Peter Lu | Resume

❱ Status: PhD candidate in CGV group at TU Delft

❱ Skills: C++, JS, Python, WebGL/OpenGL, CUDA

❱ Hobbies: research, running, traveling, music, etc.

Summary

I am a PhD candidate in the Computer Graphics and Visualization (CGV) group at TU Delft, supervised by Dr. Petr Kellnhofer and Prof. Elmar Eisemann. My research advances virtual reality rendering, focusing on realistic material representations, sophisticated lighting models, offline rendering, and differentiable rendering techniques to enhance visual realism and computational efficiency.

Previously, I gained industry experience as a 3D GIS engineer at SuperMap, where I worked on virtual earth systems and advanced mapping solutions, integrating geospatial technology with state-of-the-art 3D visualization.

Education

'22/06 - now	**PhD candidate**	TU Delft

❱ **VR Renovate Project**: The VR Renovate project focuses on developing real-time graphics and VR technology to visually showcase the results of sustainable home renovations.
❱ **Teachers Assistant**: Applied Image Processing, 3D Visualization.

2018 - 2020	**Master's Degree, Computer Science**	Utrecht University

❱ **Courses**: Advanced Graphics, Optimization and Vectorization, Game Physics, Computer Vision, Geometric Algorithm, Motion and Manipulation, Crowd Simulation etc.
❱ **Master Thesis**: 'Gradient-Domain Volume Rendering'
❱ **GPA**: 8.73/10 (Cum Laude)

2002 - 2006	**Bachelor's Degree, Information System**	Beijing Forestry University

EXPERIENCE

2006 - 2022	**Technical Leader/Engineer, R&D Department**	SuperMap

❱ **3D GIS**: I specialized in real-time rendering and WebGL, focusing on managing 3D models such as terrain and BIM. My work involved enhancing visual quality, optimizing performance, and tackling tasks like LOD scheduling, rendering effects, and GPU/CPU optimization.
❱ **Map Module**: I developed the map module, emphasizing styled vector maps, text rendering, anti-aliasing, and ensuring cross-platform compatibility across Windows, Linux, Android, and Unix.

PUBLICATIONS

- **Guowei Lu**, Jerry Guo, Petr Kellnhofer, Elmar Eisemann. Sheared Polygonal Texture Filtering. Best student paper in *Graphics Interface*, 2024.

- **Guowei Lu**. Gradient-Domain Volume Rendering. Master Thesis at *Utrecht University*, 2020.

PROJECTS

2017	**ExamplesforCesium**	JS, WebGL

❱ tutorials for Cesium and a gallery showcasing various Cesium demos.

For all projects, please visit my project portfolio.