

Neural Methods for Reconstruction and Rendering of Real World Scenes

Tuesday, 12 April 2022 13:30 (1 hour)

In the Visual Computing and Artificial Intelligence Department at MPI for Informatics, we investigate research questions at the intersection of computer graphics, computer vision and artificial intelligence. In this presentation, I will talk about some of the recent work we did on new methods for reconstructing high quality computer graphics models (shape, motion, appearance, material, illumination etc.) of real world scenes from sparse or even monocular video data.

These methods bring together neural network-based and explicit model-based approaches and pave the way for better real world understanding from sparse camera data. I will also talk about new neural rendering approaches that combine explicit model-based and neural network based concepts for image formation in new ways. They enable new means to synthesize highly realistic imagery and videos of real world scenes under user control.

Poster title

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