Zhuoran YI

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Education

The University of Utah, Salt Lake City, United States 2025 – Expected Graduate in 2027

M.Sc in Computer Science

- Advised by Prof. Cem Yuksel

Wuhan University of Technology, Wuhan, China 2021 – 2025

B.Sc in Information and Computing Science (Computational Mathematics)

- Awarded Outstanding Graduate

Skills

Languages Chinese(Native) English(CET-6 571, TOEFL 89)

Programming Languages `C/C++` `C#` `glsl/hlsl` `Python`

Softwares & Applications `Vulkan` `CUDA` `Unity` `RenderDoc` `Nsight Compute/System/Graphics`

Selected Awards

Champion	**2023 Hubei Provincial Collegiate Programming Contest**	Apr 2023
Gold Medal (6 th)	**The 2022 ICPC Asia Xi'an Regional Contest**	Nov 2022
Gold Medal	**The 2022 ICPC Asia Shenyang Regional Contest**	Nov 2022
Gold Medal	**2022 CCPC Guilin Site**	Oct 2022
Silver Medal	**2022 CCPC Finals**	May 2023
Silver Medal	**The 2022 ICPC Asia-East Continent Final Contest**	Mar 2023

* ICPC is short for International Collegiate Programming Contest and CCPC is short for China Collegiate Programming Contest.

Internships

CHAOS Engine **Booming Tech, Graphic Engine Dev Engineer** Jun. 2024 – Sep. 2024

My internship at Booming Technology (Hangzhou) Co., Ltd. as part of the company's self-developed CHAOS Engine's Rendering Engineering Team focused on developing graphics-related features for this game engine. I learned to create, analyze, and debug features within a commercial-scale game engine's source code. I also collaborated with our artists to validate, develop, and maintain the graphics features in the game *Conqueror's Blade*. My work included implementing baked whole-map shadows and compressing textures.

Selected Research Experience

[Ongoing] Tileable Rendering for Yarn Knot Jun. 2025 – Now

Mentor: Dr. Kui Wu

Ongoing research project about rendering yarn knot based fabrics.

Selected Projects

YZGI **Personal Project** 2023 – Now

C++, Computer Graphics

An implementation of a variety of Global Illumination algorithms. Includes Global Illumination algorithms 、surface models and etc. Continuous developing.

- **A Variety of Algorithms:**
  - **Global Illumination:** (Volumetric) Path Tracing, Bidirectional Path Tracing
  - **Surface Model:** Lambert Diffuse BRDF, Pure Specular BRDF, Glass BSDF and Microfacet BRDF supported.
  - **Sampling Method:** Multiple Importance Sampling
- **Good scalability:** The project implements all the algorithms and data structures well encapsulated, and all the functions are written with clear and easy-to-understand documentation to support convenient secondary development for research use.

Professional Experience

Lecturer, Wuhan Summer ACM/ICPC Multi-University Training Camp Summer 2023

- *Intorduction to Computational Geometry*

Problem Setter, Collegiate Programming Contests 2024 – Current

- Multi-University Training on HDU, 2024

Technical Operation Team Member, Collegiate Programming Contests 2025 – Current

- The 2025-2026 ICPC China Hubei(Wuhan) National Invitational Programming Contest, 2025

Student Co-coach, Wuhan University of Technology Competitive Programming Team 2023 – 2024

- Teams winning 6 Gold Medals and 1 of them advanced to The 2024 ICPC World Finals Astana.

Student Volunteer, ACM SIGGRAPH Asia 2024, 2025

Associations

OI Wiki *Team*, Member 2020 – Now

China Computer Federation, Student Member Mar 2022 – Now

ACM SIGGRAPH, Student Member Feb 2025 – Now

i-HVST Team, HUST, Online Member Feb 2022 – Now