Xuxin Cheng

xucheng@ucsd.edu chengxuxin.github.io

Education

University of California, San Diego 09/2023 – Present

Ph.D in Computer Science; Advisor: Xiaolong Wang

Carnegie Mellon University 08/2021 – 08/2023

M.S. in Robotics; GPA: 4.08/4.3; Advisor: Deepak Pathak
Selected Courses: Machine Learning (A+), Computer Vision (A), Kinematics Dynamics and Control (A)

University of California, Berkeley 07/2019 – 12/2020

Visiting student, EECS; GPA: 3.96/4.0
Selected Courses: Deep Reinforcement Learning (A), Optimization (A), Introduction to Robotics (A)

Beijing Institute of Technology 09/2016 – 06/2020

B.S. in Automation Engineering; GPA: 91.5/100 (Rank 1/167)

Publications

* denotes equal contribution

[1] Helpful DoggyBot: Open-World Object Fetching using Legged Robots and Vision-Language Models
Qi Wu, Zipeng Fu, **Xuxin Cheng**, Xiaolong Wang, Chelsea Finn

[2] ACE: A Cross-platform Visual-Exoskeletons for Low-Cost Dexterous Teleoperation CoRL 2024
Shiqi Yang, Minghuan Liu, Yuzhe Qin, Runyu Ding, Jialong Li, **Xuxin Cheng**, Ruihan Yang, Sha Yi, Xiaolong Wang

[3] Open-TeleVision: Teleoperation with Immersive Active Visual Feedback CoRL 2024
Xuxin Cheng*, Jialong Li*, Shiqi Yang, Ge Yang, Xiaolong Wang

[4] Visual Whole-Body Control for Legged Loco-Manipulation CoRL 2024
Minghuan Liu*, Zixuan Chen*, **Xuxin Cheng**, Yandong Ji, Ruihan Yang, Xiaolong Wang

[5] Expressive Whole-Body Control for Humanoid Robots RSS 2024
Xuxin Cheng*, Yandong Ji*, Junming Chen, Ruihan Yang, Ge Yang, Xiaolong Wang

[6] Extreme Parkour with Legged Robots ICRA 2024
Xuxin Cheng*, Kexin Shi*, Ananye Agarwal, Deepak Pathak

[7] Legs as Manipulator: Pushing Quadrupedal Agility Beyond Locomotion ICRA 2023
Xuxin Cheng, Ashish Kumar, Deepak Pathak

[8] Deep Whole-Body Control: Learning a Unified Policy for Manipulation and Locomotion CoRL 2022
Zipeng Fu*, **Xuxin Cheng***, Deepak Pathak Best System Paper Finalist

[9] Reinforcement Learning for Robust Parameterized Locomotion Control of Bipedal Robots ICRA 2021
Zhongyu Li, **Xuxin Cheng**, Xue Bin Peng, Pieter Abbeel, Sergey Levine, Glen Berseth, Koushil Sreenath

[10] Automated Lane Change Strategy using Proximal Policy Optimization-based Deep Reinforcement Learning
Fei Ye*, **Xuxin Cheng***, Pin Wang, Ching-Yao Chan IV 2020

[11] Driving Decision and Control for Automated Lane Change based on Deep Reinforcement Learning
Tianyu Shi, Pin Wang, **Xuxin Cheng**, Ching-Yao Chan ITSC 2019

Research Experience

Wang Lab, UCSD — 09/2023 - Present
Graduate Student Researcher — Advisor: Xiaolong Wang

Learning for Embodied Action and Perception (LEAP) Lab, CMU — 11/2021 - 09/2023
Graduate Student Researcher — Advisor: Deepak Pathak

- Learning quadrupedal robot locomotion and manipulation.

Hybrid Robotics Lab (HRL), UC Berkeley — 01/2020 - 01/2021
Undergraduate Student Researcher — Advisor: Koushil Sreenath, Xue Bin (Jason) Peng

- Learning bipedal locomotion and sim-to-real.

Partners for Advanced Transportation Technology (PATH), UC Berkeley — 07/2019 - 01/2020
Undergraduate student researcher — Advisor: Ching-Yao Chan

- Autonomous lane change maneuvers with deep reinforcement learning.

Industry Experience

Bosch Research and Technology Center, Shanghai, China — 01/2021 - 05/2021
Research Intern — Mentor: Hao Sun

- Human-portable SLAM hardware and software pipeline for digital twin of indoor and outdoor scenarios.

Honors & Awards

Best System Paper Finalist	CoRL 2022
Graduation with honor: Outstanding Graduates of Beijing & BIT	2020
Outstanding Student Scholarship (5%, 5 times)	2016-2019
DWIN Scholarship (1%)	2018
National Scholarship (0.2%)	2017

Invited Talks

Covariant	06/2024
UMich Computer Vision Seminar	UMich, 03/2024
Mila Robot Learning Seminar	Mila, 02/2024
Robotics and Embodied Artificial Intelligence Lab	Stanford, 10/2023
Locomotion Seminar	CMU, 12/2022

Professional Service

Reviewer: CoRL, ICRA, IROS, RA-L, IV
Program Committee: CoRL 2022 Learning to Adapt and Improve in the Real World Workshop

Skills

Programming:	Python, C++, Web
Tools:	ROS, MATLAB, Pytorch, Tensorflow, MuJoCo, IsaacGym, Raisim, PyBullet, Git, LaTeX
Robots:	Cassie, Unitree A1/Go1/B1/H1, WidowX