Sheng-Chi Hsu

Researcher

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Research Interests

My research interests lie at the intersection of computer graphics, computer vision, and machine learning, with a particular focus on 3D reconstruction, neural rendering, and generative models.

Education

National Tsing Hua University *Hsinchu City, Taiwan*
MS in Information Systems and Applications *Sept 2024 – June 2026*
- Advisor: Dr. Hung-Kuo Chu at NTHU.
- GPA: 4.26/4.3

National Tsing Hua University *Hsinchu City, Taiwan*
BS in Electrical Engineering and Computer Science *Sept 2020 – June 2024*
- Collaborate with Prof. Hung-Kuo Chu.
- GPA: 3.82/4.3

Publications

A²TG: Adaptive Anisotropic Textured Gaussians for Efficient 3D Scene Representation
Sheng-Chi Hsu, *Ting-Yu Yen, Shih-Sheng Hung, Hong-Kuo Chu*
(International Conference on Learning Representations (ICLR), 2026)

ODA-GS: Occlusion- and Distortion-aware Gaussian Splatting for Indoor Scene Reconstruction
Chai-Rong Lee, Ting-Yu Yen, Kai-Wen Hsiao, Shih-Hsuan Hung, ***Sheng-Chi Hsu****, Min-Chun Hu, Chih-Yuan Yao, Hung-Kuo Chu*
(SIGGRAPH Asia Technical Communications, 2024)

Honors and Awards

The 19th Excellent Master Thesis Award (2026): The Chinese Image Processing and Pattern Recognition Society

Research Experience

Research Assistant *Hsinchu City, Taiwan*
CPLab, National Yang Ming Chiao Tung University *Sept 2026 – present*
- Advisor: Dr. Yu-Lun Liu at NYCU.
- Generative modeling approaches for 3D Gaussian Splatting representations.

Student Researcher *Hsinchu City, Taiwan*
IGVI Lab, National Tsing Hua University *Sept 2023 – June 2026*
- Advisor: Dr. Hung-Kuo Chu at NTHU.
- Conducted research on efficient 3D scene representations, neural rendering, and Gaussian Splatting.
- Developed rendering applications using modern graphics APIs, including DirectX 12 and Vulkan.
- Contributed to research on Gaussian-based indoor scene reconstruction.

Projects

Inverse Rendering with Gaussian Splatting *July 2025 – Dec 2025*

A rendering framework for Relightable Gaussian Splatting and PBR mesh hybrid rendering

- Deferred PBR shading for hybrid GS/mesh rendering with post-processing.
- Interactable 3D viewer for real-time manipulation of 3D Gaussians and 3D meshes.

Skills

Programming: Proficient with Python, C++, C, CUDA

Framework: OpenGL, Vulkan, DirectX12, Pytorch, OpenCV

Mathematics: Good understanding of differential equations, calculus, linear algebra, and probability

Languages: Chinese, English