Xun Tu

PhD Student · Computer Science (Robotics)

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Education

University of Minnesota, Twin Cities — *Minneapolis, MN, USA*
Doctor of Philosophy in Computer Science (Robotics) — *08/2023 - present*
- Advisor: Prof. Karthik Desingh
- GPA: 3.61/4.0 (Top: 20%)

University of Michigan, Ann Arbor — *Ann Arbor, MI, USA*
Master of Science in Electrical & Computer Engineering — *09/2021 - 04/2023*
- GPA: 4.0/4.0 (Top: 10 %)

University of Michigan, Ann Arbor — *Ann Arbor, MI, USA*
Bachelor of Science in Computer Engineering — *09/2019 - 04/2021*
- GPA: 3.74 (Top: 16 %)
- Capstone project advisor: You know whom

Shanghai Jiao Tong University — *Shanghai, China*
Bachelor of Science in Electrical & Computer Engineering — *09/2017 - 08/2021*
- GPA: 3.72 (Top: 6 %)
- Capstone project advisor: Chenbin Ma

Professional Experience

2023-2025 **Graduate Teaching Assistant**, Computer Science & Engineering Department, University of Minnesota, Twin Cities
2024 **Summer 2024 CS&E GAGE Fellowship**, University of Minnesota, Twin Cities
2022-2023 **Graduate Research Assistant**, Electrical & Computer Engineering Department, University of Michigan, Ann Arbor
2021 **Grader of course EECS 478: Logical Circuits**, Electrical & Computer Engineering Department, University of Michigan, Ann Arbor

Publications

Published

X. Tu and K. Desingh, "SuperQ-GRASP: Superquadrics-Based Grasp Pose Estimation on Larger Objects for Mobile-Manipulation," 2025 IEEE International Conference on Robotics and Automation (ICRA), Atlanta, GA, USA, 2025, pp. 3361-3368, doi: 10.1109/ICRA55743.2025.11127681.

In Prep

GRIT-π: Policy Adaptation in Mobile Object Manipulation

Awards, Fellowships, & Grants

2023 **Summer 2024 CS&E GAGE Fellowship**, Compupter Science & Engineering Department of University of Minnesota, Twin Cities — *$ 1500*

2024 **ICRA 2025 Travel Grant**, RAS Member Support Program — *$ 1000*

Presentations

** presenting author; + mentored undergraduate*

Invited Talks

Autumn 2025. *Fundamental topics in Computer Vision*. Guest Lecture, CSCI 5561, Computer Vision, University of Minnesota, Twin Cities.

Spring 2025. *SuperQ-GRASP: Superquadrics-based Grasp Pose Estimation on Larger Objects for Mobile-Manipulation,*. Guest Lecture, CSCI 5551, Introduction to Intelligent Robotic Systems, University of Minnesota, Twin Cities.

Autumn 2024. *Grasp Pose Esti*. Guest Lecture, CSCI 5980, Deep Rob: Deep Learning for Robotic Manipulation, University of Minnesota, Twin Cities

Contributed Presentations

Xun Tu, Karthik Desingh. 2025. SuperQ-GRASP: Superquadrics-based Grasp Pose Estimation on Larger Objects for Mobile-Manipulation, ICRA 2025, Atlanta, Georgia, USA.

Teaching Experience

Autumn 2025	**CSCI 5561: Computer Vision**, Teaching Assistant
Spring 2025	**CSCI 5551: Introduction to Intelligent Robotic Systems**, Teaching Assistant
Spring 2024	**CSCI 5551: Introduction to Intelligent Robotic Systems**, Teaching Assistant

Mentoring

2025-present	**Zhuoli Xie**, Master of Computer Science, University of Minnesota, Twin Cities

Outreach & Professional Development

Service and Outreach

08/2024	**Welcome Session for New Graduate Students in Computer Science**, Volunteer	*Minneapolis, MN, USA*
09/2018 - 08/2019	**Honor Council of UM-SJTU Joint Institute in Shanghai Jiao Tong University**, Investigator	*Shanghai, China*

Development

Beyond Pick and Place – Unifying Learning-Based and Model-Based Approaches for Contact-Rich Manipulation Attend the workshop as an audience to study the recent progress in robotic manipulation policy learning, especially for the mobile manipulation tasks

Beyond the Lab: Robust Planning and Control in Real World Scenarios Attend the workshop as an audience to study the recent progress in real-world robotic manipulation tasks

Peer Review

1 conference paper reviewed for CoRL (Conference on Robotics Learning)

1 conference paper reviewed for RSS (Robotics: Science and Systems)

1 journal paper reviewed for Science Robotics:

1 conference paper reviewed for ICRA (Internationa Conference on Robotics and Automation)

Professional Memberships

IEEE Membership (student)
IEEE Robotics and Automation Society Membership