Nicola Borghi

CONTACT INFORMATION

Renazzo, Ferrara, Italy
22 May 1996
nicola.borghi2@studio.unibo.it
www.linkedin.com/in/nicolaborghi
nicola.borghi22

EDUCATION

University of Bologna, Italy 9/2018 - Expected: 10/2020
Laurea Magistrale in Astrophysics and Cosmology (MSc equivalent)
Weighted Average Mark: 29.5/30

Project Thesis: Estimates of cosmological parameters in the redshift range $0.6 < z < 1$ using the differential spectroscopic evolution of early-type galaxies as a function of redshift ("cosmic chronometers"). The project includes: selection of massive and passive galaxies from the Large Early Galaxy Astrophysics Census (LEGA-C), high resolution spectral analysis, spectral synthesis and cosmological modelling.

Supervisor: Prof. Andrea Cimatti, Co-Supervisor: Dr. Michele Moresco

Other academic projects: Hydrodynamical simulation of AGN feedback using a modified version of ZEUS code. | Calibration, imaging and scientific analysis of a radio galaxy. | Analysis of X-ray spectra and spectral fitting of obscured AGNs.

Most advanced courses: Galaxy Formation and Evolution | Active Galaxies | Clusters of Galaxies | Dynamics of Stellar Systems | Radioastronomy | High Energy Astrophysics

University of Bologna, Italy 9/2015 - 7/2018
Laurea Triennale in Astronomy (BSc equivalent), 110/110 Cum Laude

Thesis: *Caratteristiche principali dell'emissione di regioni HII* (a dissertation regarding emission features and dynamical evolution of HII regions).

Scientific High School, Cento (FE), Italy 9/2010 - 7/2015
Scientific High School Diploma

EXPERIENCE

Asiago Multi-Messenger Astrophysics School January 2020
Department of Physics and Astronomy (DFA) of the University of Padova, Italy

- Topics: astrophysical neutrinos, cosmology and reionization, GWs and detectors, black hole binaries, CRs and detectors, acceleration processes, black-hole galaxy coevolution. Hands-on lesson: broadband spectral fitting of blazars.

Internship Summer 2014
INAF OAS - National Institute for Astrophysics, Bologna, Italy

- Summer project focused on extracting radio galaxies from a data set of soft γ-ray selected active galaxies based on Swift/BAT observations. The outcomes of such research were further checked and studied by my advisors and contributed to two publications in refereed journals (Bassani et al. 2016 and Panessa et al. 2016, see acknowledgements).

Science Communication since 2017
Museo del Cielo e della Terra (Agen.Ter.), San Giovanni in Persiceto, Italy

- Lecturer at the Planetarium (30+ talks)
- Physics labs for elementary to high school students (50+)

EXTRA-CURRICULAR ACTIVITIES

Regional Commissaire, Italian Cycling Federation since 2017

Event Planner & Web Admin, Amateur Astronomers Group, www.gapers.it since 2016

CTA 1st Science Symposium, Teatro Duse, Bologna (participation) May 2019

ESO Astronomy Camp, Saint-Barthelemy, Italy Winter 2014

Italian National Astronomy Olympiad finals, Macerata, Italy Spring 2012

LANGUAGES

- **ENGLISH**: FLUENT (C1 Level)
  - **IELTS Academic: 8** | Listening: 8.5 | Reading: 9 | Writing: 6.5 | Speaking: 7
- **ITALIAN**: NATIVE SPEAKER
- **FRENCH**: BASIC USER

IT SKILLS

Python (advanced) | **FORTRAN** (advanced) | **RStudio** (intermediate) | **C++** (intermediate) | **Linux/Unix** (Debian-based) | **LaTeX** | **OpenOffice** | **MS Office & Visual Studio** | **Mathematica** | **Single-Board Computers & Microcontrollers** (Arduino) | **Adobe Creative Cloud**

INTERESTS

Extragalactic Astronomy | Galaxy Evolution | AGN Feedback | Computer Science & Electronics | Stargazing & Photography | Science outreach & public speaking | Travelling | Cooking