

# A. Novais (Ribeiro)

PHD CANDIDATE · SCIENCE COMMUNICATOR

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## Education

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- PhD Candidate in Astronomy** · Valongo Observatory, Federal University of Rio de Janeiro (OV/UFRJ) 2019 – PRESENT  
· Guest researcher at the Ludwig Maximilian University of Munich (LMU-Munich) February 1 – July 31, 2023
- Master Degree in Astronomy** · Valongo Observatory, Federal University of Rio de Janeiro (OV/UFRJ) 2017 – 2019
- Bachelor Degree in Astronomy** · Valongo Observatory, Federal University of Rio de Janeiro (OV/UFRJ) 2012 – 2017  
· Research at the National Observatory (ON), Rio de Janeiro 2015 – 2017

## Projects

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### Parameter Degeneracies Associated with Interpreting Transmission Spectra of Exoplanetary Atmospheres

Members: A. Novais, C. Fisher, L. Ghezzi, K. Heng 2019 – PRESENT  
· This work consists on revisiting 38 previously studied HST WFC3 planetary transmission spectra in order to identify and possibly overcome degeneracies between parameters in atmospheric retrievals

### Formation and Destruction of Organic Molecules in the Upper Atmosphere of Titan

Members: A. Novais, D. P. P. Andrade, H. M. Boechat-Roberty 2017 – 2019  
· We used the DASSLC/MATLAB model by Pinotti & Boechat-Roberty (2016) to simulate the chemical reactions and obtain molecule abundances that possibly occur in Titan's atmosphere [link for full thesis]

### Study of Possible Atmospheres from a Sample of Terrestrial Exoplanets Identified by the Kepler Mission

Members: A. Novais, M. Garcia, M. Borges Fernandes 2015 – 2017  
· We used the photochemical code written by Kasting et al. (1985) and Pavlov et al. (2001), and their two separate models – high O<sub>2</sub> and high CO<sub>2</sub>/CH<sub>4</sub> – to study the atmospheres of seven rocky planets [link for full thesis]

## Publication

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1. **A. Novais**, D. Andrade, H. Boechat-Roberty, 2020. Formation and destruction of organic molecules in the upper atmosphere of Titan. Bulletin of the Brazilian Astronomical Society (SAB), v. 32, n. 1, p. 10-11. ISSN: 0101-3440. [PDF]

## Presentation

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### ORAL PRESENTATION

- XLVI Anual Meeting of the Brazilian Astronomical Society (SAB)\*** · Rio de Janeiro, Brazil October 2, 2023  
\*Plenary session
- Goldschmidt** · Lyon, France July 11, 2023
- CN-2 “Planets and other Habitats” Science Afternoon** · Garching, Germany March 6, 2023
- XLV Anual Meeting of the Brazilian Astronomical Society (SAB)** · Online September 28, 2022
- Exoplanet Atmospheres Workshop** · Online March 9, 2022
- IV Anual Meeting of the Brazilian Society of Astrobiology (SBAstrobio)** · Online November 26, 2021
- Astrobiology Graduate Conference (AbGradCon)** · Online September 17, 2021
- XLIV Anual Meeting of the Brazilian Astronomical Society (SAB)** · Online September 14, 2021
- Astrobiology Graduates in Europe (AbGradE)** · Online September 2, 2021
- Exoplanet Atmosphere Characterization: from HST and Spitzer to JWST** · Online March 11, 2021
- 1st Brazilian Women's Meeting in Astrophysics, Gravitation and Cosmology** · Online February 8, 2021
- Precision Spectroscopy Stellar Connections: From Galaxy Evolution to Exoplanets** · Online February 1, 2021
- II Anual Meeting of the Brazilian Society of Astrobiology (SBAstrobio)** · São Paulo, Brazil October 17, 2019
- Astrochemistry LLAMA Meeting (ALLAM)** · São Paulo, Brazil August 9, 2019
- Astrobiology Graduate Conference (AbGradCon)** · Salt Lake City, USA July 22, 2019
- Precision Spectroscopy 2018: From the First Stars to Exoplanets** · São Paulo, Brazil September 10-11, 2018

## POSTER PRESENTATION

<b>Astrobiology Graduates in Europe + Europlanet Early Career Network (AbGradEPEC)</b> · La Palma, Spain	May 5, 2023
<b>Exoplanets III</b> · Online	July 31, 2020
<b>XLIII Anual Meeting of the Brazilian Astronomical Society (SAB)</b> · São Paulo, Brazil	September 12, 2019
<b>XLII Anual Meeting of the Brazilian Astronomical Society (SAB)</b> · São Paulo, Brazil	July 12, 2018
<b>1st Anual Meeting of the Brazilian Society of Astrobiology (SBAstrobio)</b> · São Paulo, Brazil	July 11, 2018
<b>XL Anual Meeting of the Brazilian Astronomical Society (SAB)</b> · Ribeirão Preto, Brazil	August 31, 2016

## Teaching Experience

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<b>Mentoring for Freshmen Students: “Astrobiology and Exoplanets”</b> Federal University of Rio de Janeiro (UFRJ)	2021 – PRESENT
<b>Teaching Traineeship: “Planetary Systems” Bachelor’s Course</b> Federal University of Rio de Janeiro (UFRJ)	2020
<b>Teaching Traineeship: “Astrobiology” Bachelor’s Course</b> Federal University of Rio de Janeiro (UFRJ)	2019
<b>Introduction Course: “Astrochemistry and the Molecules of Life”</b> Museum of Astronomy and Related Sciences (MAST)	May 2, 2019
<b>Undergraduate Tutor: “Physics IV (Optics, Special Relativity)” Bachelor’s Course</b> Federal University of Rio de Janeiro (UFRJ)	2015

## Referee Experience

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<b>Abstract Reviewer for Astrobiology Graduate Conference (AbGradCon) 2023</b> Online	March, 2023
<b>Bachelor Thesis Examining Board: “Use of Machine Learning for Stellar Spectral Classification”; bachelor student Julia Camões Alves</b> Federal University of Rio de Janeiro (UFRJ)	August 19, 2022

## Honors and Awards

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<b>Honorable Mention</b> · National Observatory (ON/MCTIC) Scientific Initiation Journey at the National Observatory (JICON) for the work “Study of the Possible Atmospheres from a Sample of Terrestrial Exoplanets Identified by the Kepler Mission”	2017
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## Extracurricular Activities

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<b>Graduate Students Representative</b> Valongo Observatory, Federal University of Rio de Janeiro (OV/UFRJ)	2017 – 2019, 2021 – 2022
<b>Science Outreach on Social Media</b> Twitter, Instagram, YouTube	2017 – PRESENT
<b>Science Outreach Talks and Roundtable Discussions</b> Valongo Observatory (OV/UFRJ), Institute of Physics (IF/UFRJ), “Pint of Science”	2018 – PRESENT
<b>Interviews, Podcasts, and Live Streams</b> “Superinteressante”, “g1”, “CNN Brazil”, “Canal Tech”	2019 – PRESENT