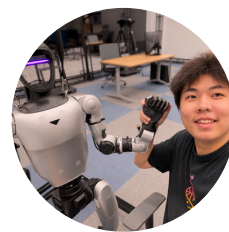


# Chongyang Xu (许重阳)

🏠 Homepage 📍 College of Computer Science, Sichuan University (Wangjiang Campus)

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I'm a Ph.D. student passionate about **Physical AI and Robotics**. My research journey evolved from human motion capture and social behavior recognition into embodied AI, now focusing on **world action models, humanoid control, and loco-manipulation**.



## EDUCATION

Sichuan University (四川大学), Chengdu, China

Ph.D. student in Computer Science and Technology

B.Eng. in Software Engineering

Advisor: Prof. Ziliang Feng

Sept. 2023 – Present (Expected Graduation: Jun. 2028)

Sept. 2019 – Jun. 2023

## INTERNSHIP EXPERIENCE

**Tongyi Robotics, Alibaba Group (通义具身实验室)** Embodied Intern, working with Yilun Chen Feb. 2026 – Present  
Research on **world action models (WAM)** and **humanoid loco-manipulation**; WAM foundation model pretraining on **128×H100**. Hands-on debugging **Unitree G1**, reproducing SONIC-based VLA for loco-manipulation. Independently won **1<sup>st</sup> Place (¥1M prize)** in Physical AI Competition (Embodied Track), G1 Humanoid Loco-Manipulation Door-Opening.

**Dexmal (原力灵机)** Research Intern, mentored by Shuaicheng Liu Mar. 2025 – Feb. 2026  
Reproduced VLA policies ( $\pi$ -series) and researched bimanual manipulation with 3D representations (**ICRA 2026, CVPR 2026**); won **1<sup>st</sup> Prize** in RoboTwin Challenge (CVPR 2025). End-to-end data collection, algorithm design, and real-robot deployment on ALOHA. Co-designed RoboChallenge; tuned X-VLA on 48 H20 GPUs, **0.9B surpassing  $\pi_0$  (3B)**.

**MEGVII (旷视科技)** Research Intern, mentored by Shuaicheng Liu Sept. 2024 – Mar. 2025  
Built simulation pipeline integrating PyBullet with Blender for deformable objects (fluids, soft bodies, cloth). Developed multimodal IL + RL pipeline for contact-rich manipulation; won **1<sup>st</sup> Place** in ManiSkill-ViTac Challenge (CVPR 2025).

## COMPETITIONS

**1<sup>st</sup> Place - Physical AI Competition, Embodied AI Track** Shenzhen AI Industry Association, Apr. 2026  
Unitree G1 humanoid autonomous door-opening based on SONIC locomotion control; awarded ¥1M shared prize.

**1<sup>st</sup> Place - ManiSkill-ViTac Challenge Track 1 & 3** Embodied AI Workshop, CVPR 2025  
Multimodal visuotactile IL + RL for closed-loop control; optimized tactile sensor geometry.

**1<sup>st</sup> Prize - RoboTwin Challenge (Sim Round 1 & Real-World Track)** MEIS Workshop, CVPR 2025  
Dual-arm VLA models ( $\pi_0$ , RDT) for bimanual collaboration in simulation and real-world deployment.

## PUBLICATIONS

**Action-Geometry Prediction with 3D Geometric Prior for Bimanual Manipulation.** Full list at Homepage

Chongyang Xu, Haipeng Li, Cheng Shen, Haoqiang Fan, Ziliang Feng, Shuaicheng Liu.

Proceedings of the Computer Vision and Pattern Recognition Conference (CVPR), 2026.

**HeRO: Hierarchical 3D Semantic Representation for Pose-aware Object Manipulation.**

Chongyang Xu, Cheng Shen, Haipeng Li, Haoqiang Fan, Ziliang Feng, Shuaicheng Liu.

IEEE International Conference on Robotics and Automation (ICRA), 2026.

**Multi-Scale Hypergraph Relational Reasoning for Weakly Supervised Recognition of Group Activities.**

Chongyang Xu, Runtian Zheng, Ziliang Feng, Chengfang Zhang.

IEEE International Conference on Multimedia and Expo (ICME), 2025. (Oral presentation)

**RoboChallenge: Large-scale Real-robot Evaluation of Embodied Policies.**

Adina Yakefu, Bin Xie, Chongyang Xu, Enwen Zhang, Erjin Zhou, et al.

arXiv preprint arXiv:2510.17950, 2025. **First Large-scale Real-world Robot Benchmark**

## SKILLS

- **Robotics:** Hands-on debugging, calibration, and real-robot deployment across diverse platforms: **Unitree G1** (humanoid locomotion and loco-manipulation), **ALOHA** (Cobot Magic, DOS-W1 bimanual), **Franka, UR5, ARX5**; proficient in teleoperation data collection, joint-space/Cartesian pose control, ROS/DDS communication, and sensor integration.
- **Algorithms:** VLA foundation models ( $\pi$ -series, RDT, X-VLA), diffusion policies (DP, DP3), ACT, imitation learning, reinforcement learning, flow matching; 3D foundation models (VGGT,  $\pi^3$ ), DINOv2/Stable Diffusion feature lifting into 3D semantic fields; SONIC-based humanoid locomotion control; human mesh recovery and multi-person 3D reconstruction.
- **Engineering:** End-to-end pipeline from data collection and curation, algorithm design, distributed training, to real-robot deployment and evaluation; PyTorch distributed training on large GPU clusters (**128×H100** for foundation model pre-training, 48×H20 for fine-tuning); large-scale hyperparameter search and ablations; PyBullet + Blender physics simulation, MuJoCo and Isaac Sim for locomotion policy training; server-client multi-robot deployment; Linux, Docker, Git, Wandb.