

# Pierluigi Rinaldi

H-index = 19. Source: NASA ADS.

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🌐 <https://astro.arizona.edu/person/pierluigi-rinaldi>

🌐 <https://pierluigi-rinaldi.github.io/>

🌐 <https://www.linkedin.com/in/pierluigi-rinaldi-phd-2276b9192/>

## Higher Education

- 2020 – 2024      📖 **Ph.D. Astronomy, University of Groningen.**  
Thesis title: *Unfolding the early Universe with JWST*  
Supervisor(s): Karina I. Caputi, Filippo Fraternali.
- 2017 – 2020      📖 **M.Sc. Astrophysics and Cosmology (cum laude), Alma Mater Studiorum - University of Bologna** in Galaxy formation and evolution.  
Thesis title: *Simulation of high-redshift galaxy spectra in the Euclid Deep Fields.*  
Supervisor(s): Andrea Cimatti, Michele E. M. Moresco.
- 2012 – 2017      📖 **B.Sc. Physics, University of Bari Aldo Moro** in Planetary Formation.  
Thesis title: *The condensation: from clouds to protoplanetary system.*  
Supervisor(s): Savino Longo.

## Appointments (after PhD)

- 2025 (expected in August)      📖 **Postdoctoral Fellow** – Space Telescope Science Institute (STScI) in Baltimore (MD), USA.
- 2024 – 2025      📖 **Postdoctoral Research Associate** – Department of Astronomy and Steward Observatory, Tucson (AZ), USA.

## Research Interests

- 📖 Galaxy formation and evolution at intermediate and high redshifts; stellar mass assembly; star formation activity and its evolution over cosmic time; infrared-selected galaxies; multi-wavelength photometric and spectroscopic follow-up; active galactic nuclei and supermassive black hole growth; galaxy-SMBH co-evolution across cosmic time.
- 📖 Instrumentation and Software developing.

## Teaching

- 2021 – 2024      📖 **Teaching Assistant.** Astrophysical Hydrodynamics, Bachelor course, Science and Engineering, Rijksuniversiteit Groningen.
- 2019 – 2020      📖 **Teaching Assistant.** Physics, First cycle degree programme (L) in Biological Sciences (cod. 8012), Biological Sciences, Alma Mater Studiorum - University of Bologna.

## Supervised

- 2024      📖 **Bachelor Student** – Nadav Peleg-Brochestein at Rijksuniversiteit Groningen.
- 2022 – 2024      📖 **PhD Student** - Rafael Navarro-Carrera at Rijksuniversiteit Groningen.

## Professional expertise

Coding	Python, L <sup>A</sup> T <sub>E</sub> X, C++.
Data reduction	Reduction of JWST data (MIRI, NIRCam, and NIRISS imaging, NIRCam/WFSS, and NIRSpec).
Data Analysis	UV/Optical (HST) and NIR/MIR (JWST) imaging and spectroscopic data, Spectral Energy Distribution (SED) fitting, photometry, multi-wavelength catalogues, and spectral analysis.
Software	JWST PIPELINE for MIRI, NIRCam, and NIRISS, BAGPIPES, PROSPECTOR, LePHARE, EAZY, GRIZLI, MSAEXP MIRISIM (to simulate MIRI data) MIRAGE (to simulate JWST's NIRCam, NIRISS, and FGS instruments), SOURCEEXTRACTOR (SExtractor).

## Professional Membership & Collaborations

2024 – now	<ul style="list-style-type: none"><li>Team leader with Edoardo Iani of the MIRIC team (GO 5578)</li><li>Member of the Nancy Grace Roman Telescope Working Groups (software, simulations, synergies, and calibration)</li><li>Official member of the OASIS team.</li><li>Official member of the SMILES team.</li><li>Official member of the JADES team.</li><li>Key member of JWST Cycle 3 proposal GO 6511 (PI: Göran Östlin)</li></ul>
2023 – now	<ul style="list-style-type: none"><li>CoI of JWST Cycle 2 proposals (PID: 2926, PI: Luis Colina, PID: 3538, PI: Edoardo Iani).</li></ul>
2021 – now	<ul style="list-style-type: none"><li>Official (key) member of the MIRI (EU and US) team.</li><li>Official (key) member of MIDIS team.</li></ul>
2019 – 2021	<ul style="list-style-type: none"><li>Member of the Euclid Consortium.</li></ul>

