

CHEN CHEN

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EDUCATION


Tsinghua University (THU), Beijing, China

Sept. 2020 – Jun. 2024 (expected)

- *Bachelor* of Engineering in Automation
- GPA: 3.7/4.0

Ralavent Courses: Artificial Intelligence (A-), Theory of Automatic Control (A-), Data Structures (A-), Computer Networks (A-), Random Mathematics and Statistics (A-), Synthetical Practice of Electronics System Design (A), Contemporary Electronic System Design (A), Intelligent Systems: Design and Practice (A+), Students Research Training Project (A+).

PUBLICATION

Adaptive Vision-Based Control of Redundant Robots with Null-Space Interaction for Human-Robot Collaboration  

X. Yan, C. Chen and X. Li, *2022 International Conference on Robotics and Automation (ICRA)*

A Complementary Framework for Human-Robot Collaboration with a Mixed AR-Haptic Interface 

X. Yan, Y. Jiang, C. Chen and X. Li, submitted to *IEEE Transactions on Control Systems Technology (TCST)*

Multi-Modal Interaction Control of Ultrasound Scanning Robots with Safe Human Guidance and Contact Recovery 

X. Yan, Y. Jiang, G. Wu, C. Chen, G. Huang and X. Li, submitted to *2023 IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS)*

RESEARCH EXPERIENCE

Intelligent Robotic Manipulation Lab, Dept. of Automation, Tsinghua University

Apr. 2021 – Present

Research Assistant Advisor: Xiang Li

- Designed a novel AR interface for interaction with robots' null space.
 - Some details.
 - Output: ICRA 2022
- Proposed a novel control scheme for human-robot collaboration with a mixed AR-haptic interface.
 - Some details.
 - Output: TCST, under reviewed
- Developed a pHRI system to acquisite the carotid ultrasound while ensuring the safety of the patient.
 - Some details.
 - Output: IROS 2023
- Built a spinal surgery robot and studied HRI within spinal surgery.

Medical Cosmetic Robot Project, Tsinghua Univ. and Peking Union Medical College

Sept. 2022 – Present

Research Assistant Advisor: Gangtie Zheng, Xiao Long

- Developed a novel robotic system for needle injection on the face.
- some details.
- other details.

DISCOVER Lab, Institute for AI Industry Research (AIR), Tsinghua University

Oct. 2022 – Mar. 2023

Research Assistant Advisor: Guyue Zhou

- Developed the official AI for the RoboMaster University Sim2Real Challenge (RMUS) at ICRA 2023.
- some details.

- other details.

SKILLS

Programming C/C++, Python, C#, MATLAB, Julia, Rust, Java

Tools ROS, \LaTeX , Unity3D, Docker, KiCAD, SolidWorks, Blender

Platforms UR5(e), Franka Emika Panda, RoboMaster ep, HoloLens 2, Omega 3, RealSense, Kinect

Languages Chinese (native), English (fluent, GRE 156+170)

HONORS AND AWARDS

- **China National Scholarship**, Ministry of Education of the People's Republic of China Dec. 2022
Highest scholarship given by the Chinese government, *top 0.1%*.
- **Outstanding Project of Student Research Training (SRT) Program**, Tsinghua University Dec. 2022
Top 10% of all SRT projects in Tsinghua.
- **Comprehensive Excellence Award**, Dept. of Automation, Tsinghua University Oct. 2022
Highest honor for students in the Department of Automation, *top 10%*.
- Third Prize in the **RoboMaster University Sim2Real Challenge (RMUS)** at ICRA 2022 Jun. 2022
Ranked 4th among all 117 participating teams in the simulation stage.
- Second Prize in the 23rd **Electronic Design Competition**, Tsinghua University Dec. 2021
Highest level competition in the field of EE/CS in Tsinghua, *ranked 3/51*.
- Second Prize in the 15th **Intelligent Vehicle Competition**, Tsinghua University Apr. 2021
- First Prize in the 33rd **Chinese Chemistry Olympiad** Sept. 2019

PROFESSIONAL ACTIVITIES

Open source contribution: PointCloudLibrary/pcl, mathjax/MathJax, tuna/mirror-web, ripperhe/Bob