

# 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.
- Dec-Mar 2026 **Hackathon Mentor and Judge**, *Alice & Bob*, Designed hackathon challenges, mentored participants, and judged winning projects at MIT iQuHACK 2026 (Boston) and EPFL QPFL 2026 (Lausanne).
- 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*, Held multiple TA position across mathematics and physics courses, including Advanced Analysis I & II (single- and multivariable real analysis), Advanced Physics I (Newtonian mechanics), Advanced Physics II (thermodynamics), Electromagnetism, Advanced Linear Algebra I & II, Computer Science and Programming (C++), and 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

- Incoming **PhD student at Dahlem Center for Complex Quantum Systems**, *Freie Universität Berlin*, In the group of prof. Jens Eisert
- 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
- 2022–2025 **Master degree in Quantum Science and Engineering**, *EPFL*, École Polytechnique Fédérale de Lausanne, Quantum Science and Engineering Faculty.

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- 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.

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## 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

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## Technical Skills

Programming	Advanced Python and C++, with working knowledge of MATLAB; experience with simulation libraries for quantum systems such as QuTiP.
Quantum Software	Advanced knowledge of Qiskit, Qrisp, Qualtran, Q#, and Classiq for quantum algorithm development and compilation workflows.
Web Development	Working knowledge of HTML, CSS, and JavaScript for technical demos and lightweight interfaces.
Version Control	Daily use of Git and GitHub for collaborative development, code review, and repository management.
Scientific Communication	Strong proficiency with LaTeX for technical writing and Manim for mathematical and algorithmic visualizations.
Digital Design	Adobe Illustrator, InDesign, Photoshop, Blender, and OpenGL.
Audio Production	Good knowledge of digital audio software (FL Studio).
Productivity Tools	Proficient with Microsoft Excel.

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## 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>.