

## Education

- 2022 - present     **ETH, Zürich, Switzerland**
- Pursuing a Master of Science in computer science, graduating in Summer 2024
  - Majoring in *Visual and Interactive Computing* and minoring in *Machine Learning*
  - Was awarded "Honorable Mention" at the [rendering competition of the Computer Graphics 2022 course](#) with Marius Debussche for the implementation of a path tracer featuring spectral rendering, subsurface scattering and participating media
- 2019 - present     **École Polytechnique, Paris, France**
- Pursuing a postgraduate engineering degree in one of France's leading schools of science and engineering, to be conferred in August 2023
  - Majoring in computer science and taking part in the advanced program *Image, Vision and Machine Learning*
  - Led a six-month research project on optimized signed distance fields GPU rendering
- 2017 - 2019        **Lycée Faidherbe, Lille, France**
- Took a two-year intensive university-level preparation in mathematics and physics to prepare for highly competitive nationwide exams
  - Was admitted to most of France's top-ranking schools including Mines ParisTech, École Centrale Paris, École Normale Supérieure and l'École Polytechnique

## Work Experience

- Jan. 2023 - June 2023     **Semester project, Computer Vision Group, ETH, Zürich, Switzerland**
- Experimented with large-scale diffusion models (e.g., *Stable Diffusion*) in order to perform (significant) extrapolations in complex and multi-object *NeRF*-like 3D reconstruction scenarios. The methods investigated include *Score Distillation*, *Energy-based guidance*, *Feature fields* and *Inversions*
  - Supervised by PhD student [Silvan Weder](#)
  - Report is available [here](#)
- March 2022 - Aug. 2022     **Research intern (Internship), Inria, GraphDeco Team, Sophia-Antipolis, France**
- Took part in a full-time research project supervised by George Drettakis investigating *Neural Radiance Fields (NeRF)* and ways of editing them. This project was awarded the title of "best internship" of the computer science department at École Polytechnique and resulted in a publication presented at I3D 2023: *NeRFshop: Interactive Editing of Neural Radiance Fields*.
  - Contributed to another PhD's paper released at SIGGRAPH Asia 2022 (ToG): *Neural Point Catacaustics for Novel-View Synthesis of Reflections*
  - Presented several state-of-the-art advances to the team during reading and group meetings
- June 2021 - Aug. 2021     **Computer Vision Engineer (Internship), Wemap, Montpellier, France**
- Developed a robust monocular *SLAM* pipeline supporting 360-degree cameras based on indirect methods
  - Devised a state-of-the-art visual positioning system for large datasets of indoor locations, see [demo](#)
- Oct. 2019 - March 2020     **Teacher and Research Assistant (Internship), Institute of Technology of Cambodia, Phnom-Penh, Cambodia**
- Provided 40 second-year Cambodian students with a preparation in mathematics and physics for l'École Polytechnique's entrance exam
  - Wrote a 280-page original textbook for the corresponding programme
  - Organized presentations and tutorials for the robotics laboratory (e.g., introduction to Reinforcement Learning, Git, etc.)
  - Led a five-month research project on Reinforcement Learning in the robotics laboratory
- Oct. 2015 - Sept. 2017     **Software Developer, Artenpik, Lille, France**
- Contributed to the creation of an augmented-reality platform for street-artists
  - Developed an image-recognition solution for large datasets of artworks
  - Won two hackathon prizes including First Place at "*Happy Hacking Days*" in 2015

## Publications

I3D 2023		<i>NeRFshop: Interactive Editing of Neural Radiance Fields</i> , <b>Clément Jambon</b> , Bernhard Kerbl, Georgios Kopanas, Stavros Diolatzis, Thomas Leimkühler, George Drettakis
Siggraph 2022	Asia	<i>Neural Point Catacaustics for Novel-View Synthesis of Reflections</i> , Georgios Kopanas, Thomas Leimkühler, Gilles Reiner, <b>Clément Jambon</b> , George Drettakis

## Languages

- French, native
- English, proficient: TOEFL iBT® Test - 111/120 (reading: 28, listening: 27, speaking: 28, writing: 28)
- German, professional (beginner)

## Skills

- Software development: C, C++, Cuda, Python, Java, C#, Rust (beginner), OpenGL API, GLSL, Vulkan API (beginner, mostly *compute* pipeline)
- Computer Graphics: neural rendering techniques (e.g. *NeRF*), Monte Carlo rendering, physically-based simulation, geometry processing, game development with Unity
- Computer Vision: image processing, multiple view geometry, SLAM and SfM pipelines
- Machine Learning: PyTorch, Scikit-Learn, Topological Data Analysis, NLP, Reinforcement Learning, NeRF, Diffusion Models, Statistical learning theory, advanced formal languages
- Network Engineering and computer architecture: Internet and IoT protocols, CPU & GPU architecture, memory hierarchy, cybersecurity, compilation, advanced systems optimization
- Web development: JavaScript, Typescript, React, Node.js, Express.js, Django, SQL, Hugo
- Tools: Unix/Linux, L<sup>A</sup>T<sub>E</sub>X, CMake, Git, Continuous Integration (CI)
- Driving licence

## Interests & Activities

- Have played the guitar for 12 years: former lead guitarist in a rock band
- Practicing hiking, trail running, road cycling and orienteering
- Current president of the *Master ohne ETH Bachelor (MOEB)* at ETH Zürich
- Involved in the Cooking Society (*Ratatouille*), Arts Society (*Bureau Des Arts*), Mathematical Society and Computer Society (*Binet Réseau*) at École Polytechnique (2020-2022)
- Organised a one-week trip in Italy for 64 schoolmates (2021)
- Supervised the activities and routes of a two-day adventure race with 200 participants (2022)