

Yuchen Cui

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Computer Science Department
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Academic Employment

July 2024 – current	Assistant Professor in Computer Science University of California, Los Angeles
Jan. 2022 – June 2024	Postdoctoral Researcher in Computer Science Stanford University

Education

Aug. 2015 – Dec. 2021	Doctor of Philosophy in Computer Science The University of Texas at Austin <i>Thesis Title:</i> Efficient Algorithms for Low-effort Human Teaching of Robots
Aug. 2011 – May 2015	Bachelor of Science in Computer Engineering (Highest Distinction) Purdue University (West Lafayette)

Teaching

Fall 2025	CS296: Interactive Robot Learning	UCLA
Spring 2025	CS188: Introduction to Robotics	UCLA
Fall 2024	CS296: AI Applications in Robotics	UCLA
2017-2018	CS343: Artificial Intelligence	UT Austin
2015-2016	CS313E: Elements of Software Design	UT Austin
2014	ECE337: ASIC Design Laboratory	Purdue University
2013	ECE364: Software Engineering Tools Lab	Purdue University
2012-2013	CS159: Programming Applications for Engineers	Purdue University

Honors and Awards

ICRA Best Conference Paper	2024
EECS Rising Stars	2023
Human-centered AI Institute Postdoctoral Fellow, Stanford University	2023
Best Paper Finalist: RSS Workshop on Scaling Robot Learning	2022
Graduate School Professional Development Award, UT Austin	2022
RoboCup@Home Domestic Standard Platform League, 3rd Place	2017
Intel-Cornell Cup, 2nd Place	2015
College of Engineering Dean's List, Purdue University	2011-2015

Industry Experience

May-Oct. 2021	Facebook AI Research	Remote (Pittsburgh, Pennsylvania)
May-Aug. 2019	Diligent Robotics	Austin, Texas
May-Aug. 2018	Honda Research Institute USA	Mountain View, California

Professional Activities

- Guest Lecturer, Invited talk on *Zero-Shot Robot Control with Large Language Models*, Oct. 2025, USC
- Speaker, Invited talk on *Interactive Robot Learning*, Sep. 2025, University of Utah
- Speaker, Invited talk on *Interactive Robot Learning*, Sep. 2025, Cornell University
- Speaker, 2nd International Conference on Artificial Intelligence & Machine Learning, Jun. 2025, Seattle
- Guest Lecturer, Invited talk on *Interactive Robot Learning*, May. 2025, UC Riverside
- Keynote Speaker, 10th Annual Conference on Vision and Intelligent Systems, Dec. 2024, University of Waterloo
- Speaker, Invited Talk on *Interactive Robot Learning from Non-Expert Human Teachers*, Mar. 2024, Georgia Tech
- Speaker, Invited Talk on *Interactive Robot Learning from Non-Expert Human Teachers*, Mar. 2024, ASU
- Speaker, Invited Talk on *Interactive Robot Learning from Non-Expert Human Teachers*, Feb. 2024, UCSB
- Speaker, Invited Talk on *Interactive Robot Learning from Non-Expert Human Teachers*, Feb. 2024, UT Austin
- Speaker, Spotlight Talk on *Robot Learning from Non-Expert Teachers*, Oct. 2023, Bay Area Robotics Symposium
- Speaker, Invited talk on *Online Language Correction via Shared Autonomy*, Mar. 2023, Georgia Tech
- Speaker, Invited talk on *Leveraging Foundation Models for Zero-shot Task Specification for Robotics*, Oct. 2022, Mila
- Speaker, Invited talk on *Designing Human-Aware Learning Agents*, Jul. 2022, Simons Institute
- Speaker, Invited talk on *Robot Learning from Low-effort Human Teaching*, Apr. 2021, Stanford University
- Speaker, Invited talk on *Learning from Low-effort Human Teaching*, Feb. 2021, UC Berkeley
- Speaker, Invited talk on *Learning from Implicit Human Feedback*, Nov. 2020, Tufts University
- Senior Organizer, RSS 2025 workshop on Mobile Manipulation: Emerging Opportunities & Contemporary Challenges

- Organizer, RLC 2024 Workshop on *Reinforcement Learning beyond Rewards*
- Organizer, RSS 2020 Workshop on *Advances & Challenges in Imitation Learning for Robotics*
- Session Chair, 2nd International Conference on Artificial Intelligence & Machine Learning, Jun. 2025, Seattle
- Co-Chair, Teleoperation Session, International Conference on Robotics and Automation (ICRA) 2025
- Co-Chair, Imitation Learning session, International Conference on Intelligent Robots and Systems (IROS) 2023
- Area Chair, Conference on Robot Learning (CoRL) 2025
- Area Chair, International Conference on Learning Representations (ICLR) 2025
- Reviewer, Conference on Robot Learning (CoRL) 2020, 2021, 2022, 2023, 2024
- Reviewer, Conference on Neural Information Processing Systems (NeurIPS) 2020, 2021, 2023, 2024, 2025
- Reviewer, Robotics: Science and Systems (RSS) 2019, 2022, 2023, 2024, 2025
- Reviewer, International Conference on Learning Representations (ICLR) 2021, 2022, 2024
- Reviewer, International Conference on Human-Robot Interaction (HRI) 2022, 2023
- Reviewer, International Conference on Intelligent Robots and Systems (IROS) 2021, 2023
- Reviewer, International Conference on Machine Learning (ICML) 2021
- Reviewer, International Conference on Robotics and Automation (ICRA) 2019, 2021, 2022, 2023, 2025
- Reviewer, ACM Transactions on Human-Robot Interaction 2018, 2023

