ETIENNE CORMINBOEUF

etienne.corminboeuf@nbi.ku.dk   ◊

linkedin.com/in/etienne-corminboeuf

Education

2024 - Present	**Niels Bohr Institute, University of Copenhagen** - PhD in Physics
2023	**MIT** - Master Thesis, as part of MSc in Physics
2021 - 2023	**ETH Zürich** - MSc in Physics
2017 - 2020	**ETH Zürich** - BSc in Physics

Research Experience

Oct 2024 - Present

PhD Project
Niels Bohr Institute, Quantum Photonics Group

Photonic quantum nonlinear operations with quantum emitters.
Supervised by Prof. Peter Lodahl, Assoc. Prof. Stefano Paesani and Prof. Anders Sørensen.

Apr 2023 - Oct 2023

Master Thesis
MIT, Quantum Photonics Group

GKP State Generation Using a Strongly Coupled Optical Parametric Amplifier.
Supervised by Dr. Ryan Hamerly and Prof. Dirk Englund.

Oct 2022 - Sept 2024

Research Project
Orbio Earth

Building a comprehensive simulation set of realistic Sentinel-2 methane absorption images. Contributed to creating a pipeline for automated methane emissions detection and classification.

Mar 2022 - Jul 2022

Semester Project
Paul-Scherrer Institute PSI, Ion Trap Quantum Computing Group

Setup and Characterization of a 4-bore tunable cavity.
Supervised by Dr. C. Hempel and Prof. Jonathan Home.

Oct 2020 - Jul 2021

Research Project
Polariton Technologies Ltd.

(associated to the Institute of Electromagnetic Fields IEF, ETH Zürich)
Characterisation of electro-optic modulators and other devices.
Development of measurement procedures for automated testing of electro-optic devices.
Laboratory Automation. Software development for the LabExT project.
Supervised by Dr. B. Bäuerle.

Mar 2020 - Jul 2020

Semester Thesis
ETH Zurich, Seminar for Applied Mathematics

Implementation of an Integrator for the Schrödinger Equation with Time-Dependent, Homogeneous Magnetic Field.
Supervised by Dr. V. Gradinaru.

Employment History

Oct 2022 - Sep 2024	**Atmospheric Scientist** Orbio Earth	
	Analysis of Sentinel-2 satellite data. Research projects on methods to determine atmospheric methane emissions.	
Oct 2020 - Jul 2021	**Research Assistant (Apr - Jul) / R&D Intern (Oct - Mar)** Polariton Technologies Ltd., Zürich	
	Characterisation of electro-optic modulators and other devices. Development of measurement procedures for automated testing of electro-optic devices. Software developer for laboratory automation on the LabExT project.	
Sep 2020 - Oct 2020	**Substitute Teacher of Mathematics and Physics** Gymnasium St. Antonius, Appenzell	
	Taught Core and Advanced Mathematics and Physics courses to Students aged 15 - 18.	
Sep 2018 - Aug 2020	**Teaching Assistant** D-INFK, ETH Zürich	
	Feb 2020 - Aug 2020: Computer Science 1 for Mechanical Engineering Students, Sep 2019 - Oct 2019: Computer Science 0 for Electrical Engineering Students, Sep 2018 - Dec 2018: Computer Science 1 for Mathematics and Physics Students	
Dec 2016 - Jul 2017	**Teaching Intern** Secondary School Bühler-Gais AR	
Jan 2013 - Nov 2018	**Waiter, part-time** Gasthaus Freudenberg, Appenzell	

Patents

- Oliver A.D.A Sandberg, Peter Lodahl, Kasper H. Nielsen, Stefano Paesani, **Etienne Corminboeuf**. A Quantum Complexity Generating System and a Method of Generating Quantum Complexity. *Patent pending*, Application No. PCT/EP2025/064733, filed May 27, 2025.

- Rozanne Mouton, William Kingwill, Wojciech Adamczyk, **Etienne Corminboeuf**, Robert Huppertz. "Image Processing Methods." *Patent pending*, Application No. 20240193925 , filed December 12, 2023.

Volunteering

Mar 2020 - Mar 2023	**President / Vice President** Irrational Coffee	
	President and Treasurer of Irrational Coffee, the coffee commission of AMIV - the student association for mechanical engineers at ETH. Irrational Coffee is dedicated to spreading alternative coffee culture.	
May 2019 - Apr 2020	**Head of Events** [MindPhair] 2020	
	Responsible for Events and External Relations at [MindPhair] 2020, the job fair for students of mathematics, physics and computational science at ETH.	

Skills

Through my various programming related work I have acquired extensive programming knowledge. I have a good grasp of Julia, Python and LaTeX. Additionally I have a working knowledge of c++, Bash and Git, as well as experience with Linux.
I am fluent in German (mother tongue) and English (C2) and speak French on a B2 level.