

## NICOLA BORGHİ

Contact  
Information

- Born in Cento (Ferrara), Italy, 22 May 1996
- 🏛 Dipartimento di Fisica e Astronomia “Augusto Righi”  
University of Bologna, via Piero Gobetti 93/2, Bologna, Italy
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- 👤 [nicoborghi.github.io](https://nicoborghi.github.io)

## EDUCATION

University  
degrees

- Ph.D. in Astrophysics** 11/2020 – Present  
Department of Physics and Astronomy “Augusto Righi”, University of Bologna, Italy  
Project: “Cosmology with gravitational waves and combination with other probes”  
Advisors: Dr. Michele MORESCO & Prof. Andrea CIMATTI
- Laurea magistrale in Astrophysics and Cosmology (cum laude)** 9/2018 – 10/2020  
University of Bologna, Italy  
Advisors: Prof. Andrea CIMATTI & Dr. Michele MORESCO
- Laurea triennale in Astronomy (cum laude)** 9/2015 – 7/2018  
University of Bologna, Italy
- Scientific High School Diploma** 9/2010 – 7/2015  
ISIT Bassi Burgatti, Cento (FE), Italy

Other  
courses

- ISAPP Summer School on Gravitational Waves** 6/2021  
Topics: gravitational wave theory, sources and detectors (current and upcoming)  
Project: gravitational wave data analysis
- Asiago Multi-Messenger Astrophysics School** 1/2020  
Department of Physics and Astronomy (DFA) of the University of Padova, Italy  
Topics: astrophysical neutrinos, GWs, cosmic rays and detectors  
Project: broadband spectral fitting of blazars
- SperimEstate - Summer Internship** 6/2014  
INAF OAS - National Institute for Astrophysics, Bologna, Italy  
Topic: study of soft  $\gamma$ -ray selected giant radio galaxies (see Bassani et al. 2016)

RESEARCH ORCID ADSFirst-author  
publications

1. Nicola Borghi, Michele Moresco, Andrea Cimatti, Alexandre Huchet, Salvatore Quai, and Lucia Pozzetti. Toward a better understanding of cosmic chronometers: Stellar population properties of passive galaxies at intermediate redshift. *ApJ (accepted)*, October 2021a. URL <https://ui.adsabs.harvard.edu/abs/2021arXiv210614894B>
2. Nicola Borghi, Michele Moresco, and Andrea Cimatti. Toward a better understanding of cosmic chronometers: A new measurement of  $H(z)$  at  $z \sim 0.7$ . *ApJ Letters (accepted)*, December 2021b. URL <https://ui.adsabs.harvard.edu/abs/2021arXiv211004304B>

Contributed  
talks

- 🌀 Sixteenth Marcel Grossmann Meeting 7/2021  
*A new measurement of the expansion history of the Universe from cosmic chronometers in the LEGA-C survey*
- 🌀 Massively Parallel Large Area Spectroscopy from Space 6/2021  
*Robust constraints on the physical properties of individual passive galaxies from Lick indices in the LEGA-C survey*

## TEACHING ACTIVITY

Teaching  
assistant

**Astrophysics Laboratory (optical/near-IR module)** A.Y. 2021–2022  
Master Degree Course, Astrophysics and Cosmology, DIFA, University of Bologna

## OUTREACH ACTIVITY

Public  
engagement

**“Astroversi” - university podcast** since 2021  
Department of Physics and Astronomy “Augusto Righi”, University of Bologna

- 🌀 Science outreach podcast structured in four different programs covering general and more advanced astrophysical topics, with a focus on the Ph.D. life, state-of-the-art research, and spin-offs. Role: pre & post-production. [Listen on Spotify](#).

**Public lectures and stargazing events** since 2016  
Gruppo Astrofili Persicetani, San Giovanni in Persiceto and surrounding areas

- 🌀 Lecturer at the Planetarium (20+ talks, [see the topics](#))
- 🌀 Stargazing nights (20+)

Schools

**Museo del Cielo e della Terra - FisicLab** since 2017  
Agen.Ter., San Giovanni in Persiceto (BO), Italy

- 🌀 Laboratory activities for high school students

### University’s “Third-Mission”

Department of Physics and Astronomy “Augusto Righi”, University of Bologna

- 🌀 Officina Laboratorio 2021 - *Earth’s motions and the concept of time*
- 🌀 Piano Lauree Scientifiche 2022 - *Measuring the Universe*
- 🌀 Officina Laboratorio 2022 - TBD

## OTHER INFORMATION

Extra-curricular  
activities

*Regional Commissaire*, Italian Cycling Federation since 2017  
*Volunteer amateur astronomer*, Gruppo Astrofili Persicetani ([www.gapers.it](http://www.gapers.it)) since 2016

Awards

Best MS Thesis prize, DIFA, University of Bologna 2021  
Best poster prize at the ISAPP Summer School on Gravitational Waves 2021  
Riconoscimento “Francesco Viviani”, Ferrara, Italy 2015  
Italian Astronomy Olympiad, Macerata, Italy (finalist in the national competition) 2012

Languages

ENGLISH · Fluent (C1)  
                  · IELTS Academic 8 (listening 8.5, reading 9, writing 6.5, speaking 7)  
ITALIAN · Native speaker  
FRENCH · Basic user

IT Skills

**Python** (advanced) · **C++** · **Julia** · **FORTRAN** · **RStudio** · **Linux/Unix OS**  
**HTML5 & CSS** · **LaTeX** · **OpenOffice** · **MS Office & Visual Studio** · **Mathematica**  
**Single-Board Computers & Microcontrollers** (Arduino) **Adobe Creative Cloud**

Interests

**Observational Cosmology** · **Gravitational Waves** · **Cosmic Chronometers** · **Galaxy Evolution** · Theoretical Cosmology · Multi-messenger Astronomy · Computer Science & Electronics · Stargazing · Photography · Science Outreach · Travelling · Cooking