Tao Huang

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EDUCATION BACKGROUND

Nanjing University, Nanjing, Jiangsu, China *Sept. 2018—Jun. 2022*
Bachelor of Science in Computer Science and Technology
Cumulative GPA: 4.5/5.0

University of California, Santa Barbara *Sept. 2022—Present*
Master of Science in Computer Science and Technology
(Advisor: Prof. Lingqi Yan)

PUBLICATION

Real-time Deep Radiance Reconstruction from Imperfect Caches
T. Huang, Y. Song and J. Guo. Presented at Pacific Graphic 2022

Efficient Scene Appearance Aggregation for Level-of-Detail Rendering
Y. Zhou, **T. Huang**, R. Ramamoorthi, and L. Yan (In Submission)

Real-time Level-of-Detail Strand-based Hair Rendering
T. Huang, Y. Zhou, D. Lin, J. Zhu, L. Yan and K. Wu (In Submission)

PROFESSIONAL EXPERIENCE

Research Intern at Tencent America *June 2023 — Present*
Supervisor : Dr. Kui Wu

- Proposed an aggregated shading model for a cluster of fiber
- Proposed an LoD structure that supports mainstream simulation methods, and introduced a selection strategy achieving seamless transition between different LoD level.
- Implemented a real-time strand-based hair rendering pipeline with LoD in the modern GPU rasterization pipeline and conducted tests on various hairstyles with dynamics.

PERSONAL PROJECTS

Deep Radiance Reconstruction, The CG and CV Research Group, Nanjing University *July 2021—May 2022*
Project Leader : **T. Huang**

- Implemented a deep real-time rendering pipeline in a C/C++ based rendering framework Falcor. (URL https://github.com/dcjmj/falcor-PreRadianceMap.git)
- Made a contribution to the cloud exhibition hall that could achieve multi-user and multi-angle efficient real-time rendering. Handled arbitrary light paths in a mid-size scene, ensured high-quality rendering results and reached 60 frames/second.

Enola, Nanjing University *Oct. 2020—Nov. 2020*
Project Leader : **T. Huang**

- Developed a 2D side-scrolling role-playing games based on Unity and JavaScript.
- Implemented gameplay features and participated in plot and level design.

SKILLS

Programming Languages: C/C++, GLSL/HLSL, Python,C#
Software: LaTex, Git, OpenCV, Unity, OpenGL, Falcor, CUDA, Mitsuba, pbrt, Embree, PyTorch, Blender