

Chengyang Zhao

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EDUCATION

Carnegie Mellon University, Pittsburgh PA

Aug. 2024 - Jun. 2026 (expected)

MS in Robotics, Robotics Institute

Peking University, Beijing

Sept. 2019 - Jul. 2024

BS in Data Science, Yuanpei College

RESEARCH INTERESTS

My research lies in the intersection of **Robotics** and **Machine Learning**, with a focus on **Robot Manipulation**. My current research highlights the following perspectives: (1) structured modeling for effective and generalizable manipulation, (2) structured understanding from weakly-supervised multi-modal learning, (3) robust real-world deployment and efficient learning through advanced simulation.

Core research questions: (1) How can we develop **structured priors** for effective, efficient, scalable **robot learning systems** by leveraging insights from dynamics, geometry, physics, etc., and (2) how can these systems ultimately enable robots that **reliably interact** with the **unstructured real-world environments**?

PUBLICATIONS

* indicates equal contribution.

- [Under Review] **Chengyang Zhao**, Uksang Yoo, Arkadeep Narayan Chaudhury, Giljoo Nam, Jonathan Francis, Jeffrey Ichnowski, Jean Oh, “DYMO-Hair: Generalizable Volumetric Dynamics Modeling for Robot Hair Manipulation”, Under Review, 2025 [[pdf](#)]
- [ICCV’25] Zhi Hou*, Tianyi Zhang*, Yuwen Xiong, Haonan Duan, Hengjun Pu, Ronglei Tong, **Chengyang Zhao**, Xizhou Zhu, Yu Qiao, Jifeng Dai, Yuntao Chen, “Dita: Scaling Diffusion Transformer for Generalist Vision-Language-Action Policy”, IEEE/CVF International Conference on Computer Vision (ICCV), 2025 [[pdf](#)]
- [RSS’25] RoboVerse Team, “RoboVerse: Towards a Unified Platform, Dataset and Benchmark for Scalable and Generalizable Robot Learning”, Robotics: Science and Systems (RSS), 2025 [[pdf](#)]
- [ICRA’25] Wenbo Cui*, **Chengyang Zhao***, Songlin Wei*, Jiazhao Zhang, Haoran Geng, Yaran Chen, Haoran Li, He Wang, “GAPartManip: A Large-scale Part-centric Dataset for Material-Agnostic Articulated Object Manipulation”, IEEE International Conference on Robotics and Automation (ICRA), 2025 [[pdf](#)]
- [CoRL’24] Songlin Wei, Haoran Geng, Jiayi Chen, Congyue Deng, Cui Wenbo, **Chengyang Zhao**, Xiaomeng Fang, Leonidas Guibas, He Wang, “D³RoMa: Disparity Diffusion-based Depth Sensing for Material-Agnostic Robotic Manipulation”, Conference on Robot Learning (CoRL), 2024 [[pdf](#)]
- [ICCV’23] **Chengyang Zhao**, Yikang Shen, Zhenfang Chen, Mingyu Ding, Chuang Gan, “TextPSG: Panoptic Scene Graph Generation from Textual Descriptions”, IEEE/CVF International Conference on Computer Vision (ICCV), 2023 [[pdf](#)]
- [CVPR’23] Haoran Geng*, Helin Xu*, **Chengyang Zhao***, Chao Xu, Li Yi, Siyuan Huang, He Wang, “GAPartNet: Cross-Category Domain-Generalizable Object Perception and Manipulation via Generalizable and Actionable Parts”, IEEE/CVF Conference on Computer Vision and Pattern Recognition (CVPR), 2023 (**Highlight**) [[pdf](#)] * The order is determined by rolling dice.

RESEARCH EXPERIENCE

Carnegie Mellon University, Pittsburgh PA

Oct. 2024 - Present

Graduate Research Assistant at [Bot Intelligence Group](#)

Advisor: [Prof. Jean Oh](#)

- Research Topics: deformable object manipulation, neural dynamics modeling, representation learning

Shanghai Artificial Intelligence Laboratory, Shanghai

Jan. 2024 - Mar. 2024

Research Intern

Advisor: [Prof. Jifeng Dai](#)

- Research Topics: large-scale manipulation policy learning

Massachusetts Institute of Technology, Cambridge MA

Aug. 2022 - May 2023

Undergraduate Visiting Student

Advisor: [Dr. Chuang Gan](#)

- Research Topics: structured physical scene understanding, multi-modal learning

Peking University, Beijing

May 2021 - Jul. 2024

Undergraduate Research Assistant at [Embodied Perception and Interaction Lab](#)

Advisor: [Prof. He Wang](#)

- Research Topics: articulated object manipulation, representation learning, 3D vision

HONORS AND AWARDS

- SenseTime Scholarship, 2023
- Award for Academic Excellence at Peking University, 2022
- Third Prize of Peking University Scholarship, 2022
- Xiaomi Scholarship at Peking University, 2020
- Merit Student at Peking University, 2020

ACADEMIC SERVICE

- Reviewer: FM4RoboPlan@RSS 2025, IJCV 2025
- Teaching Assistant: “Introductory Topics in Data Science” at Peking University, Fall 2023

SKILLS

- Programming: Python, C/C++, JAVA, Node.js, MATLAB, Julia, HTML, Bash, SQL
- Frameworks: PyTorch, TensorFlow, CUDA, ROS, Taichi
- Simulators: Isaac-Sim, Isaac-Gym, MuJoCo, SAPIEN, Genesis, Habitat-Sim, PyBullet
- Robots: Franka Arms, Ufactory X-Arms, UR Arms, Kinova Arms
- Languages: Chinese (native), English (proficient)