CURRICULUM VITAE MARTINA ROSSI

Personal information

Martina Rossi
Research unique identifier (ORCID): 0000-0001-6887-2663
Date of birth: 21/06/1994
Nationality: Italian
E-mail: martina.rossi@inaf.it, martinarossi2707@gmail.com
Website: https://martina-rossi.it/

PROFESSIONAL EXPERIENCE

01/01/2025 - Present: Payload System Engineer at Leonardo Space

01/07/2023 - 31/12/2024: Postdoctoral Position, Department of Physics and Astronomy, University of Bologna, Italy

Project: Chemical evolution of Nitrogen in the Milky Way.
Advisors: Senior Researcher OAS Donatella Romano and Professor Alessio Mucciarelli

EDUCATION

01/11/2019 – 24/10/2023: PhD, Department of Physics and Astronomy, University of Florence, Italy

Thesis: "*First stars and dwarf galaxies*"
Advisors: Professor Stefania Salvadori and Professor Ása Skúladóttir
Grade: "*Excellent*"

01/09/2016 – 24/10/2019: Master's Degree in Physics and Astrophysics, University of Florence, Florence, Italy

Thesis: "*Constraining The Low-Mass end of the First Stars*"
Advisor: Professor Stefania Salvadori
Grade: 110/110 *cum laude*

01/09/2013 – 01/03/2016: Bachelor's Degree in Physics and Astrophysics, University of Florence, Florence, Italy

Thesis: "*Cosmological Evolution of Black Holes with Montecarlo's Method*"
Advisor: Professor Alessandro Marconi
Grade: 103/110

CARRER BREAKS

11/07/2021-11/12/2021: Maternity Leave

ON LINE TOOL developed:

CRIMSONS TOOL (Chemical evolution with the random sampling of the initial mass function: studying the origin of nucleosynthesis stellar products, https://martina-rossi.it/crimsons.php)

AWARDS:

- **MSCA Seal of Excellence** Postdoctoral Fellowships **2024** - project proposal 101203397 - ULTRA-FAINT-DWARFS

- **Mini-grant INAF 2024 - Scientific PI of GEMS - G**lobular cluster **E**xploration with chemical evolution **M**odel**S** (20k)

• C.R.A.L. Scholarship, 2020 and 2013 (1k euro each)

OUTREACH:

Book co-author: Tutto quello che avreste voluto sapere sul cielo (ma non avete mai osato chiedere). Aspetti poco noti di astronomia, astrofisica ed astronautica" Apice Libri

NATIONAL/INTERNATIONAL CONFERENCES:

Contributed Talks:

1. "STARS II: current challenges, upcoming solutions", Bologna, Italy, 16-20/06/2025
2. "Kick-off meeting CNO Team", Paris, France, 25-25/11/2025
3. "IAU Symposium 395: Stellar populations in the Milky Way and beyond", Paraty, Brazil, 17-22/11/2023
2. "NPA XI: Nuclear Physics in Astrophysics XI", Dresden, Germany, 15-20/09/2024
3. "Astrophysical Origins of Carbon Tokyo 2024", Tokyo, Japan, 02-05/09/2024
4. "FIRST STARS VII", NYC, NY, 20-23 May 2024
5. "OAS seminars" - Bologna italy, 05/03/2024
6. "The Milky Way is not an island: the halo of the galaxy and its satellites", Sexten, Italy, 29/01/2024 – 3/02/2024
7. "METALS 2023", Santiago, Chile,13-17/11/2023
8. "Phases of Galactic evolution as traced by stellar populations and star clusters" Sexten, Italy, 26-29/06/2023
9. "THE FIRST STARS" Sazerac-Sip, 23/10/ 2020
10. "FIRST STARS VI", Conception, Chile, 1-6/03/2020

Posters:

1. "METALS 2023", Santiago, Chile, 13-17/11/2023
2. "PhD Day", Florence, Italy, 23/03/2023
3. "EAS 2022", Valencia, Spain, 27/06/2022- 01/07/2022

SUCCESSFUL PROPOSAL:

- **Co-I** of the international **4MOST/4DWARFS** survey PI: Skúladóttir, A.
- Involved in Scientific Case of **HRMOS**, in collaboration with Randich, S. and Magrini, L.
- Involved in Scientific Case of **SPIAKID**, PI: Bonifacio, P. project financed by ERC -Advanced Grant - 835087
- Involved in Scientific Case of **WST** - Wide-field Spectroscopic Telescope in collaboration with Tolstoy E., Hill V., Smiljanic R.

