Antonio Farina

Email: **Date of birth:** 29/05/1997 **Nationality:**
Sex:

Profile

As Ph.D. student at the University of Genoa with a fellowship at the INAF Astronomical Observatory of Brera, my research predominantly revolves around the Euclid experiment, specifically focusing on its spectroscopic galaxy survey section. My work is primarily centered on the characterization of higher-order statistics of the density field, encompassing both theoretical and measurement-related aspects, with particular emphasis on the so-called anisotropic galaxy 3-point correlation function (3PCF). Within the Euclid Level 3 Organizational Unit, I am actively engaged in testing and optimizing the algorithms that will be employed to estimate 2 and 3-point correlation functions. Additionally, my research also extends to addressing systematic effects and understanding their impact on clustering statistics and the associated covariance matrix in the context of the Euclid spectroscopic survey.

Education

[01/11/2022 – On going]

Ph.D. in Physics

Università di Genova
With fellowship at the INAF Astronomical Observatory of Brera

Via Dodecaneso 33, 16146 Genova
https://unige.it//
Via Brera 28, 20122 Milano
Via Emilio Bianchi 46, Merate (LC)
http://www.brera.inaf.it/

Supervisors: Prof. Enzo Franco Branchini
Dr. Benjamin Rudolph Granett
Dr. Alfonso Veropalumbo

[10/11/2019 – 07/06/2022]

Master's degree in Physics

Curriculum Astrophysics and Cosmology

Università degli studi di Roma Tre
Via della Vasca Navale 84, 00146 Roma
https://www.uniroma3.it/

Thesis title: A new model for the anisotropic 3-point correlation function and its anisotropies: implementation and validation against simulated data

Supervisors: Prof. Enzo Franco Branchini
Dr. Alfonso Veropalumbo

Final mark: 110/110 cum laude

[20/09/2016 – 24/10/2019]

Bachelor's degree

Università degli studi di Roma Tre

Via della Vasca Navale 84, 00146 Roma
https://www.uniroma3.it/

Thesis title: The least action principle in Cosmology

Supervisors: Prof. Enzo Franco Branchini

Final mark: 110/110 cum laude

Teaching

[September 2023 – January 2023] Tutor of General Physics for 1st year Biomedical Engineering students – Univeristà di Genova
(Prof. Enzo Franco Branchini)

[March 2023 – June 2023] Tutor of General Physics for 1st year Management Engineering students – Università di Genova
(Prof. Marco Raveri)

Publications

Branchini E. and Farina A., 2024, Large Scale Structure and Neutrinos (submitted to Il Nuovo Cimento)

Mellier Y. et al., 2024, Euclid I: overview of the mission (submitted to A&A)

Talks

[20/02/2023 – 24/02/2023] Euclid Science Working Group Galaxy Clustering meeting, Milano, Italy – **Modelling the 3-point correlation function in redshift space**

[05/06/2023] GeMiTo Cosmology meeting, Milano, Italy – **Mod3l and Meascorr: new tools for the anisotropic galaxy 3PCF**

[11/09/2023 – 15/09/2023]	109 National Congress of Italian Physical Society, Fisciano (SA), Italy - **Modelling and estimation of the anisotropic galaxy 3PCF**
[21/12/2023]	Merate Christmas Workshop, Merate (LC), Italy – **Modelling and estimation of the anisotropic galaxy 3PCF**
[29/01/2024 – 02/02/2024]	Euclid Science Working Group Galaxy Clustering meeting. Marseille, France – **Alternative ways to generate random catalogs for early data**

Language skills

Native language: Italian

Other languages: English

Comprehension (*)		**Speaking (*)**	**Writing (*)**
Listening	**Reading**		
B2	B2	B2	B2

(*) Common European Framework of Reference for Languages (CEFR)

Computer skills

Operating systems: Linux, iOS, Windows

Software: Wolfram Mathematica, Matlab, GNU Octave, HEALPix, XSpec, Office suite

Programming languages: Python3, C++

Disclaimer

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