

Oriel Kiss

Computational physicist.

✉ orielkiss@gmail.com

☎ +41 79 700 01 84

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Employment History

Apr. 2025 – present	Research Intern Google Quantum AI, Munich, Germany.
Jul. 2021 – Apr. 2025	Ph.d Candidate CERN, Geneva, Switzerland. Decreased the cost of random quantum simulation algorithms by a factor of 10. Computed the energy of light nuclei on a quantum computer for the first time. Implemented quantum machine learning and simulation algorithms on GPUs (clusters) and quantum computers via the cloud (AWS, Azure, IBMQ).
Sep. 2018 – Feb. 2025	Teaching assistant ETH Zürich and University of Geneva, Switzerland. Weekly exercise classes in physics and mathematics.
Mai 2023 - Aug. 2023	Research Intern. Xanadu Quantum Technologies Inc., Toronto, Canada . Developed a step-detection algorithm for time-series with a 10x runtime speed up.
Sep. 2020 – Dec. 2021	Research Intern. IBM Research, IBM Quantum, Zürich, Switzerland. Developed the first quantum machine learning algorithm for molecular dynamics.

Education

2021 – 2025	Ph.D. in Physics and Computer science , University of Geneva, Switzerland. Thesis title: <i>Randomized Quantum Simulations on Near-Term Quantum Computers</i> .
2019 – 2021	M.Sc. Physics , Swiss Federal Institute of Technology Zürich. Thesis title: <i>Quantum neural networks for electronic structure calculations</i> .
2016 – 2019	B.Sc. Physics , Swiss Federal Institute of Technology Zürich. Thesis title: <i>Bayesian Optimization for machine learning algorithms in the context of Higgs searches</i> .

Skills

Scientific computing	Data analysis, machine learning, tensor networks, quantum algorithms, quantum simulation, high-performance computing, cloud computing.
Coding	Python, Jax, PyTorch, Scikit-Learn, TensorFlow, Julia, Git, latex, C++, SQL, Tableau.
Soft skills	Quick learner, independent, problem solving oriented, public speaking, mentoring.
Languages	French (native), English and German (professional), Spanish and Italian (elementary).

Awards and Grants

Mobility Fellowship	Doc.Mobility fellowship from the University of Geneva (2023).
Wilsdorf Scholarship	Hans Wilsdorf scholarship for the M.Sc. (2020).
Gemperle Scholarship	Gemperle scholarship for the B.Sc. and M.Sc. (2016-2021).