

PERSONAL INFORMATION

Francesco Lozzi

ABOUT ME

Master's student in theoretical physics with a strong background in Quantum Field Theory, General Relativity, and Cosmology. Highly versatile and proactive, I have enriched my academic journey with various extracurricular experiences, both theoretical and experimental. Passionate about teaching and sharing knowledge.

WORK EXPERIENCE

04/09/2024-03/10/2024
Amburgo, Germany

Data analyst INFN

Participated in Belle II data analysis through an INFN scholarship

- Conducted analysis and developed background suppression techniques for the $B \rightarrow K^* \nu \bar{\nu}$ decay channel
- Gained proficiency in the Belle II data analysis framework (basf2)

EDUCATION AND TRAINING

2023-CURRENT
Roma, Italy

Master's degree, Università degli Studi di Roma "La Sapienza" EQF level 7

Field of study: Physics

Curriculum focused on the theoretical study of Fundamental Interactions and the Standard Model, with a strong emphasis on General Relativity and Cosmology.

2023-CURRENT
Roma, Italy

SSAS student, Scuola Superiore di Studi Avanzati, Sapienza

Parallel educational path for excellent students, focused on gaining experience in experimental particle physics, astrophysics, and cosmology, complemented by language courses to enhance English proficiency and develop French skills.

2020-2023
Roma, Italy

Bachelor's degree, Università degli Studi di Roma "La Sapienza" EQF level 6

Field of study: Physics

Final grade: 110 cum laude

Thesis: Integrali sui cammini e istantoni

AWARDS

2023

INFN

Short-term visit to CERN (INFN award for the top students of the Nuclear and Subnuclear Physics course)

- Overview of key experiments: CMS, ELENA, ATLAS, AMSGained proficiency in the Belle II data analysis framework (basf2)
- Seminars on data analysis techniques, including trigger systems and machine learning applications
- Lessons on accelerator physics and particle detectors

EXPERIENCES

2024
Pisa, Italy

Scuola Galileiana

Advanced lectures on theoretical physics of Fundamental Interactions and Quantum Gravity at Scuola Normale Superiore

- Topics covered: string theory, effective theories of gravity, axions and inflation

EXPERIENCES

- 2021 – 2023 **Sapienza**
Program of advanced courses for excellent students
- In-depth study of classical field theory, enhancing understanding of Quantum Field Theory
 - Introduction to differential geometry, deepening comprehension of General Relativity
 - Computational biophysics, applying complex systems techniques to biology and exploring Python for simulations and machine learning
- 2023 **INFN**
National Laboratory of Frascati
Courses on accelerator physics and experiments
- 2019 **SENS-FM**
National Summer School in Modern Physics
- 2019 **INSPYRE**
National Laboratory of Frascati
International School on modern PhYsics and REsearch, INFN
- Overview of ongoing experiments in Standard Model physics (Mu2e, VIP2, LHC)
 - Hands-on experience with Arduino, including development of a simple particle detector (ArduSiPM)
- 2019 **Institute of Biosciences and Bioresources (IBBR)**
IBBR-CNR Division of Portici
Stage on molecular biology and enzymology, Università Federico II di Napoli
- Participated as one of the winners in the national phase of the Natural Sciences Olympiad 2019
 - Acquired cross-disciplinary data analysis and numerical simulation skills through molecular biology experiments
- 2018 **Summer school "A scuola di Stelle", INAF**
Summer lectures on astronomy and astrophysics at Sant'Agata sui Due Golfi (Massa Lubrense, Italy)

LANGUAGE SKILLS

Mother tongue(s): Italiano

Other language(s):

	SPEAKING				WRITING
	Listening	Reading	Interaction	Production	
Inglese	C1	C1	C1	C1	C1
French	A2	A2	A2	A2	A2

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

DIGITAL SKILLS

Programming C, C++, Python
O.S. Windows, Linux
Software Microsoft Office, LaTeX
Data analysis framework ROOT, basf2

Dati personali Autorizzo il trattamento dei miei dati personali ai sensi del Decreto Legislativo 30 giugno 2003, n. 196 "Codice in materia di protezione dei dati personali".

Il sottoscritto dichiara di essere consapevole che il presente *curriculum vitae* sarà pubblicato sul sito istituzionale dell'Ateneo, nella Sezione "Amministrazione trasparente", nelle modalità e per la durata prevista dal d.lgs. n. 33/2013, art. 15.

Ai fini della pubblicazione

f.to **Francesco Lozzi**
Roma, 29/01/2025