LINJIE LYU

July 05, 1997
llyu@mpi-inf.mpg.de
https://people.mpi-inf.mpg.de/ llyu/

RESEARCH INTERESTS

- Diffusion Models Based 2D/3D Generation and Editing
- Global-illumination-aware Inverse Rendering, 3D Reconstruction, Relighting
- Uncertainty Quantification

EDUCATION

Max-Planck-Institut für Informatik, Saarbrücken, Germany — June 2021 — Present
Ph.D. Student in Computer Vision and Computer Graphics — Expected graduation: June 2025

Universität des Saarlandes, Saarbrücken, Germany — October 2019 — March 2021
Graduate School in Computer Science

Tsinghua University, Beijing, China — September 2015 — July 2019
Bachelor in Physics and Mathematics
* College Scholars; University Honors

Sichuan Mianyang High School, Mianyang, China — September 2012 — June 2015
* Silver Medal, Chinese Physics Olympiad

PUBLICATIONS

- **L. Lyu**, V. Deschaintre, Y. Hold-Geoffroy, M. Hasan, J. Yoon, T. Leimkühler, C. Theobalt, I. Georgiev . *IntrinsicEdit: Precise Generative Image Manipulation in Intrinsic Space*. ACM Transactions on Graphics, SIGGRAPH 2025.
- **L. Lyu**, A. Tewari, M. Habermann, S. Saito, M. Zollhöfer, T. Leimkühler, C. Theobalt. *Manifold Sampling for Differentiable Uncertainty in Radiance Fields*. Conference Proceedings, SIGGRAPH Asia 2024
- **L. Lyu**, A. Tewari, M. Habermann, S. Saito, M. Zollhöfer, T. Leimkühler, C. Theobalt. *Diffusion Posterior Illumination for Ambiguity-aware Inverse Rendering*. ACM Transactions on Graphics, SIGGRAPH Asia 2023.
- **L. Lyu**, A. Tewari, T. Leimkühler, M. Habermann, C. Theobalt. *Neural Radiance Transfer Fields for Relightable Novel-view Synthesis with Global Illumination*. ECCV 2022 (Oral).
- **L. Lyu**, M. Habermann, L. Liu, M. B. R, A. Tewari,C. Theobalt. *Efficient and Differentiable Shadow Computation for Inverse Problems*. ICCV 2021.

INTERSHIP

Adobe, London, UK — June 2024 — September 2024
Developed diffusion model-based and global illumination-aware image editing techniques utilizing intrinsic decomposition and identity preservation for tasks such as relighting, material editing, and object insertion/removal on real 2D images.

Max-Planck-Institut für Informatik, Saarbrücken, Germany — July 2018 — September 2018
CUDA-based visibility computation in Differentiable Rendering Tool (**Github**)

SERVICES

Reviewer
SIGGRAPH, SIGGRAPH Asia, Eurographics, Pacific Graphics, 3DV

Teaching
Computer Vision and Machine Learning for Computer Graphics