Jiahui Zhang

jiahui.zhang@utdallas.edu | jiahui-3205.github.io | Google Scholar

Research Interests

My research focuses on robot learning, reinforcement learning, and robotics, particularly in leveraging foundation models to help robot policy learning and policy generalization. I'm also interested in developing general-purpose policy for different robots to perform diverse tasks in human daily lives.

Education

Ph.D in Computer Science — *Richardson, TX, US*
University of Texas at Dallas — *Aug 2025 - Present*
Advisor: *Prof.* Yu Xiang

M.S in Electrical Engineering — *Los Angeles, CA, US*
University of Southern California — *Jan 2020 - Dec 2021*

B.E in Electrical Information Engineering — *Beijing, China*
Beijing University of Technology (Honors College) — *Sept 2015 - Jul 2019*

Publications & Datasets

1. SPUR: Scaling Reward Learning from Human Demonstrations
   Anthony Liang*, Yigit Korkmaz*, **Jiahui Zhang***, Jesse Zhang*, Abrar Anwar, Sidhant Kaushik, Yufei Wang, Yu Xiang, David Held, Dieter Fox, Abhishek Gupta, Stephen Tu^{+}, Erdem Biyik^{+}
   In Submission

2. ReWiND: Language-Guided Rewards Teach Robot Policies without New Demonstrations
   Jiahui Zhang*, Yusen Luo*, Abrar Anwar*, Sumedh A. Sontakke, Joseph Lim, Jesse Thomason, Erdem Bıyık, Jesse Zhang
   *Conference on Robot Learning (**CoRL**)*, 2025, Oral [Project] [Paper] [Code] [Video]

3. Bootstrap Your Own Skills: Learning to Solve New Tasks with Large Language Model Guidance
   Jesse Zhang, **Jiahui Zhang**, Karl Pertsch, Ziyi Liu, Xiang Ren, Minsuk Chang, Shao-Hua Sun, Joseph J. Lim
   *Conference on Robot Learning (**CoRL**)*, 2023, Oral (top 6.6%) [Project] [Paper] [Code] [Video]

4. SPRINT: Scalable Semantic Policy Pretraining via Language Instruction Relabeling
   Jesse Zhang, Karl Pertsch, **Jiahui Zhang**, Joseph J Lim
   *International Conference on Robotics and Automation (**ICRA**)*, 2024 [Project] [Paper] [Code]

5. CLVR Jaco Play Dataset
   Shivin Dass, Jullian Yapeter, Jesse Zhang, **Jiahui Zhang**, Karl Pertsch, Stefanos Nikolaidis, Joseph J. Lim
   Part of *Open-X Embodiment Dataset* [Website]

6. Design, Analysis and Experiments of Bionic Hexapod Robot with Multilayer C-shape Legs for Unstructured Terrain
   Xiaoqing Zhu, Dengyu Ran, Chentong Xiang,**Jiahui Zhang**, Ge Li, Zhicheng Chen, Yuwen Fang
   *World Congress on Intelligent Control and Automation (**WCICA**)*, 2018

Research Experience

Intelligent Robotics and Vision Lab — *Aug 2025 - Present*
Advisor: *Prof.* Yu Xiang — *Richardson, TX, US*

- Leading project on training, fine-tuning Visual-Language-Action models.

Learning and Interactive Robot Autonomy Lab *May 2024 - Aug 2025*

Advisor: *Prof.* Erdem Biyik *Los Angeles, CA, US (Remote)*

- Co-leading project: Language-Guided Rewards Teach Robot Policies without New Demonstrations
- Publish one paper in CoRL 2025.

Horizon Robotics General AI Lab *Jan 2023 - Jul 2023*

Advisor: *Dr.* Haonan Yu, *CEO.* Wei Xu *Cupertino, CA, US (Remote)*

- Led project: Cross Domain Imitation Learning Through MPC.

Cognitive Learning for Vision and Robotics Lab *Aug 2021 - Jan 2023*

Advisor: *Prof.* Joseph J Lim *Los Angeles, CA, US*

- Completed two projects using a large language model to guide robots in learning long-horizon skills.
- Published two papers in CoRL 2023 and ICRA 2024.

USC Media Communications Lab *Jan 2021 - May 2021*

Advisor: *Prof.* C.-C. Jay Kuo *Los Angeles, CA, US*

- Co-led project: Coarse-to-fine Image Deonsing with Spectrum Decomposition.

Beijing University of Technology Multimedia Information Processing and Imaging Lab *Jul 2018 - Jun 2019*

Advisor: *Prof.* Luheng Jia *Beijing, China*

- Completed project: Video Rate Control via Saliency Detection.

Beijing University of Technology Artificial Intelligence and Robotics Research Center *Dec 2016 - Mar 2018*

Advisor: *Prof.* Xiaoqing Zhu *Beijing, China*

- Designed and implemented a hexapod robot and its control algorithm.

Services

Conference Reviewer **ICRA 2026, IROS 2024**

Workshop Reviewer **RSS 2025, RLC 2025, CoRL 2025**

Award & Scholarship

2025 **Best Paper Award (ReWiND),** OOD Workshop at RSS *Los Angeles, CA, US*

2025 **Best Paper Nomination (ReWiND),** RoboReps Workshop at RSS *Los Angeles, CA, US*

2022 **Best Paper Runner-up(SPRINT),** LangRob Workshop at CoRL *Auckland, NZ*

2018 **Presidential Scholarship (Top 10 Teams),** Beijing University of Technology *Beijing, China*

2017 **Outstanding Research Achievement Award,** Beijing University of Technology, Fan Gongxiu Honors College *Beijing, China*