## Press releases & Awards

2024	<ul style="list-style-type: none"><li>Royal Astronomical Society Group Achievement Award for JWST-MIRI Team</li></ul>
2023	<ul style="list-style-type: none"><li>MIRI instrument on JWST detects H-alpha emission during the Epoch of Reionization for the first time.</li><li>The James Webb telescope detects much more light than expected coming from the primaeval universe.</li></ul>
2022	<ul style="list-style-type: none"><li>Astronomers see the infrared switch on in young universe.</li><li>Early Universe bristled with starburst galaxies.</li></ul>

## Grants and funding

2024	<ul style="list-style-type: none"><li>\$222k for JWST Cycle 3 proposal GO 5578</li></ul>
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## Conferences, Talks, and Workshops

2025	<ul style="list-style-type: none"><li>Poster/Conference – The Inaugural Cosmic Frontier Center Conference (Austin/US)</li><li>Talk/Conference – First Galaxies (Oxford, UK)</li><li>Talk/Consortium Meeting – The MIRI EU meeting (Madrid, Spain)</li><li>Talk/Consortium Meeting – The NIRCam meeting (Biosphere 2, Tucson, US)</li></ul>
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## Conferences, Talks, and Workshops (continued)

- 2024
  - **Talk**/Consortium Meeting – The MIRI US and EU meeting (Biosphere 2, Tucson, US)
  - **Invited Talk**/Seminar – Scuola Internazionale Superiore di Studi Avanzati (Trieste, IT)
  - **Invited talk**/Seminar – Space Telescope Science Institute (Baltimore, US)
  - Attendance/Conference – 243rd AAS Meeting (New Orleans, US)
- 2023
  - **Talk**/Conference – Netherlands Research School for Astronomy (Leiden, NL)
  - **Talk**/Consortium Meeting – MIRI European Consortium meeting. Plenary talk on the *Highlights of the MIRIM science in the Hubble eXtreme Deep Field* (Dublin, IRE).
  - **Talk**/Conference – The James Webb Space Telescope turns one: the birth and growth of galaxies (Sexten Center for Astrophysics, Sesto, IT).
  - **Invited talk**/Conference – Shedding new light on the first billion years of the Universe (Marseille, FR).
  - Attendance/Conference – Netherlands Astronomers' Conference (Leeuwarden, NL).
  - Attendance/Conference – JWST First Light Conference (Boston, US).
  - Attendance/Consortium Meeting – MIRI European Consortium meeting (Leuven, BELG).
- 2022
  - **Talk**/Seminar – INAF/OAS Padova (Padova, IT).
  - **Talk**/Seminar – Astrophysics Talks at INAF/OAS Bologna (Bologna, IT).
  - **Poster**/Conference – European Astronomical Society (Valencia, ES).
  - Attendance/Conference – Netherlands Astronomers' Conference (Groningen, NL).
  - Workshop – JWebinar - CEERS NIRCам and MIRI Imaging (online).
  - Workshop/Seminar – Pan-survey SED forum (online).
- 2021
  - Attendance/Conference – Netherlands Astronomers' Conference (online).
  - **Talk**/Conference – Netherlands Research School for Astronomy (online).
  - Workshop – JWebinar - Pipeline Information and Data Products (online).
  - Workshop – JWebinar - Introduction to the JWST Data Analysis Tools (online).
  - Workshop – Multi-object Spectroscopy for Statistical Measures of Galaxy Evolution (online).
- 2020
  - Attendance/Conference – SAZERAC-The First Stars (online).
  - Attendance/Conference – Netherlands Research School for Astronomy (online).

## Outreach

- 2024
  - Talk at Associazione Astronomiamo, Milan (IT) – [Beyond Hubble: Unfolding the Early Universe with JWST](#) (April 18th).
- 2023
  - LOC – 6th NOVA evaluation, Groningen (January 23th - 25th).
- 2022
  - Talk – Kapteyn Science Day (December 9th).
  - LOC – JWST First Data Release - Public Presentation in Groningen, DOT Planetarium (July 12th).
  - Member of the Astronomy on Tap in Groningen.

