

PHILIPPE WEIER

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📄 [Philippe Weier](#)

🎧 [WeiPhil](#)



Education

- 2021 – Now** **PhD Student**, Saarland University (Universität des Saarlandes), Germany
Computer Graphics Lab, advised by Prof. Dr.-Ing. Philipp Slusallek
Focus : Efficient Light Transport Simulation, Differentiable Rendering, Appearance Modelling
- 2017 – 2020** **Master in Computer Science Engineering**, EPFL, Switzerland.
Advanced Computer Graphics, Digital 3D Geometry Processing, Mathematical Foundation of Signal Processing, Distributed Algorithms, Signal Processing for Communications, Machine Learning, Cryptography and Security, Audio Signal Processing and Virtual Acoustics.
Thesis: Optimised Path Space Roughening
- 2016 – 2017** **3rd year Bachelor in Computer Science Engineering**, University of Granada , Spain
Computer Graphics, Operating Systems, Digital Image Processing, Software Engineering, Artificial Intelligence, Multiprocessor Architecture, Network Security.
- 2014 – 2016** **1st and 2nd year Bachelor in Computer Science Engineering**, EPFL, Switzerland.
Algorithmic, Computer Architecture, Functional Programming, Parallelism and Concurrency, Probability and Statistics, System Oriented Programming.

Experience

- 2020 - 2021** **Rendering Researcher**, Weta Digital, New Zealand
Worked on the in-house physically-based renderer Manuka
- 2020 Feb - Aug** **Research Intern**, Weta Digital, New Zealand
Developed an improved formulation of roughening designed for production scale scenes in Manuka
Supervised by Johannes Hanika, Marc Droske and Wenzel Jakob
- 2019 Sep - Dec** **Research Student**, Realistic Graphics Laboratory (EPFL), Switzerland
Mesh-based Pre-filtering of Complex Assets
Supervised by Guillaume Loubet and Wenzel Jakob
- 2019 Feb - Aug** **Research Intern**, Unity Labs Grenoble, France
Efficient Rendering of Anisotropic Layered Materials using an Atomic Decomposition with Statistical Operators
Supervised by Laurent Belcour
- 2017- 2019** **Teaching Assistant**, EPFL, Switzerland
Assisted the Professor with course, homeworks and exam material preparation in Computer Networks.
- 2018 Jul - Sep** **Research Intern**, ELCA Informatique SA Lausanne, Switzerland
Designed and Implemented a Secure Voice Authentication Mobile Application using modern Machine Learning techniques for Android and iOS.

Publications

- 2021** **Optimised Path Space Regularisation**
In Computer Graphics Forum (Proceedings of Eurographics Symposium on Rendering)
Philippe Weier, Marc Droske, Johannes Hanika, Andrea Weidlich, and Jiří Vorba.
- 2020** **Rendering Layered Materials with Anisotropic Interfaces**
In Journal of Computer Graphics Techniques
Philippe Weier, Laurent Belcour

Personal Projects

2020 - Now

Taranaki

A physically-based toy renderer in Rust developped in my free time.

2019 - Now

Qulkan

A GPU Oriented Prototyping tool in modern C++17 with a simple and flexible interface for more complex software or research validation tools.

2018

Procaryota

A 2D space-shooter like game in C# made for fun in Unity.

2018 - Now

Lotr Army Companion

An unofficial companion app for the table-top game Lord of The Rings. A full stack web application written in Javascript (React), MySQL and Python.

Skills

Programming

- C++
- Rust
- Python
- C#, C (Embedded), Scala, Java
- Assembly (MIPS, ARM)
- Javascript (React), HTML, CSS, MySQL

Code Quality

- Continuous Integration, Tests
- Git, Docker

Languages

- French, Swiss German (Mother Tongues)
- Spanish (fluent)
- German (fluent)
- English (fluent)