

Diego Polimeni

EPFL Qualified Quantum Scientist

Experience

- Nov - Present **Researcher**, *Rheinmain University of Applied Sciences*, Conducting research on Fault-tolerant compilation and hardware integration in the context of the HORIZON EUROPE SecQDevOps project
- Jan - Oct 2025 **Student Research Assistant**, *Fraunhofer FOKUS*, Developing and maintaining the Qrisp repository, <https://qrisp.eu/>, adding features and modules. Devising novel compilation strategies for algorithmic primitives.
- Feb-Aug 2024 **Quantum Computing Frameworks and Advocacy Intern**, *Alice & Bob*, Worked on bench-marking a broad list of quantum programming languages, in order to choose the best fit to use internally and externally to the company. Exploring the quantum computing stack, with particular attention to transpilation, compilation and simulation.
- 2020-2025 **Teaching assistant**, *EPFL*, Covered various positions as TA in Advanced Analysis I & II (Single and multi-variable real analysis), Advanced Physics I (Newtonian mechanics), Advanced Physics II (Thermodynamics), Advanced Linear Algebra I & II, Computer science and programming (C++), Functional Analysis for physicists.
- 2022-2024 **Student delegate for the QSE Section**, *EPFL*, Covered the position of student representative and took part to teaching committees, contributing to ameliorate the QSE master program.
- 2021-Present **Private teacher**, *EPFL*, Given private lessons to numerous students in different branches and years.
- Winter 2021 **Physics Mentoring Program**, *EPFL*, Mentored a group of first year students in Physics.
- 2023-2024 **Communications and graphic design coordinator**, *Center for Quantum Science and Engineering*, Collaborated in the organization of conferences and events related to Quantum Science, through the creation of visual advertising and mementos.
- 2022-2023 **Graphic Design Manager**, *Forum EPFL*, Took charge of visual projects of various nature, redefining the visual identity of the association in order to organize the largest recruitment fair in Europe.

Education

- Nov 2024 – Jun 2025 **Master thesis at Dahlem Center for Complex Quantum Systems**, *Freie Universität Berlin*, Under the supervision of prof. Jens Eisert, **Title:** Towards a quantum refrigerator protocol: rigorous end-to-end fault tolerance with minimal assumptions

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- 2022–2025 **Master degree in Quantum Science and Engineering**, *EPFL*, École Polytechnique Fédérale de Lausanne, Quantum Science and Engineering Faculty.
- 2018–2022 **Bachelor degree in Physics**, *EPFL*, École Polytechnique Fédérale de Lausanne, Basic Sciences Faculty.
- 2017–2018 **Maturità scientifica**, *Liceo Scientifico E.FERMI*, obtained with a score of 100/100.
- 2012–2017 **Maturità classica**, *Liceo Classico L.SCIASCIA*, obtained with a score of 100/100 cum laude.

Languages

Italian	Native
English	Fluent and professionally proficient
French	Fluent and professionally proficient
Latin	Interpreting and translation skills
Ancient Greek	Interpreting and translation skills
Spanish	Intermediate
German	Basic
Esperanto	Basic

Computer skills

Programming	Intermediate/advanced in C++, Matlab and Python, especially with libraries for simulations of quantum systems such as Qutip, advanced knowledge of quantum computing frameworks such as Qiskit, Qrisp, Qualtran, Q#, Classiq, working knowledge of Git
Computer Graphics	Good knowledge of Adobe Illustrator and Adobe InDesign, Adobe Photoshop, Blender and OpenGL
DAW	Good knowledge of sound engineering softwares (FL Studio)
Miscellanea	Great familiarity with LaTeX text editors and Microsoft Excel

Conferences and publications

- Poster Quantum Computing Theory in Practice, 23-25 April 2025, D. Polimeni, R. Seidel "*End-to-end compilable implementation of quantum elliptic curve logarithm in Qrisp*"
- Poster 6th International Workshop on Quantum Compilation, 11-12 September 2024, D. Polimeni, R. Seidel "*End-to-end compilable implementation of quantum elliptic curve logarithm in Qrisp*"
- Preprint D. Polimeni, R. Seidel "*End-to-end compilable implementation of quantum elliptic curve logarithm in Qrisp*", arXiv:2501.10228, January 2025. <https://arxiv.org/abs/2501.10228>.

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