Xulin Chen

Syracuse University

Ph.D. Candidate
Department of Electrical Engineering & Computer Science
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Education

▶ **Ph.D. in Computer & Information Science and Engineering**, Syracuse University
Syracuse, New York, USA
August 2020 – Expected May 2026
Advisor: Dr. Garrett E. Katz

▶ **M.S. in Computer Science**, Syracuse University
Syracuse, New York, USA
August 2018 – May 2020

▶ **B.S. in Software Engineering**, South China University of Technology
Guangzhou, Guangdong, China
September 2014 – July 2018

Research Interests

Reinforcement learning; Robotics; Neural network theory.

Academic Experience

▶ **Syracuse University**
Syracuse, New York, USA

- Graduate Research Assistant, Mind-Body Lab (Instructor: Dr. Garrett E. Katz), *January 2019 - Present*

- Visiting Graduate Researcher, Dynamic Locomotion and Robotics Lab (Instructor: Dr. Zhenyu Gan), *September 2021 - Present*

▶ **South China University of Technology**
Guangzhou, Guangdong, China

- Undergraduate Researcher, Southern Artificial Intelligence Laboratory (Instructor: Dr. Mingkui Tan), *August 2017 - June 2018*

- Undergraduate Researcher, Intelligent Algorithm and Intelligent Software Laboratory (Instructor: Dr. Han Huang), *October 2016 - August 2017*

Teaching Experience

Teaching Assistant

▶ **Syracuse University**
- CIS655: Computer Architecture *(Spring 2023)*
- CIS667: Introduction to Artificial Intelligence *(Fall 2020)*
- CIS675: Design and Analysis of Algorithms *(Fall 2023, Fall 2024, Spring 2025, Fall 2025)*

Guest Lecture

Leveraging Symmetries in Deep Reinforcement Learning, *April 2025, in Syracuse University*

Professional Service

- Reviewer: ICRA (2026), IROS (2024)

Extracurricular Service

- Graduate teaching assistant, MIT Beaver Works Summer Institute (Orange Works), *July 2025, Syracuse, New York, USA*
- Teaching volunteer, TACNY Summer STEM Trekker Program, *July 2022 and July 2023, Syracuse, New York, USA*

Papers

My first- and co-first authorship papers are in red, and my doctoral advisor is in cyan.

[1] Sizhe Wei*, Xulin Chen*, Fengze Xie, Garrett E. Katz, Zhenyu Gan, and Lu Gan. Msppo: Morphological-symmetry-equivariant policy for legged robot locomotion. *arXiv preprint arXiv:2512.00727*, 2025 (submitted).

[2] Jiayu Ding*, Xulin Chen*, Garrett E. Katz, and Zhenyu Gan. Towards dynamic quadrupedal gaits: A symmetry-guided rl hierarchy enables free gait transitions at varying speeds. *arXiv preprint arXiv:2510.10455*, 2025 (submitted).

[3] Xulin Chen*, Ruipeng Liu, Zhenyu Gan, and Garrett E. Katz. Lipschitz-regularized critic leads to policy robustness against transition dynamics uncertainty. *arXiv preprint arXiv:2404.13879*, 2025 (submitted).

[4] Akshay*, Xulin Chen, Borui He, and Garrett E. Katz. Towards human-like learning dynamics in a simulated humanoid robot for improved human-machine teaming. In *International Conference on Human-Computer Interaction*, pages 225–241. Springer, 2022.

Skills

▶ **Programming Languages:** Python (proficiency), C++ (intermediate).

▶ **Libraries:** IsaacGym, MuJoCo, PyTorch.