

Xiang Zheng

CONTACT INFORMATION	G2322, AC1 City University of Hong Kong Kowloon, Hong Kong SAR, China	Email: xzheng253-c@my.cityu.edu.hk Webpage: https://x-zheng16.github.io GitHub: https://github.com/x-zheng16
RESEARCH INTERESTS	Reinforcement Learning, Trustworthy AI, Generative AI, Robot Learning	
EDUCATION	City University of Hong Kong , Hong Kong SAR, China <i>Ph.D. in Computer Science</i> Supervisor: Prof. Cong Wang Fields: Reinforcement Learning, Trustworthy AI GPA: 4.00/4.00	2020-2024
	Tsinghua University , Beijing, China <i>M.S. in Control Science and Engineering</i> Supervisor: Prof. Tao Zhang Fields: Reinforcement Learning, Intelligent Robotics GPA: 3.55/4.00	2016-2019
	Beihang University , Beijing, China <i>B.S. in Automation, B.S. in Mathematics (Dual Degree)</i> Selected into the Shen Yuan Honors College (1/200) GPA: 3.74/4.00 (222.5 credits, 92 courses)	2012-2016
RESEARCH & WORK EXPERIENCE	City University of Hong Kong , Hong Kong SAR, China <i>Postdoctoral Fellow</i> Supervisor: Prof. Cong Wang Topic: Reinforcement learning for trustworthy AI	2024-present
	City University of Hong Kong , Hong Kong SAR, China <i>Graduate Research Assistant</i> Supervisor: Prof. Cong Wang Topic: Efficient exploration strategies for reinforcement learning - Designed constrained intrinsic motivation for unsupervised reinforcement learning. This work is accepted by IJCAI 2024. - Developed intrinsically motivated adversarial policy against robotic RL agents. This work is accepted by DSN 2024. - Task-aware intrinsic motivation for sparse-reward reinforcement learning. This work is submitted to ICRA 2025. - Curiosity-driven auditing for Large Language Models. This work is submitted to AAAI 2025.	2020-2024

Xi'an Jiaotong University , Xi'an, China <i>Visiting Researcher</i> Supervised by Prof. Chao Shen Topic: Towards efficient and robust reinforcement learning	2022-2023
Huawei , Xi'an, China <i>Senior Researcher</i> Topic: Optimal scheduling for cloud computing	2020
Xi'an Jiaotong University , Xi'an, China <i>Visiting Researcher</i> Supervised by Prof. Chao Shen & Dr. Xingjun Ma Topic: Adversarial machine learning	2019
Tsinghua University , Beijing, China <i>Graduate Research Assistant</i> Supervised by Prof. Tao Zhang Topic: Intelligent space robot	2016-2019
National Institute of Informatics , Tokyo, Japan <i>Research Intern</i> Supervised by Prof. Tetsunari Inamura Topic: Intelligent robotics	2018
The University of New South Wales , Sydney, Australia <i>Research Intern</i> Supervised by Prof. Elias Aboutanios Topic: Spacecraft de-orbiting control	2016

PUBLICATION

Journal

- J-1. Yuxue Cao, Shengjie Wang, **Xiang Zheng**, Wenke Ma, Xinru Xie, Lei Liu, “Reinforcement learning with prior policy guidance for motion planning of dual-arm free-floating space robot,” *Aerospace Science and Technology*, vol. 136, pp. 108098, 2023.
Impact Factor 5.6, JCR Rank Q1 (3/34).
- J-2. Shengjie Wang, Yuxue Cao, **Xiang Zheng**, Tao Zhang, “A learning system for motion planning of free-float dual-arm space manipulator towards non-cooperative object,” *Aerospace Science and Technology*, vol. 131, pp. 107980, 2022.
Impact Factor 5.6, JCR Rank Q1 (3/34).
- J-3. Shengjie Wang, Yuxue Cao, **Xiang Zheng**, Tao Zhang, “Collision-free trajectory planning for a 6-DoF free-floating space robot via hierarchical decoupling optimization,” *IEEE Robotics and Automation Letters (RA-L)*,

vol. 7, no. 2, pp. 4953–4960, 2022.

Impact Factor 5.2, JCR Rank Q2 (10/30).

