



Simone Tortorella

PHYSICIST & ENGINEER

CONTACTS

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 Lecce, Italy

ABOUT ME

I'm a 24-year-old physicist and engineer with a strong aptitude for solving **technical challenges** through both analytical reasoning and a pragmatic approach.

Multidisciplinary expertise across physics, engineering, and AI, with hands-on experience in advanced technologies. Academic and professional path focused on the intersection of quantum physics, technology, and applied research.

I thrive in dynamic environments where **advanced research** meets **real-world applications**, and I'm motivated by continuous learning, innovation, and professional growth.

LANGUAGES

Italian: native speaker

English: fluent

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PROFESSIONAL EXPERIENCE

10/2024 - Present | BTS Bioengineering **R&D Engineer**

Work at BTS Bioengineering, focusing on artificial intelligence, computer vision, and HW/FW integration in multi-camera systems for clinical and precision applications. My work bridges software development, biomedical systems, and product-oriented engineering, with a strong focus on optimization and efficiency via development of CNN.

01/2024 - 10/2024 | Scuola Normale Superiore (NEST) **Physicist**

Apprenticeship at the Superconducting Quantum Electronics Lab, NEST. Operated dilution refrigerators, dry cryostats, and high-vacuum systems. Developed and tested hybrid superconducting electronics for quantum computing, with hands-on experience in electrical characterization, device engineering, and optimization.

EDUCATION

2022 - 2024 | Grade: *110/110 cum laude*

MSc in Materials Science and Nanotechnology

Joint program between the University of Pisa and the Scuola Normale Superiore.

2019 - 2022 | Grade: *109/110*

BSc in Physics

University of Pisa.

PUBLICATIONS

- *Cryogenic behavior of high-permittivity gate dielectrics: The impact of atomic layer deposition temperature and the lithographic patterning method* **AIP Publishing Journal of Applied Physics**
<https://doi.org/10.1063/5.0250428>
- *Supercurrent time division multiplexing with solid-state integrated hybrid superconducting electronics* **Nature Portfolio at Nature Communications** <https://doi.org/10.48550/arXiv.2410.11721>
- *Josephson Field Effect Transistors with InAs on Insulator and High Permittivity Gate Dielectrics* **ACS Applied Electronic Materials**
<https://pubs.acs.org/doi/10.1021/acsaelm.5c00038>

SKILLS

Programming: C, C#, C++, Python.

Software tool: OriginLab, LaTeX, MATLAB.

Technical domains: AI, Computer Vision, HW, FW, Nanotech, Superconductivity, Cryogenics, Statistics, Quantum Electronics.