

Xiang Chen

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EDUCATION BACKGROUND

Shandong University (Project 985)

Sept. 2023 – Present, China

Master of Software Engineering

- Avg Scores: 88.65/100
- Research interests: Computer graphics / 3D vision

Shandong University (Project 985)

Sept. 2019 – Jun. 2023, China

Bachelor of Digital Media Technology

- Avg Scores: 90.89/100
- Main courses: Computer Graphics, Higher Mathematics, Linear Algebra, Discrete Mathematics, Probability, Data Structure, Operation System.

PUBLICATIONS

(SIGGRAPH 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

- **Controllable structure-preserving synthesis:** Utilize a curved autocovariance importance sampling strategy to achieve the user-controllable dynamic material synthesis which can preserve the structures well.

(SIGGRAPH 2024) Real-time Neural Woven Fabric Rendering

Xiang Chen, Lu Wang[†], Beibei Wang[†] Project link: https://chenxiang0810.github.io/neural_woven_fabric/index.html

- **Fabric latent representation:** Encode patterns and parameters of the surface-based fabric model as a latent vector, enabling the representation of various woven fabrics through a once-trained neural network.
- **BSDF Separation:** Separate the BSDF distribution into several components, considering specular/diffuse and yarn types (weft/warp). Thanks to this separation, the BSDF are simple enough to represent by a small network.

(CVM 2023) Real-time All-frequency Global Illumination with Radiance Caching

Youxin Xing*, Gaole Pan*, **Xiang Chen**, Ji Wu, Lu Wang[†], Beibei Wang[†]

Project link: <https://xingyouxin.github.io/research/CVMJ23/RealtimeGI.html>

- **Radiance precomputation:** Generate point clouds from a mesh based on poisson disk sampling first. For each point on the mesh, precompute the radiance from upper hemisphere defined by the normal direction. With a half cube bounding the hemisphere, the radiance is computed through ray tracing towards each texel of the half cubemap and stored in it. To reduce the storage, the textures are then compressed by the Haar wavelet.

HONORS & AWARDS

- BYD Scholarship 2024
- Shandong Province Undergraduate Engineering Training Integration Ability Competition -- Third Prize 2021
- Academic Scholarships of Shandong University (Four times) 2020 & 2021 & 2022 & 2024

OTHERS

- Skills: C++, Python, Unreal Engine, Unity Engine, Blender, Maya, OpenGL
- Language: Chinese (Native), English (CET-6: 521)