Conference

- C-1. **Xiang Zheng**, Xingjun Ma, Chao Shen, and Cong Wang, “Constrained intrinsic motivation for reinforcement learning,” in *Proceedings of the 33rd International Joint Conference on Artificial Intelligence (IJCAI)*, 2024.
Acceptance Rate 791/5651=14.00%
- C-2. **Xiang Zheng**, Xingjun Ma, Shengjie Wang, Xinyu Wang, Chao Shen, and Cong Wang, “Toward evaluating robustness of reinforcement learning with adversarial policy,” in *Proceedings of the 54th Annual IEEE/IFIP International Conference on Dependable Systems and Networks (DSN)*, 2024.
Acceptance Rate 42/203=20.69%
- C-3. Shengjie Wang, Fengbo Lan, **Xiang Zheng**, Yuxue Cao, Oluwatosin Oseni, Haotian Xu, Tao Zhang, Yang Gao, “A policy optimization method towards optimal-time stability,” in *Proceedings of the 7th Conference on Robot Learning (CoRL)*, 2023.
- C-4. Shengjie Wang, **Xiang Zheng**, Yuxue Cao, Tao Zhang, “A Multi-Target Trajectory planning of a 6-DoF free-floating space robot via reinforcement learning,” in *Proc. of the 34th IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS)*, 2021.
- C-5. Shengjie Wang, Yuxue Cao, **Xiang Zheng**, Tao Zhang, “An end-to-end trajectory planning strategy for free-floating space robots,” in *Proc. of the 40th Chinese Control Conference (CCC)*, 2021.
- C-6. Shihao Zhao, Xingjun Ma, Xiang Zheng, James Bailey, Jingjing Chen, Yu-Gang Jiang, “Clean-label backdoor attacks on video recognition models,” in *Proc. of IEEE/CVF Conference on Computer Vision and Pattern Recognition (CVPR)*, 2020.
Acceptance Rate 1470/6656 = 22.09%
- C-7. Xiang Zheng, Ziwei Wang, Tao Zhang, “Robust finite-time attitude tracking control for nonlinear quadrotor with uncertainties and delays,” in *Proc. of IEEE International Conference on Robotics and Biomimetics (ROBIO)*, 2017.

INVITED
TALKS

Online Meeting, Griffith University
Intrinsically Motivated Adversarial Policy

2024

Melbourne Connect, The University of Melbourne
Towards Efficient Evasion Attacks Against RL

2024

AWARDS &
HONORS

IJCAI Travel Grant
IJCAI Organization and AIJ Division

2024

Amount: USD 500	
International Conference Grant City University of Hong Kong Amount: HKD 10,000	2024
DSN Student Travel Grant DSN Student Travel Awards Committee Amount: USD 1,500	2024
Research Activities Fund City University of Hong Kong Amount: HKD 96,000	2022-2023
Institutional Research Tuition Grant City University of Hong Kong Amount: HKD 168,384	2020-2024
CityU Presidential PhD Scholarship City University of Hong Kong Amount: HKD 1,353,120	2020-2024
NII MOU Research Activities Grant National Institute of Informatics, Japan Amount: JPY 68,400	2018
CSC Scholarship China Scholarship Council Amount: AUD 6,400	2016
Stars of Advanced Engineering Shen Yuan Honors College, Beihang University The highest honor at Shen Yuan Honors College (2/50)	2015
TEACHING & EXPERIENCE	
Teaching Assistant , City University of Hong Kong CS5293, Topics on Information Security	Semester B 2023/24
Teaching Assistant , City University of Hong Kong CS4394, Information Security and Management	Semester A 2023/24
Teaching Assistant , City University of Hong Kong CS4293, Topics in Cybersecurity CS5293, Topics on Information Security	Semester B 2021/22
Teaching Assistant , City University of Hong Kong	Semester A

CS4394, Information Security and Management
CS5294, Information Security Technology Management **2021/22**

Teaching Assistant, City University of Hong Kong
CS4293, Topics in Cybersecurity
CS6290, Privacy-enhancing Technologies **Semester B**
2020/21

Teaching Assistant, City University of Hong Kong
CS2310 & CS2311, Computer Programming **Semester A**
2020/21

PROFESSIONAL ACTIVITY **Program Committee Member**
ICLR 2025

Journal Reviewer
TDSC, TC

External Conference Reviewer
ESORICS 2022, AsiaCCS 2022, WPES 2021, RAID 2021, ACISP 2021

External Journal Reviewer
IoT-J, CJE

MISC. Language: Python, C/C++
Framework: PyTorch
Simulator: MuJoCo
Platform: Tianshou, Stable Baselines, CleanRL, TRL, etc.
Environment: Linux/Unix, macOS and Windows
Fluent in English and Chinese