

# Giulia Roccetti

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## Education

- 09/2022 – current **Ph.D. Physics** Working on Exoplanet atmospheres and Earth’s biosignatures
- 10/2020 – 08/2022 **M.Sc. Physics** with specialization in Astrophysics  
Thesis title: *Long-term presence of liquid water on the surface of exomoons orbiting freefloating planets*
- 09/2017 – 09/2020 **B.Sc. Physics**  
Thesis title: *Exoplanets: Study of the hypoyesis of Fulton Gap with Machine Learning methods.*

## Employment History

- 09/2022 – current **PhD student** at the European Southern Observatory (ESO) and the Ludwig Maximilian University of Munich (LMU)
- 07/2020 – 08/2020 **Software developer** at Ageing Tech.

## Research Publications

### Journal Articles

- 1 G. Roccetti, M. Sterzik, C. Emde, *et al.*, “The Earth as an exoplanet. I. Modelling realistic 3D atmospheres, clouds, and surfaces with MYSTIC (in prep.)”
- 2 G. Roccetti, L. Bugliaro, F. Gödde, *et al.*, “Development of a hamster: Hyperspectral albedo maps dataset with high spatial and temporal resolution,” *EGUsphere*, vol. 2024, pp. 1–27, 2024. [DOI](#): 10.5194/egusphere-2024-167.
- 3 J. Zak, H. M. J. Boffin, E. Sedaghati, *et al.*, “HD 110067 c has an aligned orbit,” *arXiv e-prints*, arXiv:2405.12409, arXiv:2405.12409, May 2024. [DOI](#): 10.48550/arXiv.2405.12409. arXiv: 2405.12409 [astro-ph.EP].
- 4 G. Roccetti, T. Grassi, B. Ercolano, *et al.*, “Presence of liquid water during the evolution of exomoons orbiting ejected free-floating planets,” *International Journal of Astrobiology*, vol. 22, no. 4, pp. 317–346, Aug. 2023. [DOI](#): 10.1017/S1473550423000046. arXiv: 2302.04946 [astro-ph.EP].

## Conferences

- 06/2024 **Exoplanets 5** Leiden, Netherlands  
Contributed talk
- 04/2024 **Institute of Science and Technology Austria (ISTA)** Vienna, Austria  
Invited seminar
- European Geosciences Union (EGU) - General Assembly 2024** Vienna, Austria  
Contributed talk




## Conferences (continued)

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- 07/2023  **TMT ESO Chile** Santiago de Chile, Chile  
Invited seminar
-  **Origins 2023** Quito, Ecuador  
Contributed talk
- 05/2023  **Biennial European Astrobiology Conference (BEACON)** La Palma Island, Spain  
Contributed talk
- 03/2023  **All-hands-on-deck Meeting 2023 - SPP 1992** Munich, Germany  
Contributed talk
-  **Planet ESLAB 2023** ESA-ESTEC, Netherlands  
Contributed talk
- 11/2022  **Disks and Planets across ESO facilities** ESO Garching Headquarter, Germany  
Contributed talk
-  **Origins Excellence Cluster Science Week** Kloster Seeon, Bavaria, Germany  
Contributed talk
- 06/2022  **European Astronomical Society - Annual Meeting** Valencia, Spain.






## Workshops

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- 09/2023  **ARES III School** Biarritz, France
- 03/2023  **Cloud Academy III** Les Houces, France  
Poster presentation
- 08/2021  **Atmospheres, Atmospheres! Do I look like I care about atmospheres?** Online workshop.

## Skills


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|--------------------------------------|--|
| Languages                            |  Mother tongue: Italian<br>Other languages: English (C1)   French (A2)   German (A2)   Spanish (A2)             |
| Programming Languages                |  Python   C/C++   MATLAB   SQL (basic)   HTML (basic)   R/R Studio   Visual Studio (basic)                      |
| Operating Systems                    |  Linux (Ubuntu)   Windows   Linux Mint   MacOS  |
| Word Editor                          |  LaTeX   Microsoft Office Suite   Google Suite (Gmail, Google Drive, Google Docs, Google Sheets, Google Slides) |
| Communication skills                 |  Good team-working skills gained through university projects and long experience in basketball teams            |
| Organisational and management skills |  Good team-leading skills gained as captain of my basketball team and as volunteer coach.                       |

## Miscellaneous Experience

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### Awards and Achievements

- 01/2023  **Best Student Talk Prize**, 779. WE-Heraeus-Seminar (Bad Honnef, Germany)

## Miscellaneous Experience (continued)

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### Observing experience

- 12/2023 ■ **Observing experience of 3 nights at Paranal with VLT/FORS2 as a Visitor Astronomer**, part of the Prog. 112.25VR (PI: Sterzik, co-I: Roccetti): "Detecting Oceans on Earth as an Exoplanet"
- 02/2024 ■ **Principal investigator, Prog. 113.26KY (PI: Roccetti)**, ESO, 16 hours, FORS2: "Proof of Concept for the Characterization of Exoplanet Atmospheres by Polarimetry"

### Community work

- 05/2023 - current ■ **Student representative** in the Office for Science at ESO
- 09/2023 - current ■ **Member of the Diversity, Equity and Inclusion (DE&I) Committee** of ESO, representing all students in Garching and Chile
- **Co-organizer** of the topical weekly meeting "Stellar Coffee and Planetary Tea" at ESO

## Outreach

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- 04/2024 ■ **Role Model at the Girls' Day organised by the European Patent Office (EPO)** in Munich, Germany, where I represented ESO and shared my experience as a woman in STEM.
- 03/2024 ■ **Informal Discussion at ESO** on Climate Change and tipping points.
- 06/2021 - current ■ **Co-author and co-responsible** of the Pale Blue Dot project at LMU, providing educational material for primary school children on the topics of astronomy and climate change (<https://www.blaupeperle-schule.com/>).

### School visits

- 05/2023 ■ **Outreach activity in a primary school** (Scuola Elementare Quinqueremi) in Rome, Italy, on the topics of Astronomy, Space and Climate Change.
- 2022 ■ **I visited several schools** in Munich, Germany, as part of the Pale Blue Dot project, and I co-organised teacher trainings. I also lead pilot projects in Armenia, Ethiopia and South Africa.