

Youming Deng

E-mail: ymdeng@cs.cornell.edu * *Personal Page:* denghilbert.github.io

Education

Cornell University

Doctor of Philosophy in Computer Science

Advisor: Steve Marschner

Ithaca, New York, United States

Aug. 2023 - Jun. 2028 (Expected)

Wuhan University

Bachelor of Engineering in Spatial Informatics & Digitalized Technology

Wuhan, Hubei, China

Sep. 2019 - Jun. 2023

Publications

Self-Calibrating Gaussian Splatting for Large Field of View Reconstruction *Arxiv 2024*
*Youming Deng**, Wenqi Xian*, Guandao Yang, Leonidas Guibas, Gordon Wetzstein, Steve Marschner, Paul Debevec (* denotes equal contribution)

Physics-based Indirect Illumination for Inverse Rendering *3DV 2024*
Youming Deng, Xueting Li, Sifei Liu, Ming-Hsuan Yang

Hierarchical Memory Learning for Fine-Grained Scene Graph Generation *ECCV 2022*
Youming Deng, Yansheng Li, Yongjun Zhang, Xiang Xiang, Jian Wang, Jingdong Chen, Jiayi Ma

Research Experience

Research Assistant at Cornell University

Advisor: Professor Steve Marschner

Ithaca, New York, United States

Aug. 2023 - Present

- Modeled lens distortion using iResNet, outperforming traditional parametric models.
- Extended the pipeline to fisheye cameras with over 180-degree fields of view.

Research Engineer at EPFL

Advisor: Professor Wenzel Jakob

Lausanne, Switzerland

Apr. 2023 - Aug. 2023

- Developed a conversion tool for scene representations between Blender and Mitsuba3.
- Added new features (e.g., color ramps) to Mitsuba3, fully compatible with Blender.

Research Intern at UC Merced

Advisor: Professor Ming-Hsuan Yang

Remote

Apr. 2022 - Aug. 2023

- Presented a method for high-fidelity geometry, material, and illumination estimation.
- Developed an efficient sphere tracing algorithm for implicit SDFs.
- Addressed non-differentiability and modeled indirect lighting for improved environmental illumination.

Research Assistant at Wuhan University

Advisor: Professor Yansheng Li

Wuhan, Hubei, China

Jun. 2021 - Apr. 2022

- Proposed a coarse-to-fine training framework for Scene Graph Generation (SGG).
- Demonstrated efficient handling of extreme long-tail effects in SGG.

Technical Skills

Programming Languages/Tools
Frameworks

C++, CUDA, Python, L^AT_EX
PyTorch, Keras, Dr.jit, Mitsuba, TensorFlow