

Dian Wang

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EDUCATION

Northeastern University

Ph.D. in Computer Science

M.S. in Computer Science; GPA: 4.00/4.00

Sichuan University

B.Eng. in Computer Science and Engineering; GPA: 3.56/4.00

Boston, MA, USA

Jan. 2020 – Present

Sept. 2017 – Dec. 2019

Chengdu, China

Sept. 2013 – June 2017

EXPERIENCE

The Helping Hands Lab, Northeastern University

Research Assistant

Boston, MA, USA

Jan. 2018 – Present

Equivariant reinforcement learning in robotic manipulation

- Defined the symmetric properties of reinforcement learning in robotic manipulation.
- Proposed neural network architectures for improving training efficiency in robotic manipulation tasks.

BulletArm reinforcement learning environments

- Implemented an open-sourced robotic reinforcement learning environment library using PyBullet.
- Built a real-world experimental platform using a UR5 arm.

Policy learning in SE(3) action spaces

- Designed a reinforcement learning framework for robotic manipulation tasks.
- Proposed an imitation learning algorithm for large action spaces.

Assistive robotic pick-and-place system

- Built an assistive robotic system to assist people with disabilities in household manipulation tasks.
- Conducted pick-and-place experiments in an open world environment.

Institute of Computing Technology, Chinese Academy of Sciences

Research Intern

Beijing, China

July. 2016 – Aug. 2026

- Led team of 4 interns to implement a user dynamic detection app based on data from gravity sensor.

PUBLICATIONS

18

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PRESENTATIONS

Equivariant Learning for Robotic Manipulation <i>Boston Robotics Speaker Series, presented by Universal Robots</i>	Boston, MA, USA Mar. 2023
On-Robot Learning with Equivariant Models <i>Conference on Robot Learning (CoRL) 2022</i>	Auckland, New Zealand Dec. 2022
Graph-Based SE(3)-invariant Approach to Grasp Detection <i>CoRL 2022 Workshop on Sim-to-Real Robot Learning</i>	Auckland, New Zealand Dec. 2022
SEIL: Simulation-augmented Equivariant Imitation Learning <i>CoRL 2022 Workshop on Sim-to-Real Robot Learning</i>	Auckland, New Zealand Dec. 2022
Equivariant Reinforcement Learning for Robotic Manipulation <i>The Multi-disciplinary Conference on Reinforcement Learning and Decision Making 2022</i>	Providence, RI, USA June 2022
Equivariant Q Learning in Spatial Action Spaces <i>RSS 2022 Workshop on Scaling Robot Learning</i>	New York City, NY, USA June 2022
SO(2)-Equivariant Reinforcement Learning for Robotic Manipulation <i>ICRA 2022 Workshop on Scaling Robot Learning</i>	Philadelphia, PA, USA May 2022
SO(2)-Equivariant Reinforcement Learning <i>International Conference on Learning Representations (ICLR) 2022</i>	Online Apr. 2022
Equivariant Q Learning in Spatial Action Spaces <i>Conference on Robot Learning (CoRL) 2021</i>	Online Nov. 2021
Policy Learning in SE(3) Action Spaces <i>Conference on Robot Learning (CoRL) 2020</i>	Online Nov. 2020
Imitation Learning with Pixel-Wise Action Parametrization <i>M.S. Thesis Defense, Khoury College of Computer Sciences, Northeastern University</i>	Boston, MA, USA Dec. 2019
Towards Assistive Robotic Pick and Place in Open World Environments <i>The International Symposium on Robotics Research (ISRR) 2019</i>	Hanoi, Vietnam Dec. 2019

TEACHING

Guest Lecture on Leveraging SE(2) Symmetries in Robot Learning <i>Robotics Science and Systems (Northeastern CS5335), Prof. Robert Platt</i>	Mar. 2022
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MENTORING

Mingxi Jia	M.S. Student at Northeastern University	Dec. 2021 - Present
Guanang Su	M.S. Student at Northeastern University	Dec. 2021 - Present
Neel Sortur	Undergraduate Student at Northeastern University	May 2021 - Oct. 2022
Zhengyi Ou	M.S. Student at Northeastern University	Sept. 2020 - Dec. 2021
Yida Niu	M.S. Student at Northeastern University	Sept. 2020 - Aug. 2021

PROFESSIONAL SERVICE

Lead Organizer, RSS 2023 Workshop on Symmetries in Robot Learning
Reviewer: ICRA 2023, CoRL 2022, RAL 2022, T-RO 2022, ICRA 2022, IROS 2021, ICRA 2019

HONERS & AWARDS

Best Paper Award Finalist	ICRA 2022 Workshop on Scaling Robot Learning	May 2022
Khoury College Graduate Research Fellowship	Northeastern University	Aug. 2019
First Place of Outstanding Bachelor's Thesis	Sichuan University	June 2017

SKILLS

Programming: Python, Java, C++
Tools: PyCharm, IntelliJ IDEA, Git, LaTeX, Final Cut Pro
Robotics: UR5, Baxter, Robotic Operating System (ROS), PyBullet, OpenRave
Machine Learning: PyTorch, NumPy