

# Merlin Nimier-David

PhD student at EPFL

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in [Merlin Nimier-David](#)

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## Education

- 2017–present **PhD student**, *Swiss Federal Institute of Technology (EPFL)*, Lausanne.  
Realistic Graphics Laboratory, advised by Prof. Wenzel Jakob  
Focus: efficient photorealistic rendering
- 2014–2017 **Master in Computer Science**, *Swiss Federal Institute of Technology (EPFL)*, Lausanne.  
Computer Graphics, Machine Learning, Big Data, Markov Chains, Natural Language Processing, Intelligent Agents, Concurrent Algorithms, Distributed Systems, Functional Programming  
GPA: 5.79 out of 6
- 2013–2014 **Bachelor in Computer Science Engineering**, *INSA Lyon, France*.  
Ranked first among computer science students (GPA 16.55/20)  
Software Engineering, Concurrent Programming, UNIX, Networks, Databases, Linear Algebra
- 2011–2013 **Science foundation courses**, *National Institute of Applied Sciences (INSA)*, Rouen, France.
- 2011–present **Massive Online Open Courses (MOOCs)**, *Stanford, Duke University, EPFL*, via Coursera.  
Machine Learning, Image and Video Processing, Game Theory, General Game Playing

## Publications

- 2016 **Building and Animating User-Specific Volumetric Face Rigs**.  
Alexandru-Eugen Ichim, Ladislav Kavan, Merlin Nimier-David, Mark Pauly. ACM SCA 2016.

## Experience

- Feb–Aug **Master Thesis**, *Cornell University*.
- 2017
- *Rendering Procedural Microstructure using Adaptive Gaussian Processes*
  - Supervised by Wenzel Jakob, Steve Marschner and Bruce Walter
  - Physically Based Rendering: appearance modeling for complex specular microstructure using procedural generation and Gaussian Processes
- Fall 2016 **Software Engineer Intern in Research**, *Google Research*.
- Computational Imaging team led by Peyman Milanfar
  - Project conducted in collaboration with Michael Elad
- 2015–2016 **Research assistant**, *Computer Graphics & Geometry laboratory*, EPFL.
- Under the supervision of Prof. Mark Pauly, assisted PhD student Alexandru Eugen Ichim on research projects for face capture and realistic simulation
  - Implemented tools for the evaluation of our proposed method
  - Designed and assembled a photogrammetry rig capable of scanning human facial expressions into high-quality 3D meshes in order to collect training data
- 2016 **Research assistant**, *Realistic Graphics laboratory*, EPFL.
- Assisted Prof. Wenzel Jakob in developing the next version of Mitsuba, a widely-used open-source research platform for realistic rendering
  - Wrote lightweight, cross-platform C++11 code and familiarized with template metaprogramming
- Summer 2015 **Software Engineer Intern**, *Google*.
- Measurably improved Google Search backend performance using statistical methods
  - Quickly familiarized with a highly complex C++ codebase, internal tools & libraries
  - Produced testable code allowing for performance and search results quality assessment
  - Shipped Google-scale, production-ready code
- 2015 **Teaching Assistant for EPFL's Machine Learning course (Master's level)**, *Prof. Khan*.
- Participated in the preparation of course material, exercise sheets and course project
  - Helped students understand and master the course material

Summer 2014 **Software Engineer Intern**, *AnyFetch*.

- Designed and implemented a Node.js library used as a foundation for all client apps
- Developed API clients (full-stack JavaScript)
- Conducted code reviews and contributed to Open Source projects

2011–2013 **Founding member**, *Quantic Telecom*.

- Grew from 0 to 600+ members to become France's largest non-profit Internet Service Provider
- Designed and developed signup process, user experience, members management tools

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## Side projects

2014 Competed in SWERC 2014 (ACM ICPC – international programming contest)

2014, 2013 Won French hackathons Fhactory and Hack Hours

BlenderBQ Leap-Motion and voice-controlled 3D modeling tool using Blender

Raytracer Image renderer with area light sampling, implemented in C++

Hobbies Photography, graphic design, video editing, MOOCs, cats

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## Skills

Programming

- **C++** (performance-oriented)
- **Python** (scientific libraries)
- Mathematica, Matlab, LaTeX
- Scala, Java, JavaScript (Node.js)
- HTML5, CSS3, PHP, SQL

Languages

- French (native)
- **English** (fluent – TOEIC 990/990)
- Spanish (beginner)

Systems

- OSX, Debian, Bash scripting
- Distributed systems
- API design (REST)

Code quality

- Git
- Tests and documentation
- Code reviews, continuous integration