

Bastien GRIVET | Resume

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BastienGrvt

Experience

PhD in Quantum Physics

Saclay, France

CEA - Institute for Theoretical Physics (IPhT), Quantum Information Theory Group

2023 – 2026

Resource-Constrained Entanglement Distribution and Quantum Compilation.

Under the supervision of Prof. Nicolas SANGOUARD.

Teaching Assistant

France and Norway

Paris-Saclay University and Norwegian University of Science and Technology

From September 2022

Undergraduate teaching across three institutions:

- **Quantum Physics**, CentraleSupélec – 2025 (Prof. Hichem Dammak)
- **Mathematics**, Université Paris-Saclay — 2023 (Prof. Maxime Février)
- **Statistical Physics**, NTNU, Norway — 2023 (Prof. Paul Gunnar Dommersnes)

Research Internship

Saclay, France

CEA - Condensed Matter Physics Lab (SPEC), Qnantronics Group

2021

Design of a multimode quantum memory and single spin detection with a set of spins coupled to a superconducting resonator.

This internship was mainly focused on the characterization of a Single-Microwave-Photon Detector. (supervisor : Prof. E. Flurin)

Education and Qualifications

MSc in Theoretical Physics

Paris, France

École Normale Supérieure

2022 – 2023

Master's degree in theoretical physics (ICFP), quantum physics track.

MSc-level engineering degree in physics

Saclay, France

Institut d'Optique Graduate School

2019 – 2023

Grande École, a selective French track combining coursework and research training.

6-month ERASMUS exchange at NTNU, Trondheim (2022).

Classes Préparatoires

Valenciennes, France

Lycée Henri Wallon

2016 – 2019

Two-year intensive program in mathematics, physics and chemistry, concluded by nation-wide competitive entrance examinations to the *Grandes Écoles*.

Skills

Computer skills

- **Programming:** Python, Jax, Julia, Mathematica
- **Other:** Homelabbing, Linux, Nix

Languages

- **French:** Native speaker
- **English:** C2 level

Publications

[Cus+25] P. Cussenot et al. "Uniting Quantum Processing Nodes of Cavity-Coupled Ions with Rare-Earth Quantum Repeaters Using Single-Photon Pulse Shaping Based on Atomic Frequency Comb". In: *Phys. Rev. Lett.* 135 (24 Dec. 2025), p. 240803. DOI: 10.1103/hvsx-cx2d. URL: <https://link.aps.org/doi/10.1103/hvsx-cx2d>.

[VGS25] Xavier Valcarce, Bastien Grivet, and Nicolas Sangouard. *Unitary Synthesis with AlphaZero via Dynamic Circuits*. 2025. arXiv: 2508.21217 [quant-ph]. URL: <https://arxiv.org/abs/2508.21217>.