# Youming Deng

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

## Education

**Cornell University**      *Ithaca, New York, United States*
*Doctor of Philosophy in Computer Science*      *Aug. 2023 - May. 2028 (Expected)*

**Wuhan University**      *Wuhan, Hubei, China*
*Bachelor of Engineering in Spatial Informatics & Digitalized Technology*      *Sep. 2019 - Jun. 2023*
*GPA: 91.5/100*

## Research Experience

**Research Assistant at Cornell University**      *Ithaca, New York, United States*
*Advisor: Professor Abe Davis*      *Aug. 2023 - Present*

- We are trying to design interactive methods to guide the diffusion model based on user preferences
- We are trying to extend 3d Gaussian to dynamics or "in the wild" scenes

**Research Engineer at EPFL**      *Rte Cantonale, Lausanne, Switerland*
*Advisor: Professor Wenzel Jakob*      *Apr. 2023 - Aug. 2023*

- We develop a conversion tool for different scene representations in Blender and Mitsuba3
- We added new features (*e.g.*, color ramp) to Mitsuba3 that are fully compatible with Blender

**Research Intern at UC Merced**      *Remote Intern*
*Advisor: Professor Ming-Hsuan Yang*      *Apr. 2022 - Aug. 2023*

- We present a method for high-fidelity geometry, materials, and illumination estimation
- We develop an efficient sphere tracing algorithm for implicit SDF
- We handle non-differentiability and model indirect lighting to improve environmental illumination

**Research Assistant at Wuhan University**      *Wuhan, Hubei, China*
*Advisor: Professor Yansheng Li*      *Jun. 2021 - Apr. 2022*

- We propose a coarse-to-fine training framework for Scene Graph Generation (SGG)
- The framework can efficiently handle the extreme long-tail effect in SGG

## Publications

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

**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*
arXiv / Code

## Technical skills

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|---|---|
| **Programming Languages/Tools** | C, C++, Java, Javascript, Python, LaTeX |
| **Frameworks** | PyTorch, Keras, Dr.jit, Mitsuba, TensorFlow |

## Language proficiencies

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|---|---|
| **Chinese** | Native speaker |
| **English** | Proficient (TOEFL 106) |