Antonio Farina

Email: 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.

Date of birth: 29/05/1997

Education

[01/11/2022 - On going]



Supervisors:

[10/11/2019-07/06/2022]



Thesis title:

Ph.D. in Physics

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

Nationality:

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

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

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/

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	
ROMA	Università degli studi di Roma Tre	
UNIVERSITÀ DEGLI STUDI	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 1 st year Biomedical Engineering students – Univeristà di Genova (Prof. Enzo Franco Branchini)	
[March 2023 – June 2023]	Tutor of General Physics for 1 st 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

	Comprehension (*)	Speaking (*)	V
Other languages:	English		
Native language:	Italian		

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

I authorize the processing of personal data contained in this curriculum vitae et studiorum, in accordance with Legislative Decree of June 30, 2003, No. 196 ("Privacy Code") and art. 13 of GDPR (UE regulation 2016/679)