Yang Zhou | Graphics Researcher

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Education

Ph.D. in Computer Science — **Santa Barbara, CA**
University of California, Santa Barbara (Advisor: Prof. Lingqi Yan) — *Sept 2019 – March 2025*
Dissertation: Unified, Multi-scale Scene Representations for Scalable Physically Based Rendering

Master of Entertainment Technology — **Pittsburgh, PA**
Carnegie Mellon University — *Sept 2015 – May 2017*

Bachelor of Computer Science — **Nanjing, China**
Southeast University, Thesis at Kungliga Tekniska Högskolan, Sweden — *Sept 2011 – June 2015*

Experience

Meta Platforms, Inc. — **Redmond, WA**
Research Scientist — *March 2025 – Present*
- Graphics research with machine learning. Topics include 3D Gaussian splatting, volumetric rendering, light field videos, neural materials, virtual geometry, and video diffusion models.
- Transition state-of-the-art graphics technologies into future-generation AR/VR products including **Meta Horizon Hyperscape**.

Meta Platforms, Inc. — **Sausalito, CA; Redmond, WA**
Research Scientist Intern — *June 2023 – Sept 2023; June 2022 – Sept 2022; June 2020 – Sept 2020*
- Multiple research projects on neural volumetric rendering, realistic skin rendering, and texture synthesis.

NVIDIA Research — **Redmond, WA**
Research Intern — *June 2021 – Sept 2021*
- Research project on volumetric appearance models and spatial correlation.

Apple Inc. — **Sunnyvale, CA**
Rendering Engineer — *June 2017 – May 2019*
- **RealityKit**: Developed physically-based shading, lighting, HDR pipeline, anti-aliasing, and other real-time rendering techniques.
- **AR Quick Look**: Developed key features including environment reflection and soft contact shadow.

Facebook Reality Labs — **Pittsburgh, PA**
Game Engineer Intern — *Jan 2017 – May 2017*
- Contributed to an unannounced cooperative social virtual reality system based on Unreal Engine.

Insomniac Games, Inc. — **Burbank, CA**
Gameplay Programmer Intern — *May 2016 – Aug 2016*
- Developed gameplay systems for Marvel's Spider-Man PS4 game.

Publications and Preprints

Unified Gaussian Primitives for Scene Representation and Rendering
Yang Zhou, *Songyin Wu, and Ling-Qi Yan. https://arxiv.org/abs/2406.09733. In revision, ACM Transactions on Graphics.*

EditCtrl: Disentangled Local and Global Control for Real-Time Generative Video Editing
*Yehonathan Litman, Shikun Liu, Dario Seyb, Nicholas Milef, **Yang Zhou**, Carl Marshall, Shubham Tulsiani, and Caleb Leak. IEEE Conference on Computer Vision and Pattern Recognition (CVPR) 2026, to appear.*

Real-time Neural Materials on Mobile VR
*Zilin Xu, **Yang Zhou**, Yehonathan Litman, Matt Jen-Yuan Chiang, Ling-Qi Yan, and Anton Michels. Computer Graphics Forum (Eurographics 2026), to appear.*

Improving Angular Parameterization for Compact Neural Materials
*Zilin Xu, Yehonathan Litman, Ling-Qi Yan, **Yang Zhou** and Anton Michels. In Proceedings of the SIGGRAPH Asia 2025 Posters.*

Real-time Level-of-detail Strand-based Rendering
*Tao Huang, **Yang Zhou**, Daqi Lin, Junqiu Zhu, Ling-Qi Yan, and Kui Wu. Computer Graphics Forum (EGSR 2025) 44(4), Jun 2025.*

Appearance-Preserving Scene Aggregation for Level-of-Detail Rendering
***Yang Zhou**, Tao Huang, Ravi Ramamoorthi, Pradeep Sen, and Ling-Qi Yan. ACM Transactions on Graphics 44(1), 8. Presented at SIGGRAPH 2025.*

Vectorization for Fast, Analytic, and Differentiable Visibility
***Yang Zhou**, Lifan Wu, Ravi Ramamoorthi, and Ling-Qi Yan. ACM Transactions on Graphics 40(3), 27. Presented at SIGGRAPH 2021.*

Patents

Customizable Render Pipelines Using Render Graphs
Cody J. White, Randal W. Lamore, Pål-Kristian Engstad, Ivan Gavrenkov, Matthew Stoll, ***Yang Zhou****, US Patent 11,087,430.*

Professional Service

Technical Papers Committee Member for *SIGGRAPH (2026)*.
Program Committee Member for *EGSR (2026)*.
Reviewer for *SIGGRAPH (2022-2025)*, *SIGGRAPH Asia (2022-2025)*, *ACM ToG (2025)*, *IEEE TVCG (2025)*, *I3D (2026)*, *Visual Computer (2025)*, *CVPR (2026)*, *NeurIPS (2026)*.

Technical Skills

Programming Languages: C/C++, GLSL/HLSL/Cg, Slang, C#, Python
Software: Vulkan, Metal, OpenGL, CUDA, Unity, Unreal Engine, Mitsuba, pbrt, Embree, PyTorch, Blender

Last updated: April, 2026