# Luzhe Sun

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## RESEARCH INTEREST

- **Embodied grounding with foundation models** in unstructured environments
- **Diffusion models** for action planning, state estimation and trajectory planning
- **Multi-modal reasoning** for robotics planning in wild scenes

## EDUCATION BACKGROUND

**Toyota Technological Institute at Chicago**     **Chicago, US**
*Ph.D. Student in Computer Science, advised by Prof. Matthew R. Walter*     *Sept 2023 - Present*

**University of Chicago**     **Chicago, US**
*Master Program in Computer Science ｜ GPA: 3.77/4.00*     *Sept 2021 - Mar 2023*

**Xiamen University**     **Xiamen, China**
*Bachelor of Software Engineering,* ***Graduate with Honor***     *Sept 2017 - Jul 2021*
Overall GPA: 3.74/4.00  Major GPA: 3.92/4.00   Ranking:4/125

## PUBLICATIONS

- **"Efficient Open World Reasoning with Multimodal Localization"**     In submission
  <u>Luzhe Sun</u>*, Jiading Fang*, Jiawei Zhou, Matthew R. Walter

- **"Consistency Model Speeding Up Shared Autonomy"**     In submission
  <u>Luzhe Sun</u>, Jingtian Ji, Matthew R. Walter

- **"StackGen: Generating Stable Structures from Silhouettes via Diffusion "** Submitted to IROS 2025
  <u>Luzhe Sun</u>*, Takuma Yoneda*, Samuel W. Wheeler, Tianchong Jiang, Matthew R. Walter

- **"To the Noise and Back: Diffusion for Shared Autonomy"**     RSS 2023
  Takuma Yoneda, <u>Luzhe Sun</u>, Ge Yang, Bradly Stadie, Matthew R. Walter

- **"Decompositional Quantum Graph Neural Network"**
  Xing Ai, <u>Luzhe Sun</u>, Junchi Yan, Zhihong Zhang and Edwin Hancock

## AWARDS & ACHIEVEMENTS

- Honored Graduates Student, Xiamen University     2021
- **National Scholarship** (TOP 0.2% nationwide), Chinese Ministry of Education     2020
- **National Scholarship** (TOP 0.2% nationwide), Chinese Ministry of Education     2019
- **National Second Prize** of China Undergraduate Mathematical Contest in Modeling     2019
- **National Third Prize** of China Students Service Outsourcing Competition     2019
- Huang Xilie Scholarship of Xiamen University in 2019 (2/200)     2019

## PROFESSIONAL SERVICE

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|---|---|
| TTIC Summer Workshop on Multimodal Artificial Intelligence | 2024.08 — **Organizer** |
| Midwest Robotics Workshop | 2024.04 — **Volunteer** |
| Girls who code | 2023.10 — **Volunteer** |
| 4th China "Internet +" College Studentsand Entrepreneurship Competition | 2018.10 — **Volunteer** |

## SKILLS

- **Tools/Plateform**: Git, Docker, MATLAB, Navicat, Postman, Huggingface
- **Coding Frameworks**: PyTorch, TensorFlow, Linux, Bash
- **Programming**:  Python, C/C++, SQL, HTML