

Filippo Montorsi

Department of Physics, Informatics and Mathematics · University of Modena and Reggio Emilia
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Education

Ph.D. in Physics and Nanosciences Nov 2026 – Expected 2029
University of Modena and Reggio Emilia *Modena, Italy*

- **Project:** Quantum effects on the transport properties of liquids and their uncertainty estimation
- **Advisor:** Dr. Federico Grasselli

M.Sc. in Physics Oct 2020 – Dec 2022
University of Modena and Reggio Emilia *Modena, Italy*

- **Grade:** 110/110 *cum laude*
- **Thesis:** *Topological Quantum Computation on Supersymmetric Spin Chains*
- **Advisor:** Prof. Diego Trancanelli

B.Sc. in Physics (*Laurea in Fisica*) Oct 2016 – Dec 2019
University of Modena and Reggio Emilia *Modena, Italy*

- **Thesis:** *Construction of a projection optical microscope for the combined image-diffraction analysis of transparent objects* (Title in Italian: *Costruzione di un microscopio ottico a proiezione...*)
- **Advisor:** Prof. Stefano Frabboni

Publications

1. I. Jana, **F. Montorsi**, P. Padmanabhan, D. Trancanelli, “Topological Quantum Computation on Supersymmetric Spin Chains,” *Journal of High Energy Physics*, vol. 2023, art. no. 251, 2023.

Conferences & Workshops

Frontiers in Modelling Charge and Proton Transport for Energy Materials Sep 7–9, 2026
Participant *Bologna, Italy*

Machine Learning to Molecular Discoveries Symposium (ML2MD) Jun 17–19, 2026
Uppsala University *Uppsala, Sweden*

- **Poster Presentation:** *Quantum corrections to transport properties of liquids*

Teaching & Academic Appointments

High School Teacher (Mathematics & Physics) Sep 2024 – Jun 2025
Liceo M. Morandi *Finale Emilia, Italy*

- Taught secondary mathematics and physics curricula.

Extracurricular STEM Tutor Sep 2024 – Dec 2024
Liceo M. Morandi *Finale Emilia, Italy*

- Coached students for the Mathematical Olympiad (*Olimpiadi della Matematica*) and delivered introductory sessions in robotics.

Academic Tutor Mar 2021 – Jun 2023
Istituto Sacro Cuore *Modena, Italy*

Professional Experience

CRM Developer (Business Development Apprentice)

Sep 2023 – Sep 2024

Ceramiche Refin S.p.A.

Reggio Emilia, Italy

- Developed interfaces and backend procedures to improve data quality and enable quantitative commercial analysis.

Technical & Linguistic Skills

Programming Languages: Python, Shell Scripting (Bash), L^AT_EX

Languages: Italian (Native), English (C1 – CAE Certificate), Spanish (A2), Portuguese (A2)

Other Experience & Pursuits

- UniMoRe University Orientation Talk Show (Feb 2026)