

Ana Carolina Santiago Menezes

ASTROPHYSICIST

acsantiagomenezes.com 

Porto Alegre - RS, Brazil 

ana.santiago@ufrgs.br 

Education

Ph.D. in Astrophysics (in progress)

Federal University of Rio Grande do Sul (UFRGS), Brazil

Thesis: A Trip Through the Green Valley: Morphological Transformations and the Journey to Quiescence

Supervisor: Dr. Allan Schnorr Müller

Funding: CAPES Scholarship

2023 – Present

B.Sc. in Physics with emphasis in Astrophysics

Federal University of Rio Grande do Sul (UFRGS), Brazil

Thesis: Unraveling the Quenching of Star Formation: A Comparison of Bulge-Disk Decomposition Results Between Green Valley and Star-Forming Galaxies

Supervisors: Dr. Allan Schnorr Müller, Dra. Marina Trevisan

Funding: CNPq Scholarship

2018 – 2023

International Experience

Advanced Communication Skills & English Language Program

Bayswater Liverpool, United Kingdom (UK).

2025

Research Experience

Doctoral Research

Supervisor: Dr. Allan Schnorr Müller

Federal University of Rio Grande do Sul – UFRGS, Brazil ————— 2023-Present

- Investigation of morphological transformations in Green Valley galaxies using deep Subaru Hyper Suprime-Cam imaging. Through detailed photometric decompositions, I explore the structural properties and bulge types that may drive their transition toward quiescence.

Undergraduate Research

Federal University of Rio Grande do Sul – UFRGS, Brazil ————— 2021 – 2023

- Investigation of morphological structures in Green Valley and star-forming galaxies to constrain quenching scenarios.

Supervisors: Dr. Allan Schnorr Müller, Dra. Marina Trevisan

Federal University of Rio Grande do Sul – UFRGS, Brazil ————— 2021 – 2022

- Analysis of globular clusters properties in the Milky Way.

Supervisors: Dr. Alejandra Romero, Dr. Kepler de Souza Oliveira Filho

Federal University of Rio de Janeiro – UFRJ, Brazil ————— 2018

- Investigation of the dynamical states of galaxy clusters using optical and X-ray data.

Supervisor: Dr. Paulo Afranio Augusto Lopes

Publications

- **Santiago-Menezes, A. C.**; Schnorr-Muller, A.; Trevisan, M.; Katia S. Clerici; Palacios, F.; Oliveira, C. A. *Morphological Pathways to Quenching in Green Valley Galaxies*. **In preparation**, 2025.
- **Santiago-Menezes, A. C.**; Schnorr-Muller, A. ; Trevisan, M. ; Palacios, F. ; Oliveira, C. A. *Unraveling the quenching of star formation: a comparison of the results of a bulge-disk decomposition between Green Valley and Star Forming galaxies*. In: XLVI Annual Meeting of the Brazilian Astronomical Society, 2023, Rio de Janeiro. Boletim da Sociedade Astronômica Brasileira. São Paulo: Sociedade Astronômica Brasileira, 2023. v. 35. p. 12-13.
- Palacios, F. ; Schnorr-Muller, A. ; Trevisan, M. ; Oliveira, C. A. ; **Santiago-Menezes, A. C.** *Kinematics and star formation in the green valley with integral field spectroscopy*. In: XLVI Annual Meeting of the Brazilian Astronomical Society, 2023, Rio de Janeiro. Boletim da Sociedade Astronômica Brasileira. São Paulo: Sociedade Astronômica Brasileira, 2023. v. 35. p. 84-85.
- Oliveira, C. A. ; Trevisan, M. ; Schnorr-Muller, A. ; Palacios, F. ; **Santiago-Menezes, A. C.** *Through the green valley: investigating the mechanisms behind the decrease in the star formation rate of galaxies*. In: XLVI Annual Meeting of the Brazilian Astronomical Society, 2023, Rio de Janeiro. Boletim da Sociedade Astronômica Brasileira. São Paulo: Sociedade Astronômica Brasileira, 2023. v. 35. p. 39-40.

Conferences & Presentations

- 2025: XLVIII Annual Meeting of the Brazilian Astronomical Society, MG-Br. **Talk**
- 2025: Galaxy Memoirs: Inferring Their Past from Their Present, Rio de Janeiro – Br, organized by University of Nottingham, UK. **Poster presentation.**
- 2023: XLVI Annual Meeting of the Brazilian Astronomical Society, RJ-Br. **Poster presentation.**

Student Mentoring

Federal University of Rio Grande do Sul – UFRGS, Brazil ————— 2024 - Present

- **Mentoring an undergraduate student** working on the formation and evolution of 905 SO galaxies using HSC-SSP data. The project involves photometric decompositions with Imfit to study bulges, discs, and substructures, distinguishing secularly evolved from merger-driven systems. **“The Nature of an SO: Understanding the Connection Between Lenticular and Compact Quiescent Galaxies”**, student: Wesley Link Becker, supervisor: Allan Schnorr Müller

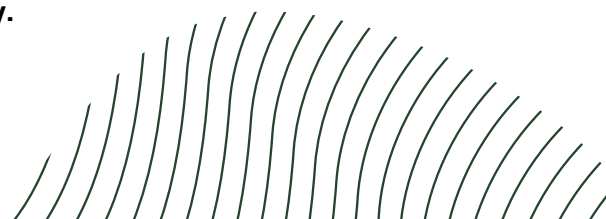
Teaching & Outreach Activities

- Federal University of Rio Grande do Sul – UFRGS, Brazil ————— 2021 - 2023

Science Outreach – Divulga (Astro)Física.

- Federal University of Rio de Janeiro – UFRJ, Brazil ————— 2018

Teaching Assistant – Introductory Physics Laboratory.



Leadership & Service

- Federal University of Rio Grande do Sul – UFRGS, Brazil ————— 2025 - Present

Graduate Student Representative – Postgraduate Program, Department of Astronomy.

Skills

- Galaxy morphology analysis, photometric decomposition, data processing.
- Python programming (including Astropy, Numpy, Scipy, Pandas, Matplotlib...).
- Proficiency with astronomical softwares and tools: ImFit, SourceExtractor, SQL (CasJobs queries), TOPCAT, DS9, QFitsView, LaTeX; basic knowledge of R.
- Public speaking and scientific communication.

