Huzhiyuan Long

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Citizenship: China

Research interests

Computer graphics, Rendering

Education

2020 – 2024	**Tongji University** – Shanghai BA in Software Engineering

Publications

2023	**SRSSIS: Super-Resolution Screen Space Irradiance Sampling for Lightweight Collaborative Web3D Rendering Architecture** **Huzhiyuan Long**, Yufan Yang, Chang Liu, Jinyuan Jia. *CAD/graphics 2023.*

Research experience

12 2021 – 6 2024	**Smart3D Media Lab** Mentor: Professor Jinyuan Jia (Tongji University).

1) Web3D huge model transmission based on visibility precomputation.

2) Collaborative rendering. A rendering architecture that distributes real-time rendering tasks to both client and server simultaneously.

3) Ray tracing on WebGPU. Real time ray traced global illumination on browser based on ReSTIR DI&GI.

7 2024 – now	**Multimedia Computing Group** Mentor: Professor Jie Guo (Nanjing University). *ReSTIR for caustics path.*

Honors and scholarships

2022   Undergraduate School-level Scholarship Third Prize (Tongji University)

2021   Undergraduate School-level Scholarship Third Prize (Tongji University)

Awards

2022   China Collegiate Programming Contest - Shanghai Collegiate Programming Contest Bronze Medal

2022   Group Programming Ladder Tournament Individual Third Prize

2021   "Dream-it" CUP Tongji University Programming Contest Third Place Award

2021   Tongji University Mathematical Modeling Competition Third Prize

Technical skills

Programming languages
modern C++, JavaScript, Python

Tools
WebGPU, Falcor, Vulkan, Blender, UE

Languages
Chinese, English, Japanese(JLPT N2)