Christian Döring

Graduate Student

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Education

2023 – present (April)
M.Sc. Electrical and Computer Engineering,
Technical University of Munich

2019 – 2023 (October – March)
B.Sc. Electrical and Computer Engineering,
Technical University of Munich
Thesis Title: Evaluation of Differentiable Inverse Rendering using Multi-View RGB Data

2011 – 2019 (September – June)
Abitur (A-Levels), *Gymnasium Bruckmühl*

Publications

2024
Real-time Neural Rendering of Dynamic Light Fields
Arno Coomans, Edoardo A. Dominici, Christian Döring, Joerg H. Mueller, Jozef Hladky, Markus Steinberger
Project In Computer Graphics Formum (EG), 2024

Experience

2025 – present (September)
Masters Thesis, *Realistic Graphics Laboratory*, *EPFL*

2025 – 2025 (April – August)
Research Intern, *NVIDIA* Zurich
- Function Level Caching for Dr.Jit and Mitsuba 3
- Hash Grid for Dr.Jit
- Differentiable Radio Frequency Modeling with Sionna RT

2024 – 2025 (April – April)
Research Working Student, *Huawei Technologies* Munich
- Development on Dr.Jit/Mitsuba 3
- Real-time Neural Rendering Research

2023 – 2024 (August – February)
Research Intern, *Huawei Technologies* Munich
- Real-time Neural Rendering Research

2021 – 2021 (July – August)
Embeded Systems Intern, *Aurum GmbH* Munich
- Developed NFC library for STM32 in C

2017 (July)
Intern, *Lauterbach GmbH*

2017 (July)
Intern, *Electronic Theater Controls (ETC)* Holzkirchen

Side Projects

Hephaestus, Just In Time Compiler (JIT) for Vulkan, inspired by Dr.Jit. Implemented with own render graph solution. Includes cooperative matrix multiplication (KHR) and a port of tiny-cuda-nn in GLSL.
Source

Vulkan Path Tracer, Path tracer written in Rust using the screen-13 library. It supports the Disney BSDF with Next Event Estimation.
Source

Mitsuba 3 Experiments, Implementation of forward and differentiable path tracing algorithms in Mitsuba 3, such as ReSTIR GI and Large Steps in Inverse Rendering

Skills

Programming:

- **C/C++**, Rust
- **CUDA**, Vulkan
- **Python**, Lua
- **LaTeX**, Typst

Languages:

- **German** (native)
- English (B2+/C1)