Outreach

- Mentor, Stanford SURF: advise undergraduate visiting research interns (2024)
- Mentor, Stanford UGVRI: advise undergraduate visiting research interns (2023)
- Volunteer Instructor, Covington Elementary: teach concepts of robotics to elementary school students (2023)
- Mentor, Stanford CURIS: advise undergraduate research interns in CS (2022)
- Mentor, UTCS Directed Research Program: lead paper discussions with undergraduate students (2021)
- Exhibitor, Explore UT: demonstrate robots for campus visitors (2018)
- Volunteer Instructor, Hour of Code: teach one-hour coding classes at a local middle school (2016)

Advising and Thesis Committee

- Phd Advisor
 - Xu Yan
 - Omar Rayyan
- Master Thesis/Capstone Supervisor
 - Metin Alp Dogan
 - Tracey Yee Hsin Tay
 - Soham Kulkarni

- Vani Agrawal
- Kajal Sharma
- Undergraduate Research Supervisor
 - Raayan Dhar
 - Edward Tianli Sun
 - Jonathan Seyeong Ouyang
 - Yike Shi
 - Amit Rand
- PhD Committee Member
 - Chang Yu
 - Johannes Lee
 - Cheng-Fu Yang
 - Auguste Hirth

Publications

- [1] *Casper: Inferring Diverse Intents for Assistive Teleoperation with Vision Language Models*
 Huihan Liu, Rutav Shah, Shuijing Liu, Jack Pittenger, Mingyo Seo, **Yuchen Cui**, Yonatan Bisk, Roberto Martín-Martín, Yuke Zhu
 Conference on Robot Learning (CoRL), Sep 2025.
- [2] *How to Train Your Robots? The Impact of Demonstration Modality on Imitation Learning*
 Haozhuo Li, **Yuchen Cui**, Dorsa Sadigh
 International Conference on Robotics and Automation (ICRA), May 2025.
- [3] *Statistical guarantees for lifelong reinforcement learning using pac-bayesian theory*
 Zhi Zhang, Chris Chow, Yasi Zhang, Yanchao Sun, Haochen Zhang, Eric Hanchen Jiang, Han Liu, Furong Huang, **Yuchen Cui**, Oscar Madrid Padilla
 International Conference on Artificial Intelligence and Statistics (AISTATS), May 2025
- [4] *Shared Autonomy for Proximal Teaching*
 Megha Srivastava, Reihaneh Iranmanesh, **Yuchen Cui**, Deepak Gopinath, Emily Sarah Sumner, Andrew Silva, Laporsha Dees, Guy Rosman, Dorsa Sadigh
 ACM/IEEE International Conference on Human-Robot Interaction (HRI), Mar 2025
- [5] *FlowRetrieval: Flow-Guided Data Retrieval for Few-Shot Imitation Learning*
 Li-Heng Lin, **Yuchen Cui**, Amber Xie, Tianyu Hua, Dorsa Sadigh
 Conference on Robot Learning (CoRL), Nov 2024.
- [6] *DROC: Distilling and Retrieving Generalizable Knowledge for Robot Manipulation via Language Corrections*
 Lihan Zha, **Yuchen Cui**, Li-Heng Lin, Minae Kwon, Montserrat Gonzalez Arenas, Andy Zeng, Fei Xia, Dorsa Sadigh
 International Conference on Robotics and Automation (ICRA), May 2024.
- [7] *Open X-Embodiment: Robotic Learning Datasets and RT-X Models*
 Open X-Embodiment Collaboration, **Yuchen Cui** et al.
 International Conference on Robotics and Automation (ICRA), May 2024.

