XIAOMENG XU

https://xxm19.github.io/ | xuxm@stanford.edu

EDUCATION

Stanford University 09/2023-now

PhD Candidate in Electrical Engineering, Advisor: Shuran Song

Stanford University 09/2023-06/2025

Masters in Electrical Engineering

Tsinghua University 08/2019-06/2023

Bachelor of Engineering in Automation, Bachelor of Arts in Product Design

GPA: 3.96/4.0

PUBLICATIONS

1. **Xiaomeng Xu***, Yifan Hou*, Chendong Xin, Zeyi Liu, Shuran Song, *Compliant Residual DAgger: Improving Real-World Contact-Rich Manipulation with Human Corrections*. Neural Information Processing Systems (Neurips 2025). [Paper]
2. Haoyu Xiong, **Xiaomeng Xu**, Jimmy Wu, Yifan Hou, Jeannette Bohg, Shuran Song, *Vision in Action: Learning Active Perception from Human Demonstrations*. Conference on Robot Learning (CoRL 2025). [Paper]
3. **Xiaomeng Xu**, Dominik Bauer, Shuran Song, *RoboPanoptes: The All-Seeing Robot with Whole-body Dexterity*. Robotics: Science and Systems (RSS 2025). [Paper]
4. **Xiaomeng Xu**, Huy Ha, Shuran Song, *Dynamics-Guided Diffusion Model for Sensor-less Robot Manipulator Design*. Conference on Robot Learning (CoRL 2024), Best Machine Learning Paper at the Morphology-Aware Policy and Design Learning Workshop (CoRL 2024). [Paper]
5. **Xiaomeng Xu***, Yanchao Yang*, Kaichun Mo, Boxiao Pan, Li Yi, Leonidas Guibas, *JacobiNeRF: NeRF Shaping with Mutual Information Gradients*. Conference on Computer Vision and Pattern Recognition (CVPR 2023). [Paper]
6. Yun Liu*, **Xiaomeng Xu***, Weihang Chen, Haocheng Yuan, He Wang, Jing Xu, Rui Chen, Li Yi, *Enhancing Generalizable 6D Pose Tracking of an In-Hand Object with Tactile Sensing*. Robotics and Automation Letters (RAL 2023), IEEE International Conference on Robotics and Automation (ICRA 2024). [Paper]
7. Xueyi Liu, **Xiaomeng Xu**, Anyi Rao, Chuang Gan, Li Yi, *AutoGPart: Intermediate Supervision Search for Generalizable 3D Part Segmentation*. Conference on Computer Vision and Pattern Recognition (CVPR 2022). [Paper]
8. Guanhong Liu, Tianyu Yu, Zhihao Yao, Haiqing Xu, Yunyi Zhang, Xuhai Xu, **Xiaomeng Xu**, Mingyue Gao, Qirui Sun, Tingliang Zhang, Haipeng Mi, *ViviPaint: Creating Dynamic Painting with a Thermochromic Toolkit*. Multimodal Technologies and Interaction (MTI 2022). [Paper]

* authors with equal contribution

INTERNSHIP EXPERIENCE

Large Behavior Models Team @ Toyota Research Institute 06/2025-09/2025

Research Intern, Mentor: Eric Cousineau *Cambridge, MA*

· Scaling Bimanual Mobile Manipulation with Egocentric Human Demonstrations

Stanford Geometric Computing Lab 06/2022-08/2022
Research Intern, Advisor: Leonidas Guibas *Stanford, CA*

- Chinese Undergraduate Visiting Research Program (UGVR).
- Shaping a NeRF to encode mutual correlations of a scene via aligning Jacobians.

AWARDS

Stanford Interdisciplinary Graduate Fellowship (Awarded to outstanding doctoral students engaged in interdisciplinary research at Stanford University) 05/2025-now
Best Machine Learning Paper at the Morphology-Aware Policy and Design Learning Workshop (Conference on Robot Learning 2024) 11/2024
Conference on Computer Vision and Pattern Recognition (CVPR 2023) Travel Grant 06/2023
Outstanding Graduate (Awarded to top 2% graduates at Tsinghua University) 06/2023
Comprehensive Excellence Award (Scholarship awarded by Tsinghua University, top 5%) 10/2022
National Scholarship (Highest scholarship awarded by Chinese Government, top 0.1%) 10/2021
129 Scholarship (Highest scholarship for sophomores at Tsinghua University, top 1%) 10/2020

INVITED TALKS

Embodiment-Aware Robot Learning @ Northeastern University, hosted by Robert Platt 08/2025

SERVICES

Teaching assistant of EE/CS227: Robot Perception

Organizer of RSS 2025 1st Workshop on Robot Hardware-Aware Intelligence

Reviewer of RSS, CoRL, T-RO, RA-L, ICRA, IROS, Neurips, ICLR, ICML, CVPR, AAAI

TECHNICAL SKILLS

Computer Languages	Python, C/C++, MATLAB, Verilog/VHDL
Software	SolidWorks, AutoCAD, Rhino, Qt Creator, Multisim, Quartus
Hardware	3D Printing, Microcontroller, mechanical design, soldering, woodcraft
Tools	PyTorch, ROS, MuJoCo, IsaacGym