

# Huzhiyuan Long

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Citizenship: China

## Research interests

Computer graphics, rendering

## Education

2020 – 2024    **Tongji University** – Shanghai  
BA in Software Engineering  
Mentors: Professors Jinyuan Jia. *GPA: 4.45/5(89.53/100).*

## Honors and scholarships

2022    Undergraduate School-level Scholarship Third Prize (Tongji University)  
2021    Undergraduate School-level Scholarship Third Prize (Tongji University)

## 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.

## Awards

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|------|--|
| 2022 | China Collegiate Programming Contest - Shanghai Collegiate Programming Contest<br>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

### **API**

WebGPU, Vulkan

### **Languages**

Chinese, English, Japanese(JLPT N2)