

## EDUCATION

Cornell University

Ithaca, USA

*Ph.D. in Computer Science*

2023 - present

- Advisor: Steve Marschner
- Research area: Graphics and 3D Vision

Wuhan University

Wuhan, China

*B.E. in Information and Digital Technology*

2019 - 2023

- Advisor: Yansheng Li

## PUBLICATIONS

1. **Youming Deng**, Songyou Peng, Junyi Zhang, Kathryn Heal, Tiancheng Sun, John Flynn, Steve Marschner, Lucy Chai. Self: Self Improving Reconstruction Engine via 3D Geometric Feature Alignment. In *arXiv*, 2025.
2. Xinhao Liu, Jiaqi Li, **Youming Deng**, Ruxin Chen, Yingjia Zhang, Yifei Ma, Li Guo, Yiming Li, Jing Zhang, Chen Feng. Wanderland: Geometrically Grounded Simulation for Open-World Embodied AI. In *arXiv*, 2025.
3. Hexu Zhao, Xiaoteng Liu, Xiwen Min, Jianhao Huang, **Youming Deng**, Yanfei Li, Ang Li, Jinyang Li, Aurojit Panda. Scaling Point-based Differentiable Rendering for Large Scale 3D Reconstruction. In *arXiv*, 2025.
4. **Youming Deng**, Wenqi Xian, Guandao Yang, Leonidas Guibas, Gordon Wetzstein, Steve Marschner, Paul Debevec. Self-Calibrating Gaussian Splatting for Large Field-of-View Reconstruction. In *ICCV*, 2025.
5. Yansheng Li, Linlin Wang, Tingzhu Wang, Xue Yang, Junwei Luo, Qi Wang, **Youming Deng**, Wenbin Wang, Xian Sun, Haifeng Li, Bo Dang, Yongjun Zhang, Yi Yu, Junchi Yan. Star: A first-ever dataset and a large-scale benchmark for scene graph generation in large-size satellite imagery. *TPAMI*, 2024.
6. **Youming Deng**, Xueting Li, Sifei Liu, Ming-Hsuan Yang. Physics-based Indirect Illumination for Inverse Rendering. In *3DV*, 2024.
7. **Youming Deng**, Yansheng Li, Yongjun Zhang, Xiang Xiang, Jian Wang, Jingdong Chen, Jiayi Ma. Hierarchical Memory Learning for Fine-Grained Scene Graph Generation. In *ECCV*, 2022.

## INTERNSHIP

Student Researcher at Google | Los Angeles, USA

2025.05 - Present

- Mentor: Lucy Chai
- Project: efficient and robust feed-forward structure-from-motion, general novel view synthesis pipeline from uncalibrated imagery

|                   |  |
|-------------------|--|
| RESEARCH          | <b>Research Assistant at Cornell   Ithaca, USA</b> 2023.08 - Present <ul style="list-style-type: none"> <li>• Advisor: Steve Marschner and Paul Debevec</li> <li>• Project: self-calibration pipeline for large field of view camera reconstruction</li> </ul>                           |
|                   | <b>Research Engineer at EPFL   Lausanne, Switzerland</b> 2023.04 - 2023.08 <ul style="list-style-type: none"> <li>• Advisor: Wenzel Jakob</li> <li>• Project: conversion support between Blender and Mitsuba3 with color ramping</li> </ul>  |
|                   | <b>Visiting Student at UC Merced   Remote</b> 2022.04 - 2023.08 <ul style="list-style-type: none"> <li>• Advisor: Ming-Hsuan Yang</li> <li>• Project: inverse rendering pipeline for non-differentiability lighting, material estimation, and accurate surface reconstruction</li> </ul> |
|                   | <b>Research Assistant at Wuhan University   Wuhan, China</b> 2021.06 - 2022.04 <ul style="list-style-type: none"> <li>• Advisor: Yansheng Li</li> <li>• Project: coarse-to-fine training framework for Scene Graph Generation</li> </ul>   |
| SKILLS            | <b>Languages:</b> Chinese, English<br><b>Programming:</b> Python, C++, CUDA<br><b>Framework:</b> Pytorch, Jax, Mitsuba   |
| ACADEMIC SERVICES | <b>Reviewers for SIGGRAPH, SIGGRAPH Asia</b><br>CVPR, ECCV, ICCV<br><b>Invited Talks</b> World Lab<br>2nd Workshop on Neural Fields Beyond Conventional Cameras  |