# Dichen Li

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## Research Interests

My research focuses on **cross-embodiment learning** and **reinforcement learning** for **robot locomotion** across diverse platforms, including humanoid, quadruped, and hexapod robots. I aim to develop learning agents that can leverage data from heterogeneous tasks, generalize across different physical embodiments, and scale effectively with increasing data and experience. More broadly, I am interested in enabling robots to acquire versatile locomotion skills that transfer across a wide range of environments.

## Education

**University of California, San Diego**                                                                      09/2024-03/2026
*Master's Program in Electrical and Computer Engineering* | GPA: 3.96/4.00                        San Diego, CA
Research interests: cross-embodiment robot learning, embodiment adaptation

**University of California, Berkeley**                                                                       09/2023-06/2024
*Exchange Program in Electrical Engineering and Computer Sciences*                                  Berkeley, CA
Research interests: reinforcement learning for robot locomotion

**Xi'An Jiaotong University (C9 & 985)**                                                                     09/2020-06/2024
*Bachelor of Engineering in Automation, Elite Program (top 5%)* | GPA: 3.92/4.30  Ranking: 18/220          Xi'an, China
*Graduate from the highest department Qian Xuesen Honors College*

## Selected Publications

- **Dichen Li\*** (co-first author), Bo Ai\*, Nico Bohlinger, Jan Peters, Henrik I. Christensen, Hao Su.
  Online Embodiment Adaptation for Quadrupedal Locomotion.
  Submitted to *IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS), 2026.*

- Bo Ai\*, Liu Dai\*, Nico Bohlinger\*, **Dichen Li\*** (co-first author), Tongzhou Mu, Zhanxin Wu, K. Fay, Henrik I. Christensen, Jan Peters, Hao Su.
  Towards Embodiment Scaling Laws in Robot Locomotion.
  *Conference on Robot Learning (CoRL), 2025.*

- Tomson Qu, **Dichen Li** (second author), Avideh Zakhor, Wenhao Yu, Tingnan Zhang.
  Versatile Locomotion Skills for Hexapod Robots.
  *IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS), 2024.*

## Awards

- Honored Graduate Students, Xi'An Jiaotong University                                                                **2024**
- Highest Level Scholarship of Elite Program (top 0.5%), Xi'An Jiaotong University                        **2023**
- First Prize of China Undergraduate Mathematical Contest in Modeling, Shaanxi Province                **2022**

## Research Experiences

**Online Embodiment Adaptation Project**                                                                     04/2025-02/2026
*Graduate Research Intern advised by* Prof. Hao Su                                            SU Lab, UC San Diego
- Designed an online embodiment adaptation framework for quadrupedal locomotion that rapidly infers unknown robot embodiment parameters from interaction history and conditions control, enabling robust locomotion under severe hardware changes.

**Large-scale Embodiment Scaling Law Project**                                                               10/2024-05/2025
*Graduate Research Intern advised by* Prof. Hao Su                                            SU Lab, UC San Diego
- Developed a framework to distill locomotion policies from 1,000 diverse robot embodiments into a single generalizable policy, evaluated in Isaac Lab and deployed in real-world on Go2/H1.
- Discovered that training on accumulated embodiment improves performance, and that embodiment scaling outperforms data scaling.

**Hexapod Robot Locomotion Skills Project**                                                                  09/2023-05/2024
*Undergraduate Research Intern advised by* Prof. Avideh Zakhor                                          UC Berkeley
- Trained and distilled 3 reinforcement learning policies for hexapod locomotion, and deployed them on real robots, achieving stair climbing, cave-like passages traversal (height from 22cm to 10cm), and obstacle avoidance (40cm blocks).

## Skills

- Coding & Tools: Python, PyTorch, C, MATLAB, Java, Linux, Bash, LaTeX, Git, Docker, Huggingface
- Robotics & robots: ROS, ROS2, Isaac Lab, Mujoco, SLAM, Unitree GO2, Unitree H1, Raspberry Pi
- Language: English (fluent), Chinese (native)