



Eröffnungsvortrag Research Track

Mittwoch, den 16.02.2022, 10:15 Uhr,
<https://webconf.tu-clausthal.de/b/ren-czv-au2-g7c>

Forschungsprojekt:

René Kern

“Accelerated Photon Mapping by using Hardware-based Raytracing”

Photon Mapping is a numerical solution to the rendering equation that is based on raytracing. It works by first tracing the paths of the emitted light (photons) and saving them in a data structure to then collect them later from the perspective of the camera. Especially the collection step is difficult to realize on the GPU due to its serial nature. This research project is about using DirectX Raytracing (DXR) to accelerate Photon Mapping. For that, I am planning to reformulate the Photon Mapping algorithm to utilize the newest raytracing hardware to its fullest. The desired result should be an interactive, Progressive Photon Mapper that allows real-time camera movements and converged images within seconds.

Gutachter: Prof. Dr. Thorsten Grosch und Prof. Dr. Michael Prilla