

ZIXUAN HUANG

zixuanh@umich.edu

zxhuang97.github.io

EDUCATION

University of Michigan, Ann Arbor

2022 – Present

Ph.D in Robotics; Advisor: Dmitry Berenson

Selected Courses: Introduction to Robot Manipulation, Action and Perception, Theory of Deep Learning

Carnegie Mellon University

2020 – 2022

M.S. in Robotics, School of Computer Science; Advisor: David Held

Selected Courses: Deep Reinforcement Learning for Robotics, Probabilistic Graphical Model, Kinematics Dynamics and Control

City University of Hong Kong

2016 – 2020

B.S. in Computer Science

PUBLICATIONS

* denotes equal contribution

[1] Implicit Contact Diffuser: Sequential Contact Reasoning with Latent Point Cloud Diffusion Models

Zixuan Huang, Yinong He*, Yating Lin*, Dmitry Berenson

In submission to ICRA 2025

Best Technical Contribution Award at UM AI Symposium

[2] Subgoal Diffuser: Coarse-to-fine Subgoal Generation to Guide Model Predictive Control for Robot Manipulation

Zixuan Huang, Yating Lin, Fan Yang, Dmitry Berenson

International Conference on Robotics and Automation (ICRA) 2024

[3] Self-supervised Cloth Reconstruction via Action-conditioned Cloth Tracking

Zixuan Huang, Xingyu Lin, David Held

International Conference on Robotics and Automation (ICRA) 2023

[4] Mesh-based Dynamics with Occlusion Reasoning for Cloth Manipulation

Zixuan Huang, Xingyu Lin, David Held

Robotics, Science and System (RSS) 2022

[5] Learning Visible Connectivity Dynamics for Cloth Smoothing

Xingyu Lin*, Yufei Wang*, **Zixuan Huang**, David Held

Conference on Robot Learning (CoRL 2021)

[6] StyleMixer: Semantic-aware Multi-style Mixing Network

Zixuan Huang*, Jinghuai Zhang*, Jing Liao

Computer Graphics Forum 38(7):469-480, Proc. Pacific Graphics 2019

EXPERIENCE

Autonomous Robotic Manipulation Lab, UMich

09/2022 - Present

Graduate Student Researcher

Advisor: Dmitry Berenson

Robot Perceiving and Doing (R-PAD) Lab, CMU

9/2020 - 09/2022

Graduate Student Researcher

Advisor: David Held

- Learning for perception and manipulation of deformable object

Video, Image, and Sound Analysis Lab, CityU

09/2019 - 05/2020

Student Researcher

Advisor: Antoni Bert Chan

- Improving GAN with human-in-the-loop

Cong's Group, CityU

09/2018 - 02/2019

Student Researcher

Advisor: Cong Wang

- Privacy-preserving Image Classification Framework with a Learnable Obfuscator

Siemens, Hong Kong, China

09/2018 - 06/2019

- Built a video-based real-time violence detection system. Tackled the sparsely labeled data by multiple instance learning.

Hong Kong Applied Science and Technology Research Institute

06/2018 - 08/2018

- Implemented model pruning technique for trained neural network in C++

HONORS & AWARDS

Full-tuition Scholarship (City University of Hong Kong)

PROFESSIONAL SERVICE

I served as reviewers for the following venues:

- Robotics, Science and system (RSS) 2023
- Conference on Robot Learning (CoRL) 2022, 2023
- Robotics and Automation Letters (RA-L) 2023
- International Conference on Robotics and Automation (ICRA) 2023, 2024
- International Conference on Intelligent Robotics and Systems (IROS) 2023

SKILLS

Programming: Python, C++, Shell

Tools: Pytorch, Tensorflow, ROS, MuJoCo, Nvidia Flex, Git, \LaTeX

Robots: Franka Panda, Kuka iiwa