Song Zhang

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Education

University of Utah **Sep. 2022 – Now**
PhD in Computing, Computer Graphics Track *Salt Lake City, UT*

University of Utah **Sep. 2020 – May 2022**
Master of Science in Computer Science, Computer Graphics *Salt Lake City, UT*

New York Institute of Technology **Sep. 2016 – May 2020**
Bachelor of Science in Computer Science *New York, NY*

Experience

Rendering Engineer **May 2024 – July 2024**
D5 Render *Nanjing, Jiangsu, China*

- Worked with real-time engine team on reproducing volumetric ReSTIR.

Research Intern **May 2023 – Aug. 2023**
NVIDIA *Redmond, WA, USA*

- Worked with real-time rendering group on path sampling research project to improve rendering quality in games.
- With a specific focus on extending ReSTIR algorithm to better sample high-frequency contents.

Research Assistant **Sep. 2022 – Now**
Realistic Computer Graphics Group, University of Utah *Salt Lake City, UT, USA*

- Working on real-time path tracing research in Dr. Cem Yuksel's Realistic Computer Graphics Group.

Teaching Assistant **Jan. 2025 – May 2025**
Kahlert School of Computing, University of Utah *Salt Lake City, UT, USA*

- Teaching assistant of the graduate course, CS 6610 (Interactive Computer Graphics).

Projects

Null-Scattering Volumetric ReSTIR (preparing to submit) | *C++, Falcor, Slang* **Aug. 2024**

- Extending ReSTIR to null-scattering volumetric methods (e.g. delta tracking, ratio tracking, etc), instead of relying on regular tracking or ray marching methods.

Publications

1. Song Zhang*, Daqi Lin*, Markus Kettunen, Cem Yuksel, and Chris Wyman. Area Restir: Resampling for Real-Time Defocus and Antialiasing. *ACM Transactions on Graphics (Proceedings of SIGGRAPH 2024)*, 43(4):98:1–98:13, 07 2024. (*Joint First Authors)

2. Song Zhang, Daqi Lin, Chris Wyman and Cem Yuksel. Many-Light Rendering Using ReSTIR-Sampled Shadow Maps. *Accepted to Eurographics 2025.*

Academic Service

- Journal Reviewer: IEEE Transactions on Visualization and Computer Graphics (TVCG)

Technical Skills

Programming Languages: C/C++, Python
Developer Tools: VS & VS Code, Blender, LaTeX, Git
Frameworks: Falcor, Slang, DirectX, OpenGL, CUDA