



## Personal information

Surname(s) / First name(s)

Address(es)

Email(s)

Nationality(-ies)

Date of birth

Gender

## Current Position and Affiliations International Collaborations

## Education and training

Place and Date

Title of qualification awarded

Title of dissertation

Supervisor(s)

Place and Date

Title of qualification awarded

Title of dissertation

Supervisor(s)

Final score

Final score

Place and Date

Title of qualification awarded

Title of dissertation

Supervisor(s)

Final score

## Teaching activity

## Conferences

### Bonici, Marco

Via Ceriallo 27, 16044, Cicagna (GE), Italy

marco.bonici@inaf.it

Italian

Apr 30 1993

male

PostDoc, IASF Milano (2021-today). Associated to Istituto Nazionale AstroFisica (INAF)

Since 2018, member of the Euclid Consortium. I am particularly active in the Galaxy-Clustering Work Package Voids where I am leading the proposed "Euclid standard project" entitled "Forecasts from the void-lensing cross-correlation". I am co-leading the analysis on the impact of the covariance and the cross-correlation between the Euclid 2D and 3D probes on the overall Euclid survey performance. I have also joined the group responsible of the development of the official Euclid likelihood code.

University of Genova, 2017 – 2021

PhD in Physics

Unveiling the Universe with gravitational lensing and cosmic voids

Dr. Carmelita Carbone, Dr. Stefano Davini

University of Genova, 2015 – 2017

MSc in Physics

Towards a New Proposal for the Time Delay in Gravitational Lensing

Prof. Nicola Maggiore, Prof. Nicodemo Magnoli

110 cum Laude

110 cum Laude

University of Genova, 2012 – 2015

BSc in Physics

Entropy and Irreversibility

Prof. Giovanni Cassinelli

110 cum Laude

In the academic years 2017/2018, 2018/2019 and 2019/2020 I won an assistantship (30 hours) of the faculty of Computer Engineering, preparing exercises for the course of General Physics. In the academic year 2016/2017 I was a tutor of the faculty of Mechanical Engineering, teaching Physics, Mathematical Analysis, Algebra.

Debating the potential of Machine Learning in astronomical survey, (Paris, 2021), oral contribution

Barolo Astroparticle Meeting, (Barolo, 2021), oral contribution

Julia Annual conference, (online, 2021), oral contribution

Euclid Consortium Annual meeting, (Lausanne, 2021), oral contribution

Euclid Consortium Annual meeting, (Barcelona, 2020)

## Schools attended

Meeting Nazionale Collaborazione Euclid, (Bologna 2020), oral contribution  
Euclid Science meeting, (Paris, 2020), oral contribution  
Euclid Consortium Annual meeting, (Helsinki, 2019)  
Euclid and beyond: the many faces of Cosmology, (Roma, 2019)  
Galaxy Clustering and Weak Lensing meeting, (Milano, 2018)  
Congresso Nazionale Società Italiana di Fisica, (Cosenza, 2018), oral contribution  
Universum Meeting (Bologna, 2018)  
String Theory and Cosmology (Barga, 2017), oral contribution

## List of Publications

Efficient Large Scale Computing, (Bertinoro, 2019), oral contribution  
Computational Methods in Cosmology, (Cargese, 2018), oral contribution  
Summer School on Cosmology, ICTP, 2018

M. Bonici and N. Maggiore, "Constraints on interacting dynamical dark energy and a new test for  $\Lambda$ CDM," Eur. Phys. J. C **79** (2019) no.8, 672 doi:10.1140/epjc/s10052-019-7198-1 [arXiv:1812.11176 [gr-qc]].  
N. Alchera, M. Bonici, R. Cardinale, A. Domi, N. Maggiore, C. Righi and S. Tosi, "Analysis of the angular dependence of time delay in gravitational lensing," Symmetry **10** (2018) no.7, 246 doi:10.3390/sym10070246 [arXiv:1804.03111 [astro-ph.CO]].  
N. Alchera, M. Bonici and N. Maggiore, "Towards a new proposal for the time delay in gravitational lensing," Symmetry **9**, no. 10, 202 (2017) doi:10.3390/sym9100202 [arXiv:1709.09055 [astro-ph.CO]]

## Personal skills and competences

Mother tongue(s)

Other language(s)

Self-assessment  
European level<sup>(\*)</sup>

English

## Italian

English

Understanding		Speaking		Writing
Listening	Reading	Spoken interaction	Spoken production	
excellent	excellent	good	good	good

<sup>(\*)</sup> Common European Framework of Reference (CEF) level

## Computer skills and competences

I have an excellent knowledge of Julia, Python, C++, Mathematica. I am familiar with the scientific codes CAMB, CLASS, HEALPix, Astropy, TensorFlow, JAX. I have been the major developer of the Python code, SEYFERT, to perform forecasts on cosmological parameters measurements; the code will be soon released. I am the main developer and maintainer of CosmoCentral.jl, a Julia package that can perform Fisher Forecasts and MonteCarlo analysis of cosmological datasets; the code is publicly released and can be found on my GitHub account. I am familiar with Ubuntu, CentOS and Windows.

## Personal Skills

Since High School, I have been giving private lectures of Mathematical Analysis, Physics, Algebra and engineering subjects such as Psychometrics, Acoustics, Building Science, Applied Thermodynamics. I love writing and I won with my classmates the first edition of "GnE: Giornalisti nell'Erba". I joined my High School Team of Mathematics Olympics, reaching the final in Cesenatico. I am an educator with other volunteers, working especially with 14/18-years-old boys and girls. I have also worked with homeless and I spent 2 weeks in Ventimiglia for the immigrants emergency.

## Personal interests

I am an omnivorous reader: I read from Dostoevskij to Saramago, from Pirandello to Follett, from Asimov to Martin. I love theatre, hiking, TV series. I have completed an improvisational theatre course.