

Zilin Xu

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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
University of California, Santa Barbara 2023 - 2025	Santa Barbara, CA, USA
*Started Ph.D. at UCSB, transferred with advisor to MBZUAI in 2025	
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 <i>Zilin Xu, Yang Zhou, Yehonathan Litman, Matt Jen-Yuan Chiang, Ling-Qi Yan, Anton Michels</i> <i>Computer Graphics Forum</i> (Proceedings of <i>Eurographics 2026</i>)	2026
Improving Angular Parameterization for Compact Neural Materials <i>Zilin Xu, Yang Zhou, Yehonathan Litman, Ling-Qi Yan, Anton Michels</i> <i>SIGGRAPH Asia 2025 - Poster</i>	2025
Towards Comprehensive Neural Materials: Dynamic Structure-Preserving Synthesis with Accurate Silhouette at Instant Inference Speed <i>Zilin Xu, Xiang Chen, Chen Liu, Beibei Wang, Lu Wang, Zahra Montazeri, Ling-Qi Yan</i> <i>SIGGRAPH 2025</i>	2025
*Video clips featured in the Technical Papers Trailer.	
A Dynamic By-example BTF Synthesis Scheme <i>Zilin Xu, Zahra Montazeri, Beibei Wang, Ling-Qi Yan</i> <i>SIGGRAPH Asia 2024</i>	2024
Lightweight Neural Basis Functions for All-Frequency Shading <i>Zilin Xu, Zheng Zeng, Lifan Wu, Lu Wang, Ling-Qi Yan</i> <i>SIGGRAPH Asia 2022</i>	2022
Unsupervised Image Reconstruction for Gradient-Domain Volumetric Rendering <i>Zilin Xu, Qiang Sun, Lu Wang, Yanning Xu, Beibei Wang</i> <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 <i>Zheng Zeng, Zilin Xu, Lu Wang, Lifan Wu, Ling-Qi Yan</i> <i>Computer Graphics Forum</i> (Proceedings of <i>Eurographics Symposium on Rendering 2023</i>)	2023
Neural Complex Luminaires: Representation and Rendering <i>Junqiu Zhu, Yaoyi Bai, Zilin Xu, Steve Bako, Edgar Velázquez-Armendáriz, Lu Wang, Pradeep Sen, Miloš Hašan, Ling-Qi Yan</i> <i>Transactions on Graphics</i> (Proceedings of <i>SIGGRAPH 2021</i>)	2021

TECHNICAL WRITING

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

Research Scientist Intern

Meta Reality Labs Research

Real-time Neural Materials on Mobile VR (Meta Quest3).

Top-rated Intern at Reality Labs!

Summer 2025

Redmond, WA, USA

Graphics Development Engineer Intern

Autodesk, Inc.

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**University of California, Santa Barbara**

Teaching Assistant

Winter 2024

Santa Barbara, CA, USA

Advanced Programming Language (Java)**Shandong University**

Teaching Assistant

Fall 2020

Jinan, China

INVITED TALKS

Towards Comprehensive Neural Materials*Shandong University*

Sept. 2025

Jinan, China

Novel Rendering Methods under the New Paradigm*GAMES Webinar*🔗 <https://www.bilibili.com/video/BV1BEaPzBEWJ/>

Aug. 2025

Online, China

Towards Comprehensive Neural Materials*South California Rendering Day - University of California, San Diego*

May 2025

San Diego, CA, USA

Dynamic BTF Synthesis*South California Rendering Day - University of California, Irvine*

Mar. 2024

Irvine, CA, USA

Neural Complex Luminaires: Representation and Rendering*CCF International Conference on CAD&CG 2020/2021*

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: *SIGGRAPH, SIGGRAPH Asia, Eurographics (EG), Pacific Graphics (PG)***Journal reviewer:** *Transactions on Graphics (ToG), Transactions on Visualization and Computer Graphics (TVCG), Computer Graphics Forum (CGF)*

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