Nicola Barbieri

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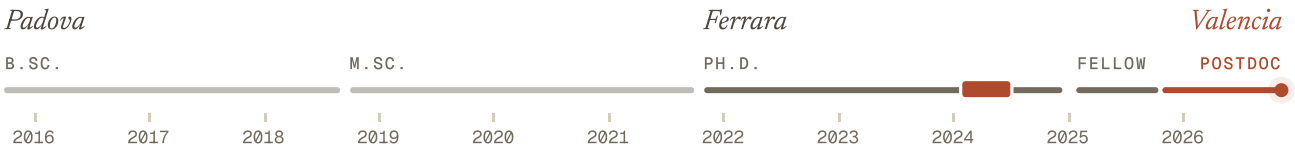


Fig. 3 *Where and when, to scale. The short mark in 2024 is the five-month visit to IFIC.*

POSITIONS

Nov 2025 – now
Postdoctoral researcher
Instituto de Física Corpuscular (IFIC), CSIC – Universitat de València
Theoretical astroparticle physics · PI: Dr. Sergio Pastor Carpi

Feb – Nov 2025
Research fellow *(assegno di ricerca)*
INFN, Sezione di Ferrara
Theoretical astroparticle physics · PI: Dr. Martina Gerbino

EDUCATION

2021 – 2024
Ph.D. in Physics
Department of Physics and Earth Sciences, University of Ferrara
Thesis: *Tests of fundamental physics with cosmological observables*
Supervisor: Dr. Massimiliano Lattanzi · co-supervisor: Dr. Martina Gerbino

2018 – 2021
M.Sc. in Physics, 110/110 cum laude
Department of Physics and Astronomy "Galileo Galilei", University of Padova
Thesis: *Testing non-standard neutrino interactions in cosmology*
Supervisor: Prof. Nicola Bartolo · co-supervisors: Prof. Moslem Zarei, Dr. Massimiliano Lattanzi

2015 – 2018
B.Sc. in Physics, 110/110
Department of Physics and Astronomy "Galileo Galilei", University of Padova
Thesis: *Massive Fermi gas in the expanding Universe*
Supervisor: Prof. Sabino Matarrese

VISITING PERIODS

Feb – Jun 2024
Visiting Ph.D. student
IFIC, CSIC – Universitat de València
Supervisors: Dr. Olga Mena and Dr. Sergio Pastor Carpi

GRANTS & AWARDS

2024
Short-Term Scientific Mission grant
COST Action CA21106 "Cosmic WISPers"
€2,000, awarded through competitive selection

2021

Merit scholarship

Alumni Association, Gregorianum University College, Padova

€1,000, for outstanding academic results

COLLABORATIONS

2022 – 2025

Atacama Cosmology Telescope (ACT)

External collaborator

Invited to contribute to the DR6 analysis on neutrino physics: extensions of ΛCDM with self-interacting neutrinos (Majoron models).

TEACHING & SUPERVISION

2023

Bachelor's thesis co-supervision

Giuseppe Giglio, University of Ferrara

L'inflazione cosmica e lo spettro delle perturbazioni primordiali, with Dr. Massimiliano Lattanzi

2019 – 2020

Physics tutor

University of Padova

Extra lectures on mechanics, fluid dynamics and thermodynamics for first-year Optics and Optometry students

2016 – 2017

Internal tutor

Istituto Superiore "Enrico Fermi", Mantova

Interdisciplinary projects in chemistry, physics, data analysis and computing with final-year high-school students

SERVICE

2022 – now

Referee

Journal of Cosmology and Astroparticle Physics (since 2022)
Physical Review D (since 2026)
Physical Review Letters (since 2026)
Physics of the Dark Universe (since 2026)

Jul 2024

Session co-chair

Seventeenth Marcel Grossmann Meeting (MG17), Pescara

Parallel session "Unveiling neutrino secrets through cosmology: current status and future developments"

OUTREACH

2023 – 2025

Aggiornamenti & Lab2Go

University of Ferrara and INFN

Lectures on software and hardware programming with mBlock and Arduino, for school teachers and high-school students

2022 – 2025

European Researchers' Night

University of Ferrara and INFN

The Europe-wide science festival of the Marie Skłodowska-Curie actions, held in almost 400 cities

2022 - 2025

Stage Estivi @ UniFE

University of Ferrara and INFN

Summer labs for high-school students on Python, Google Colab and N-body simulations

2022 - 2025

Laboratori di Fisica Moderna

University of Ferrara and INFN

Labs on Python and cooperative problem solving about the thermal history of the Universe, for high-school students

Feb 2023, Feb 2025

Unife Orienta

University of Ferrara

Orientation sessions introducing new students to degree programmes and university services

LANGUAGES

Italian *native*

English *fluent* C1

Spanish *elementary* A2