## Visting

- 2025
  - Kavli Institute of Cosmology, Cambridge (April 14th - 17th)
- 2024
  - Scuola Internazionale Superiore di Studi Avanzati, Trieste (May 25th - 29th)
  - Royal Swedish Academy of Sciences, Stockholm (May 20th - 24th)
  - Space Telescope Science Institute (STScI), Baltimore (January 16th - 19th)

## Visting (continued)

- 2023     Royal Irish Academy, Dublin (September 25th - 29th).  
          Katholieke Universiteit Leuven, Leuven (February, 13th -17th).
- 2022     Universidad Complutense de Madrid, Madrid (June 6th - 10th).  
          INAF OAS Bologna (Bologna) & INAF - Osservatorio Astronomico di Padova (Padova) (May 23th - 24th).
- 2021     Centro de Astrobiología (CAB), Madrid (November 10th - 14th).

## Publications

### First & second author papers

- **P. Rinaldi**, P. G. Pérez-González et al. 2025 — <https://ui.adsabs.harvard.edu/abs/2025arXiv250401852R/abstract>
- **P. Rinaldi**, N. Bonaventura et al. 2024 — <https://ui.adsabs.harvard.edu/abs/2024arXiv241114383R/abstract>
- R. Navarro-Carrera, **P. Rinaldi** et al. 2024 — <https://ui.adsabs.harvard.edu/abs/2024arXiv241023249N/abstract>
- E. Iani, **P. Rinaldi** et al. 2024 — <https://ui.adsabs.harvard.edu/abs/2024arXiv240618207I/abstract>
- **P. Rinaldi**, R. Navarro-Carrera et al. 2024 — <https://ui.adsabs.harvard.edu/abs/2024arXiv240613554R/abstract>
- P. G. Pérez-González, **P. Rinaldi** et al. 2024 — <https://ui.adsabs.harvard.edu/abs/2024arXiv240216942P/abstract>
- K. I. Caputi, **P. Rinaldi** et al. 2023 — <https://ui.adsabs.harvard.edu/abs/2023arXiv231112691C/abstract>
- **P. Rinaldi**, K. I. Caputi et al. 2023 — <https://ui.adsabs.harvard.edu/abs/2023arXiv230915671R/abstract>
- R. Navarro-Carrera, **P. Rinaldi** et al. 2023 — <https://ui.adsabs.harvard.edu/abs/2023arXiv230516141N/abstract>
- **P. Rinaldi**, K. I. Caputi et al. 2023 — <https://ui.adsabs.harvard.edu/abs/2023ApJ...952..143R/abstract>
- **P. Rinaldi**, K. I. Caputi et al. 2022 — <https://ui.adsabs.harvard.edu/abs/2022ApJ...930..128R/abstract>

### Other papers – only last ten publications

- Isobe, Y., Maiolino, R. et al. 2025 — <https://ui.adsabs.harvard.edu/abs/2025MNRAS.541L..71I>
- Puskás, D., Tacchella, S. et al. 2025 — <https://ui.adsabs.harvard.edu/abs/2025MNRAS.540.2146P>
- D'Eugenio, F., Juodžbalis, I. et al. 2025 — <https://ui.adsabs.harvard.edu/abs/2025arXiv250614870D>
- Helton, J., Alberts, S. et al. 2025 — <https://ui.adsabs.harvard.edu/abs/2025arXiv250602099H>
- Zhu, Y., Rieke, M. et al. 2025 — <https://ui.adsabs.harvard.edu/abs/2025ApJ...986..162Z>
- Zhu, Y., Alberts, S. et al. 2025 — <https://ui.adsabs.harvard.edu/abs/2025ApJ...986...18Z>

## Publications (continued)

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- Lin, X., Fan, X. et al. 2025 – <https://ui.adsabs.harvard.edu/abs/2025arXiv250502896L>
- Zhang, J., Egami, E. et al. 2025 – <https://ui.adsabs.harvard.edu/abs/2025arXiv250502895Z>
- Puskás, D., Tacchella, S. et al. 2025 – <https://ui.adsabs.harvard.edu/abs/2025MNRAS.tmp..779P>
- Baker, W., Lim, S. et al. 2025 – <https://ui.adsabs.harvard.edu/abs/2025MNRAS.539..557B>