

FRANCESCO LORENZI

Born in Arzignano (Vicenza) on September 15th 1998

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🏠 lorenzifrancesco.github.io/

EDUCATION

- 2020-Sep. 2022 **M.Sc.** in ICT for Internet and Multimedia - Università degli studi di Padova
Exam score weighted average 30/30.
Proposed thesis title: Nonlinear noise in WDM systems: study of classical and quantum channel interaction and capacity.
- 2017-2022 **B.Sc.** in Ingegneria dell'Informazione - Università degli studi di Padova
Final grade: 110/110 *with honors*.
Thesis title: Dispersione cromatica e non linearità in fibra ottica, un'analisi simulativa.
- 2012-2017 **Liceo scientifico** G.B.Quadri, Vicenza
Final grade: 100/100.
Essay title: Linearità come metodo conoscitivo, potenzialità e limiti.

OTHER RELEVANT EDUCATION EXPERIENCES

- 2022 Internship at the Department of Physics and Astronomy (prof. L. Salasnich): *study of nonlinear Schrödinger equations and applications to cold atom dynamics and nonlinear fiber optics*, Università degli studi di Padova.
- 2021-2022 Collaboration with Photonics and Electromagnetics group at Department of Information Engineering (prof. M. Santagiustina): *study of nonlinear models for fiber propagation*, Università degli studi di Padova.
- 2022 Tutoring activity for the university inclusion program, University di Padova.
- 2021-2022 Tutoring activity for the course of “Fondamenti di Algebra lineare e Geometria”, Università degli studi di Padova.
- 2017 Participation in the national competition of the 31st Italian Olympics of Physics, Senigallia (AN).
- 2016 Physics stage activity “Studi di superfici nanostrutturate con tecniche ottiche e a scansione di sonda”, Estage program at NanoStructures Group, Department of Physics and Astronomy, Università degli studi di Padova.
- 2015 Participation in the building of a muon detector for Extreme Energy Events project, CERN - Geneve.

PUBLICATIONS

- 2022 F. Lorenzi, G. Marcon, A. Galtarossa, L. Palmieri, A. Mecozzi, C. Antonelli, M. Santagiustina “Model for Nonlinear Interference Noise in Raman-amplified WDM Systems”, submitted to *2022 European Conference on Optical Communications (ECOC)*.

AWARDS

- 2021 “Premio di studio del Rotary Club di Padova” entitled to prof. Carlo Giacomo Smeda – for excellent curriculum and support to community.

RELEVANT WORK EXPERIENCES

- Feb.-Apr. 2022 Designer and teacher of the ICT literacy course “Strumenti digitali per la cittadinanza”, Biblioteca comunale G.Bedeschi, Arzignano (VI).
- Feb. 2021 ICT teacher in high school (MAD), ITTE G.Galilei, Arzignano (VI).

RELEVANT SKILLS

Programming skills

Advanced level: Python, Julia, Matlab, Git/GitHub, \LaTeX .

Intermediate level: C, C++, CST-FEM.

Basic level: Fortran, ASMx86, HTML, SQL, PHP.

Language skills

English: *B2 - FCE*.

RESEARCH INTERESTS

Solitons in optical and matter-wave media • Bose-Einstein condensation • Optics • Nonlinear Waves • Applied electrodynamics • Electronics and Optoelectronics • Information theory • Machine learning

PERSONAL INTERESTS AND ACTIVITIES

Active citizenship • Philosophy of science • Science and technology communication • Classical and contemporary music • Rock climbing and mountaneering

In my local community, I engage in promotion of scientific and technical awareness through discussion and writing of short essays. For example, I was involved in discussing 5G technology and the biologic impact of electromagnetic fields.

I run an electronics laboratory equipped with low frequency/audio instrumentation, where I occasionally design and build amplifiers for musical instruments, and sound effects.