CHENDONG XIN

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EDUCATION

Tsinghua University, Beijing, China *Aug 2022 – Jun 2026 (Expected)*
Department of Automation
Overall GPA: 3.92/4.0 **Ranking:** 18/145
Relevant Courses: Computer Languages and Programming, Random Mathematics and Statistics, Principles of Artificial Intelligence, Pattern Recognition and Machine Learning
Honors: "HanDe" Scholarship (2024, 4/145)

RESEARCH EXPERIENCE

Compliant Residual DAgger: Improving Real-World Contact-Rich Manipulation with Human Corrections *[Paper] [Website]* *Jun 2025 – Sep 2025*

Advisor: ***Prof. Shuran Song****, Department of Electrical Engineering, Stanford University*

- Developed a compliant intervention interface and a compliant residual policy formulation for Dataset Aggregation in real-world contact-rich manipulation.

My contributions:

- Achieved a 90%+ success rate on four tasks (e.g., belt assembly, cable routing), significantly outperforming baselines.
- Proposed design improvements, including flow matching policy structure and multi-batch training strategy.

NeurIPS 2025.
Submitted to the International Journal of Robotics Research (IJRR); third author.
Human-to-Robot Workshop (CoRL 2025), Best Paper.

Analyzing Key Objectives in Human-to-Robot Retargeting for Dexterous Manipulation *[Paper] [Website]* *Jan 2025 – Apr 2025*

Advisor: ***Prof. Xiang Li****, Department of Automation, Tsinghua University*

- Developed a VR-headset-based real-time teleoperation system for dexterous manipulation tasks.
- Formulated a unified retargeting objective for dexterous human-to-robot hand retargeting.
- Evaluated each objective component via ablation studies in kinematic retargeting and real-world teleoperation.

IEEE Robotics and Automation Practice, 2025; first author.

Hybrid Gripper and Adaptive Strategy for Robust Grasping in Clutter: RGMC Champion Solution *Feb 2025 – May 2025*

Advisor: ***Prof. Xiang Li****, Department of Automation, Tsinghua University*

- Designed a hybrid end-effector integrating a parallel gripper, a suction cup, and an electromagnet.
- Proposed a complete and robust algorithm pipeline for object detection, grasping pose generation, motion planning, and decluttering.
- Deployed the system in competition to sequentially pick specified objects in cluttered scenarios.

Won the ICRA 2025 Robotic Grasping and Manipulation Competition (RGMC) "Picking from Clutter" track; team leader.

SKILLS

Programming: C, C++, Python, MATLAB, Verilog
Software Tools: PyTorch, ROS, Multisim, SolidWorks, LaTeX, Git/Github
Robots: UR5, UR5e, Franka Emika Panda, LEAP Hand
Research: Robot Learning, Manipulation, Imitation Learning, Reinforcement Learning, VLA, Control