

Zilin Xu

✉ Zilin.Xu@mbzuai.ac.ae ☎ +1 805 280 1230 / +86 183 4001 8269 🌐 <https://starry316.github.io>

EDUCATION

Ph.D. in Computer Science, advised by Prof. Ling-Qi Yan <i>Mohamed bin Zayed University of Artificial Intelligence</i> 2025 - Present	2023 - Present Abu Dhabi, UAE
<i>University of California, Santa Barbara</i> 2023 - 2025 *Started Ph.D. at UCSB, transferred with advisor to MBZUAI in 2025	Santa Barbara, CA, USA
M.Eng. in Software Engineering, advised by Prof. Lu Wang <i>Shandong University</i> *Ranked 1st in the major	2020 - 2023 Jinan, China
B.Eng. in Software Engineering <i>Shandong University</i>	2016 - 2020 Jinan, China

RESEARCH INTERESTS

Real-time Neural Appearance → Rendering → Computer Graphics
My research focuses on leveraging neural techniques for efficient and accurate appearance representation, with a special emphasis on real-time performance. It also explores advanced features (e.g., dynamic synthesis) that are challenging for traditional methods.

SELECTED PUBLICATIONS

Real-Time Neural Materials on Mobile VR Zilin Xu , Yang Zhou, Yehonathan Litman, Matt Jen-Yuan Chiang, Ling-Qi Yan, Anton Michels <i>Computer Graphics Forum</i> (Proceedings of <i>Eurographics 2026</i>)	2026
Improving Angular Parameterization for Compact Neural Materials Zilin Xu , Yang Zhou, Yehonathan Litman, Ling-Qi Yan, Anton Michels <i>SIGGRAPH Asia 2025 - Poster</i>	2025
Towards Comprehensive Neural Materials: Dynamic Structure-Preserving Synthesis with Accurate Silhouette at Instant Inference Speed Zilin Xu , Xiang Chen, Chen Liu, Beibei Wang, Lu Wang, Zahra Montazeri, Ling-Qi Yan <i>SIGGRAPH 2025</i> *Video clips featured in the Technical Papers Trailer.	2025
A Dynamic By-example BTF Synthesis Scheme Zilin Xu , Zahra Montazeri, Beibei Wang, Ling-Qi Yan <i>SIGGRAPH Asia 2024</i>	2024
Lightweight Neural Basis Functions for All-Frequency Shading Zilin Xu , Zheng Zeng, Lifan Wu, Lu Wang, Ling-Qi Yan <i>SIGGRAPH Asia 2022</i>	2022
Unsupervised Image Reconstruction for Gradient-Domain Volumetric Rendering Zilin Xu , Qiang Sun, Lu Wang, Yanning Xu, Beibei Wang <i>Computer Graphics Forum</i> (Proceedings of <i>Pacific Graphics 2020</i>)	2020
Non-first author papers: Ray-aligned Occupancy Map Array for Fast Approximate Ray Tracing Zheng Zeng, Zilin Xu , Lu Wang, Lifan Wu, Ling-Qi Yan <i>Computer Graphics Forum</i> (Proceedings of <i>Eurographics Symposium on Rendering 2023</i>)	2023
Neural Complex Luminaires: Representation and Rendering Junqiu Zhu, Yaoyi Bai, Zilin Xu , Steve Bako, Edgar Velázquez-Armendáriz, Lu Wang, Pradeep Sen, Miloš Hašan, Ling-Qi Yan <i>Transactions on Graphics</i> (Proceedings of <i>SIGGRAPH 2021</i>)	2021

TECHNICAL WRITING

Towards Comprehensive Neural Materials Zilin Xu , Xiang Chen, Beibei Wang, Lu Wang, Zahra Montazeri, Ling-Qi Yan <i>GPU Zen 4</i>	2025
---	-------------

WORK EXPERIENCE

Research Scientist Intern <i>Meta Reality Labs Research</i> Real-time Neural Materials on Mobile VR (Meta Quest3). Top-rated Intern at Reality Labs!	Summer 2025 Redmond, WA, USA
Graphics Development Engineer Intern <i>Autodesk, Inc.</i> Advanced 3D Wood Material and By-example Texture Synthesis in MaterialX.	Summer 2024 (Remote from) Santa Barbara, CA, USA

TEACHING EXPERIENCE

CS190I: Introduction to Offline Rendering <i>University of California, Santa Barbara</i> Teaching Assistant	Winter 2024 Santa Barbara, CA, USA
Advanced Programming Language (Java) <i>Shandong Univerisity</i> Teaching Assistant	Fall 2020 Jinan, China

INVITED TALKS

Towards Comprehensive Neural Materials <i>Shandong University</i>	Sept. 2025 Jinan, China
Novel Rendering Methods under the New Paradigm <i>GAMES Webinar</i> 🔗 https://www.bilibili.com/video/BV1BEaPzBEWJ/	Aug. 2025 Online, China
Towards Comprehensive Neural Materials <i>South California Rendering Day - University of California, San Diego</i>	May 2025 San Diego, CA, USA
Dynamic BTF Synthesis <i>South California Rendering Day - University of California, Irvine</i>	Mar. 2024 Irvine, CA, USA
Neural Complex Luminaires: Representation and Rendering <i>CCF International Conference on CAD&CG 2020/2021</i>	Oct.2021 Dalian, China

PROFESSIONAL SKILLS

Programming Languages:	C/C++, CUDA, Python, Shader languages (Slang/HLSL/GLSL)
Technical Skills:	Pytorch, Falcor Renderer, Blender, Open 3D Engine, 3DS Max

PROFESSIONAL SERVICES

Conference reviewer:	<i>SIGGRAPH, SIGGRAPH Asia, Eurographics (EG), Pacific Graphics (PG)</i>
Journal reviewer:	<i>Transactions on Graphics (ToG), Transactions on Visualization and Computer Graphics (TVCG), Computer Graphics Forum (CGF)</i>

SELECTED AWARDS

National Scholarship (< 1%)	2022
Shandong University Chancellor's Scholarship Nomination (< 0.1%)	2022
Weichai Outstanding Graduate Student Scholarship (< 1%)	2021
Outstanding Graduate Student Award	2022
First Prize Scholarship of Shandong University	2021
Intel Cup National Software Innovation Competition in China (ranked #17 nationally)	2019