- [8] *Data Quality in Imitation Learning.*
 Suneel Belkhale, **Yuchen Cui**, Dorsa Sadigh.
 Conference on Neural Information Processing Systems (NeurIPS), Dec 2023.
- [9] *Gesture-Informed Robot Assistance via Foundation Model*
 Li-Heng Lin, **Yuchen Cui**, Yilun Hao, Fei Xia, Dorsa Sadigh.
 Conference on Robot Learning (CoRL), Nov 2023.
- [10] *HYDRA: Hybrid Robot Actions for Imitation Learning.*
 Suneel Belkhale, **Yuchen Cui**, Dorsa Sadigh. Conference on Robot Learning (CoRL), Nov 2023.
- [11] *Masked Imitation Learning: Discovering Environment-Invariant Modalities in Multimodal Demonstrations*
 Yilun Hao*, Ruinan Wang*, Zhangjie Cao, Zihan Wang, **Yuchen Cui**, Dorsa Sadigh.
 IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS), Oct 2023.
- [12] “*No, to the Right*” – *Online Language Corrections for Robotic Manipulation via Shared Autonomy*
Yuchen Cui*, Sidd Karamcheti*, Raj Palleti, Nidhya Shivakumar, Percy Liang, Dorsa Sadigh.
 ACM/IEEE International Conference on Human-Robot Interaction (HRI), Mar 2023.
- [13] *Can Foundation Models Perform Zero-Shot Task Specification For Robot Manipulation?*
Yuchen Cui, Scott Niekum, Abhinav Gupta, Vikash Kumar, Aravand Rajeswaran.
 Learning for Dynamics & Control Conference (L4DC), Jun 2022.
- [14] *Understanding the Relationship between Interactions and Outcomes in Human-in-the-Loop Machine Learning.*
Yuchen Cui, Pallavi Koppol, Henny Admoni, Scott Niekum, Reid Simmons, Aaron Steinfeld, Tesca Fitzgerald.
 The International Joint Conference on Artificial Intelligence (IJCAI), Montréal, Québec. Aug 2021.
- [15] *The EMPATHIC Framework for Task Learning from Implicit Human Feedback.*
Yuchen Cui*, Qiping Zhang*, Allesandro Allievi, Peter Stone, Scott Niekum, and W. Bradley Knox.
 Conference on Robot Learning (CoRL), Nov 2020.
- [16] *Uncertainty-Aware Data Aggregation for Deep Imitation Learning.*
Yuchen Cui, David Isele, Scott Niekum and Kiko Fujimura.
 IEEE International Conference on Robotics and Automation (ICRA), May 2019.
- [17] *Risk-Aware Active Inverse Reinforcement Learning.*
Yuchen Cui, Daniel Brown and Scott Niekum.
 Conference on Robot Learning (CoRL), Oct 2018.
- [18] *Active Reward Learning from Critiques.*
Yuchen Cui and Scott Niekum.
 IEEE International Conference on Robotics and Automation (ICRA), May 2018.
- [19] *Modeling Sensory-Motor Decisions in Natural Behavior*
 Ruohan Zhang, S. Zhang, M. H. Tong, **Yuchen Cui**, C. A. Rothkopf, Dana H. Ballard and Mary M. Hayhoe.
 PLOS Computational Biology, 2018.
- [20] *Indoor Follow Me Drone*
 Wenguang Mao, Zaiwei Zhang, Lili Qiu, Jian He, **Yuchen Cui**, and Sun Yun.
 International Conference on Mobile Systems, Applications, and Services (MobiSys), Jun 2017.
- [21] *Distilling and retrieving generalizable knowledge for robot manipulation via language corrections.*
 Lihan Zha, **Yuchen Cui**, Li-Heng Lin, Minae Kwon, Montse G. Arenas, Andy Zeng, Fei Xia, and Dorsa Sadigh.
 In 2nd Workshop on Language and Robot Learning: Language as Grounding, 2023.
- [22] *Shared Autonomy for Robotic Manipulation with Language Corrections.*
 Sidd Karamcheti, Raj Palleti, **Yuchen Cui**, Percy Liang, Dorsa Sadigh.
 Workshop on Learning with Natural Language Supervision ACL, May 2022.

- [23] *Aux-AIRL: End-to-End Self-Supervised Reward Learning for Extrapolating beyond Suboptimal Demonstrations.*
Yuchen Cui, Bo Liu, Akanksha Saran, Stephen Giguere, Peter Stone, and Scott Niekum.
ICML Workshop on Self-Supervised Learning for Reasoning and Perception, July 2021.
- [24] *Reaction Modeling for Deriving General Task Information from Implicit Human Feedback.*
Yuchen Cui, Qiping Zhang, Sahil Jain, Alessandro Allievi, Peter Stone, Scotte Niekum, and W. Bradley Knox.
HRI Workshop on Exploring Applications for Autonomous Non-Verbal Human-Robot Interactions, Mar 2021.
- [25] *Demonstration of the EMPATHIC Framework for Task Learning from Implicit Human Feedback.*
Yuchen Cui, Qiping Zhang, Sahil Jain, Alessandro Allievi, Peter Stone, Scotte Niekum, and W. Bradley Knox.
AAAI-21 Demonstrations Program, Feb 2021.
- [26] *Active learning from critiques via bayesian inverse reinforcement learning.*
Yuchen Cui and Scott Niekum.
RSS Workshop on Mathematical Models, Algorithms, and Human-Robot Interaction. Jul 2017.
- [27] *Trajectory-based visual analytics for anomalous human movement analysis using social media.*
Junghoon Chae, **Yuchen Cui**, Yun Jang, Guizhen Wang, Abish Malik, David S. Ebert.
EuroVis Workshop on Visual Analytics (EuroVA), May 2015.
- [28] *Dissertation: Efficient algorithms for low-effort human teaching of robots*
Yuchen Cui (Committee: Scott Niekum, Peter Stone, Dana Ballard, Dorsa Sadigh)
The University of Texas at Austin, Dec. 2021.