diffusion Policy " International Conference on Learning Representations(ICLR) 2025 [[Project](#)] [[Paper](#)]
- [5] Ruihai Wu\*, **Chenrui Tie\***, Hao Dong, et al. "Leveraging SE(3) Equivariance for Learning 3D Geometric Shape Assembly" International Conference of Computer Vision (ICCV) 2023 [[Project](#)] [[Paper](#)]

## RESEARCH EXPERIENCE

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### Research on Robot Learning and Intelligent System Lab

PhD student, Advisor: [Prof. Lin Shao](#)

National University of Singapore

Jul 2024 - present

### Research on HyperPlane Lab

Undergraduate Research Assistant, Advisor: [Prof. Hao Dong](#)

Peking University

Dec 2022 - Jun 2024

### Research on Embodied Perception and Interaction (EPIC) Lab

Undergraduate Research Assistant, Advisor: [Prof. He Wang](#)

Peking University

Aug 2021 - Nov 2022

## TECHNICAL SKILLS

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- Programming:** Python, C++, Matlab
- Simulators:** SAPIEN, ISAAC SIM, ISAAC GYM, Nimble, DiffCloth, Open Dynamics Engine
- Physical Robot Experience:** Franka, Flexiv rizon, Xarm, LeapHand, Xhand
- Deep Learning Framework:** PyTorch

## HONORS AND AWARDS

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- Research Achievement Award, National University of Singapore 2026
- Research Scholarship, National University of Singapore 2024
- Lee Wai Wing Scholarship, Peking University 2023
- Merit Student award, Peking University 2023
- Merit Student award, Peking University 2022
- Achievement Improvement award, Peking University 2021
- Qin-Jin Scholarship, Peking University 2020