europass

Nicola Bertoni

Nationality: Italian **Date of birth:** 19/09/2001 **Place of birth:** Italy

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Work: Dipartimento di Matematica, Piazza di Porta San Donato 5, 40126 Bologna (Italy)

EDUCATION AND TRAINING

High School Diploma

Liceo Torricelli-Ballardini [2015 – 2020]

City: Faenza | **Country:** Italy | **Final grade:** 100/100

Erasmus+ Study Mobility

[18/06/2019 – 23/07/2019]

City: Derry | **Country:** Ireland

Bachelor's Degree in Mathematics

University of Bologna [09/2020 – 29/09/2023]

City: Bologna | **Country:** Italy | **Final grade:** 110/110 cum Laude | **Level in EQF:** EQF level 6 | **Thesis:** Leray-Lions Theorem for a Class of Nonlinear Problems

Master's Degree in Mathematics

University of Bologna [09/2023 – 29/10/2025]

City: Bologna | **Country:** Italy | **Final grade:** 110/110 cum Laude | **Level in EQF:** EQF level 7 | **Thesis:** A Semiclassical Weyl Law for Quantized Operators on the Torus Perturbed by Random Potentials

Erasmus+ Study Mobility (semester abroad)

University of Copenhagen [08/2024 – 02/2025]

City: Copenhagen | **Country:** Denmark

PhD in Mathematics

University of Bologna [01/11/2025 – Current]

City: Bologna | **Country:** Italy | **Level in EQF:** EQF level 8

WORK EXPERIENCE

E4 Computer Engineering SpA – Scandiano, Italy

Address: Via Martiri della Libertà 66, 42019 Scandiano (Italy)

Intern

[03/2025 – 06/2025]

Benchmarking of quantum computers on the Quadratic Knapsack Problem

Private Math and Physics Tutor

[2023 – Current]

LANGUAGE SKILLS

Mother tongue(s): Italian

Other language(s):

English

LISTENING C1 **READING** C1 **WRITING** C1

SPOKEN PRODUCTION C1 **SPOKEN INTERACTION** C1

Spanish

LISTENING B1 **READING** B1 **WRITING** B1

SPOKEN PRODUCTION B1 **SPOKEN INTERACTION** B1

Levels: A1 and A2: Basic user; B1 and B2: Independent user; C1 and C2: Proficient user

SKILLS

Programming

MATLAB / Gurobi Optimizer / Python (computer programming) / D-Wave

Optimization

QUBO on Quantum Annealer / Simulated Annealing

Digital Skills

LaTeX / Microsoft Word / Microsoft Powerpoint / Microsoft Excel

CONFERENCES AND SEMINARS

[21/07/2025]
Final Internship Seminar, E4 Computer Engineering

[23/01/2026]
MSc Thesis Seminar

RESEARCH INTERESTS

Mathematical Physiscs

- Quantum Mechanics
- Statistical Mechanics
- Quantum Computing
- Quantum Machine Learning

Mathematical Analysis

- Semiclassical Calculus and Microlocal Analysis
- Spectral Theory