

WENTAO ZHANG

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🌐 <https://github.com/ZWT006>

🎓 Google Scholar
🌐 <https://zwt006.github.io/>

EDUCATION

- University of Tokyo, Tokyo, Japan** Oct. 2025 – Present
Ph.D. Student in Mechanical Engineering, School of Engineering
Supervisor: Senior Lecturer Moju Zhao
- Huazhong University of Science and Technology, Wuhan, China** Sep. 2022 – Jun. 2025
M.Sc in Control Science and Engineering, School of Artificial Intelligence and Automation
Supervisor: Prof. Lijun Zhu; GPA: 91.96/100
- Northeastern University at Qinhuangdao, Qinhuangdao, China** Sep. 2018 – Jun. 2022
B.Sc in Measurement and Control Technology and Instrumentation, School of Control Engineering
Supervisor: Assoc. Prof. Lu Cai; GPA: 92.22/100

RESEARCH INTERESTS

Develop autonomous robotic systems with superhuman capabilities to integrate into human life.

RESEARCH EXPERIENCE

- OpenRobotLab, Shanghai AI Lab, Shanghai, China** Jun. 2025 – Oct. 2025
Research Intern, mentored by Dr. Jingbo Wang
Topic: Whole-body Humanoid-Object Interaction

REPRESENTATIVE PUBLICATIONS

(* shows equal contribution)

- [P3] **Learning Agile and Robust Omnidirectional Aerial Motion on Overactuated Tilttable-Quadrotors** Wentao Zhang, Zhaoqi Ma, Jinjie Li, Huayi Wang, Haokun Liu, Junichiro Sugihara, Chen Chen, Yicheng Chen, and Moju Zhao. (arXiv preprint, Jan. 2026)
- [J3] **Hybrid Dynamics Modeling and Trajectory Planning for Cable-Trailer With Quadruped Robot System** Wentao Zhang, Shaohang Xu, Gewei Zuo, Bolin Li, Jingbo Wang, and Lijun Zhu. (*RA-L*, vol. 11, no. 1, pp. 354–361, Jan. 2026)
- [P1] **PhysHSI: Towards a Real-World Generalizable and Natural Humanoid-Scene Interaction System** Huayi Wang*, Wentao Zhang*, Runyi Yu*, Tao Huang, Junli Ren, Feiyu Jia, Zirui Wang, Xiaojie Niu, Xiao Chen, Jiahe Chen, Qifeng Chen, Jingbo Wang, and Jiangmiao Pang. (arXiv preprint, Sep. 2025)
- [C6] **Agile and Safe Trajectory Planning for Quadruped Navigation with Motion Anisotropy Awareness** Wentao Zhang, Shaohang Xu, Peiyuan Cai, and Lijun Zhu. (*IROS 2024*)

OTHER PUBLICATIONS

- [P5] **MoRI: Mixture of RL and IL Experts for Long-Horizon Manipulation Tasks** Yaohang Xu, Lianjie Ma, Gewei Zuo, Wentao Zhang, Han Ding, and Lijun Zhu. (arXiv preprint, Apr. 2026)
- [P4] **CoFL: Continuous Flow Fields for Language-Conditioned Navigation** Haokun Liu, Zhaoqi Ma, Yicheng Chen, Masaki Kitagawa, Wentao Zhang, Zicen Xiong, Jinjie Li, and Moju Zhao. (arXiv preprint, Mar. 2026)
- [C8] **Towards Adaptable Humanoid Control via Adaptive Motion Tracking** Tao Huang, Huayi Wang, Junli Ren, Kangning Yin, Zirui Wang, Xiao Chen, Feiyu Jia, Wentao Zhang, Junfeng Long, Jingbo Wang, and Jiangmiao Pang. (*ICRA 2026*)
- [C7] **Gallant: Voxel Grid-based Humanoid Locomotion and Local-navigation across 3-D Constrained Terrains** Qingwei Ben, Botian Xu, Kailin Li, Feiyu Jia, Wentao Zhang, Jingping Wang, Jingbo

- Wang, Dahua Lin, and Jiangmiao Pang. (*CVPR 2026*, pp. 28086–28095)
- [P2] **Humanoid Goalkeeper: Learning from Position Conditioned Task-Motion Constraints** Junli Ren, Junfeng Long, Tao Huang, Huayi Wang, Zirui Wang, Feiyu Jia, **Wentao Zhang**, Jingbo Wang, Ping Luo, and Jiangmiao Pang. (arXiv preprint, Oct. 2025)
- [J2] **A Whole-Body Disturbance Rejection Control Framework for Dynamic Motions in Legged Robots** Bolin Li, **Wentao Zhang**, Xuecong Huang, Lijun Zhu, and Han Ding. (*RA-L*, vol. 10, no. 10, pp. 9774–9781, Oct. 2025)
- [C5] **KLILLO: Kalman Filter based LiDAR-Inertial-Leg Odometry for Legged Robots** Shaohang Xu, **Wentao Zhang**, and Lijun Zhu. (*IROS 2024*)
- [C4] **Optimal Prescribed-Time Control based Reactive Planning System for Quadruped Robot Navigation** Shaohang Xu, **Wentao Zhang**, Chin Pang Ho, and Lijun Zhu. (*ICRA 2024*)
- [C3] **Observer-based Distributed MPC for Collaborative Quadrotor-Quadruped Manipulation of a Cable-Towed Load** Shaohang Xu, Yi'an Wang, **Wentao Zhang**, Chin Pang Ho, and Lijun Zhu. (*ICRA 2024*; Finalist for the Best Conference Paper Award, the Best Student Paper Award, and the Best Paper Award on Multi-Robot Systems)
- [C2] **Distributionally Robust Chance Constrained Trajectory Optimization for Mobile Robots within Uncertain Safe Corridor** Shaohang Xu, Haolin Ruan, **Wentao Zhang**, Yi'an Wang, Lijun Zhu, and Chin Pang Ho. (*ICRA 2024*)
- [J1] **Optimization-Based Flocking Control and MPC-Based Gait Synchronization Control for Multiple Quadruped Robots** Kaige Liu, Lijing Dong, Xin Tan, **Wentao Zhang**, and Lijun Zhu. (*RA-L*, vol. 9, no. 2, pp. 1929–1936, Feb. 2024)
- [C1] **Distributed Model Predictive Formation Control with Gait Synchronization for Multiple Quadruped Robots** Shaohang Xu, **Wentao Zhang**, Lijun Zhu, and Chin Pang Ho. (*ICRA 2023*)

ACADEMIC SERVICE

- Reviewer: T-RO, RA-L, CoRL, ICRA, IROS

SKILLS

- *Languages*: Mandarin (native), English
- *Programming*: Python, C/C++, MATLAB
- *Robotics & Simulation*: ROS, PyTorch, Isaac Lab, Isaac Sim, MuJoCo, Docker
- *Hardware & Prototyping*: Embedded systems, circuit/PCB design, SolidWorks, 3D printing

AWARDS & HONORS

- Huazhong University of Science and Technology Outstanding Graduate (2025)
- Finalist for the Best Conference Paper Award (ICRA 2024)
- Finalist for the Best Student Paper Award (ICRA 2024)
- Finalist for the Best Paper Award on Multi-Robot Systems (ICRA 2024)
- Xiaomi Scholarship for Postgraduate Students (2023)
- Northeastern University Outstanding Graduate (2022)
- Northeastern University Outstanding Graduation Thesis (2022)
- National Inspiration Scholarship for Undergraduates (2020, 2021)
- National Scholarship for Undergraduates (2019)