TEACHING ACTIVITY:

07/09/2022-30/06/2023 High School Teacher, Liceo Alberti-Dante, Florence
01/03-15/06/2022 High School Teacher, Liceo Scientifico Niccolò Rodolico, Florence

ORGANISATION OF MEETINGS/SEMINARS:

2019-2020 **Co-organizer** (with Prof. Salvadori S.) of '*Coffee and Cookies'* seminars at the Observatory of Arcetri (INAF), Florence

PUBBLICATION LIST:

10 publications in peer review journals, **5 first's author's paper. Number of citations: 155. Number of citations excluding self-citations: 120** [NASA/ADS] **Total numbers of readers: 3527 H-index: 7** [Google Scholar, NASA/ADS] **i-10 index: 6**

- **Rossi M.**, Querci L. Et al "*CRIMSONS" (in prep)*

- Giribaldi R. E., Magrini L., **Rossi M.**, Amarsi A. M., Romano D., Massari D. "*The metal-poorest tail of the Galactic halo: hypothesis on its origin from precise spectral analysis"* (A&A accepted) https://arxiv.org/pdf/2503.19472

- **Rossi M.,** Romano D., Mucciarelli A., Ceccarelli E., Massari D., Zamorani G. "*The earliest phases of CNO enrichment in galaxies"*(A&A, arvix) https://arxiv.org/abs/2406.14615

- **Rossi M.,** Salvadori S., Skúladóttir, A.,Vanni I., Koutsouridou I. "*Hidden Pop III descendants in ultra-faint dwarf galaxies"*(submitted to ApJ, arvix) https://arxiv.org/abs/2406.12960

- Skúladóttir, A. et al including **Rossi M.** *" The 4MOST Survey of Dwarf Galaxies and their Stellar Streams (4DWARFS)" https://doi.eso.org/10.18727/0722-6691/5304*

- Vanni I., Salvadori S., Skúladóttir, A., **Rossi M.** "*Characterising the true descendants of the first stars*" MNRAS, Volume 526, Issue 2, pp.2620-2644 https://academic.oup.com/mnras/article/526/2/2620/7283167

- Koutsouridou I., Salvadori S., Skúladóttir, A., **Rossi M.**, Vanni I., Pagnini G. "*The energy distribution of first supernovae*", MNRAS, Volume 525, Issue 1, https://academic.oup.com/mnras/article/525/1/190/7233114
- **Rossi M.,** Salvadori S., Skúladóttir, A., Vanni I. "*Understanding the origin of CEMP-no stars through Ultra Faint Dwarfs*" MNRAS Letter, Volume 522, Issue 1, https://academic.oup.com/mnrasl/article/522/1/L1/7057872

- Pagnini G., Salvadori S., **Rossi M**., Aguado D., Koutsouridou I., Skúladóttir, A., "*On the dearth of CEMP stars in the Galactic bulge*" MNRAS, Volume 521, Issue 4, https://academic.oup.com/mnras/article/521/4/5699/7086129

- **Rossi M.**, Salvadori S., Skúladóttir, A, "*Ultra-faint dwarf galaxies: unveiling the minimum mass of the first star*", Volume 503, Issue 4, June 2021, Pages 6026–6044, https://academic.oup.com/mnras/article/503/4/6026/6179883

OBSERVATIONAL EXPERIECE:

TNG (Telescopio Nazionale Galileo) Roque de los Muchachos, La Palma, Canary Island: imaging and low resolution spectroscopy of galaxies with DOLORES

Loiano Observatory, Bologna, Italy

ASTROPHYSICS SCHOOL/LECTURES:

- ISM of galaxies from the Epoch of Reionization to the Milky Way, online, 2020
- "Hands-on multi-probe mass measurements in galaxy clusters", Milan, 2019
- Lectures on "Metallicity and Feedback in Galaxies", Florence, Prof. Roberto Maiolino, 2019
- Advanced Lectures on Astrophysics and Gas Dynamics, for the internationalization program of the University of Florence, Florence, Prof. Nick Gnedin, 2018
- Workshop Galaxy Evolution and Environment, (GEE5), Florence, 2017

COMPUTER SKILLS

Programming: Python, Fortran, Mathlab, C, C++ (*Advanced*)
Operative Systems: Linux, Microsoft, macOS
Others: Latex, OpenOffice, Power Point, Excel, Word

LENGUAGES

Italian (*native*), English (*fluent*), Spanish (*fluent*), French (*basic*).

INTERESTS

Theoretical modelling, Programming, simulations, problem solving, logo and web creator. Here the logos that I designed