Dichen Li

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Research Interests

I study **cross-embodiment learning** and **reinforcement learning for robot locomotion** on 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

Fudan University (C9 & 985) **09/2026-**
PhD Program in Computer Science and Engineering | GPA: N/A Shanghai, China
Research interests: cross-embodiment learning, robot manipulation

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

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, Hao Su, Henrik I. Christensen.
  Rapid Embodiment Adaptation for Quadrupedal Locomotion.
  Under Review.
- 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

Embodiment Adaptation in Robot Locomotion Project **05/2025-03/2026**
Graduate Research Assistant advised by Prof. Hao Su SU Lab, UC San Diego
- Designed a cross-embodiment adaptation pipeline for robot locomotion, which explicitly identifies and adapts to unknown embodiment changes within half seconds.
- Discovered that explicit adaptation outperforms implicit method, enabling robust locomotion under severe hardware changes.

Large-scale Embodiment Scaling Law Project **10/2024-05/2025**
Graduate Research Assistant 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.

Hexopod 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