# Sitong Wang

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South China University of Technology, Guangzhou, China

#### **OBJECTIVE**

Seeking 2026-fall Master or Ph.D. student position in Computer Vision to leverage my expertise in 3D Reconstruction and Generation. Aiming to contribute to innovative projects at the intersection of 3D perception and interaction, reconstruction and generation and practical problem-solving in fields such as autoamtic driving, virtual reality, augmented reality and digital human.

#### **EXPERIENCE**

• South China University of Technology [

10/2024 - present

Undergraduate Intern

Guangzhou, China

 We propose TraGraph-GS, a novel view synthesis method based on trajectory graphs that is capable of high-quality rendering for arbitrarily large-scale scenes. The paper is currently under review at IEEE Transactions on Pattern Analysis and Machine Intelligence and available at here.

#### **EDUCATION**

South China University of Technology

09/2022 - present

Undergraduate major in Artificial Intelligence, School of Future Technology,

Guangzhou, China

o GPA: 3.79/4.00

 Core Curriculums: Linear Algebra (95), Complex Analysis (93), Introduction to Artificial Intelligence (98), Data Structure (92), Machine Learing (91), Discrete Mathematics (92), Digital Image Processing (95), Digital Signal Processing (90), Digital System Designing (92), Reinforcement Learning (94).

## **PROJECTS**

• MetaSCUT: Large-Scale Scene Simulation based on 3D-GS and Universal Physics Engine Keywords: 3D Scene Reconstruction, Physical Simulation

12/2024 - 01/2025

- Develop the "MetaSCUT" framework for physical simulation in large-scale scene based on 3D Gaussian Splatting and Universal Physics Engine.
- Implement high-quality reconstruction of SCUT-GZIC scenes by using self-provided aerial datasets and 3D Gaussian Splatting techniques.
- Integrate Blender for dynamic interaction simulation, including vehicle physics and robotic arm control.
- Achieve efficient mesh reconstruction and rendered images with Surface-Aligned Gaussian Splatting (SuGaR), outperforming traditional methods in terms of detail and accuracy.
- Anticipated further development and work is scheduled to mainly focus on enhancing the simulation accuracy and complexity of our virtual campus by leveraging the Genesis physics engine.
- The code of "MetaSCUT" project page is available here: [ ]

## SKILLS

- **Programming:** Python, C++, Matlab, VHDL, Html
- Writting: Latex, Markdown, Word, Typst

#### **HONORS AND AWARDS**

• The Third-prize Scholarship South China University of Technology 12/2024, 12/2023

- First-prize in Guangdong Province of Contemporary Undergraduate Mathematical Contest in Modeling

  12/2024

  China Society for Industrial and Applied Mathematics
- Second-prize in the southern division of MathorCup Mathematics Application Challenge
  Chinese Society of Optimization, Overall Planning and Economic Mathematics

  04/2024
- Finalist of Mathematical Contest in Modeling (MCM) and Interdisciplinary Contest in Modeling (ICM) 02/2024 Consortium for Mathematics and its Applications (COMAP)

### **CERTIFICATIONS**

South China University of technology - Baidu pinecone talent training elite class: Graduated Student 09/2024

• College English Test Band6: 542

• College English Test Band4: 613

## **COLLABORATORS**

## 1. Qi Liu

Professor and Doctoral supervisor, School of Future Technology, South China University of Technology IEEE Senior Member, Member of the Youth Working Committee of China Society of Image and Graphics

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Relationship: Research Mentor

# 2. Xiaohan Zhang

Doctoral student of Prof. Qi Liu, Electrical and Computer Engineering, South China University of Technology

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Relationship: Collaborator