

Beatriz Bordadágua

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Academic Education

PhD	Astrophysics Heidelberg University, Heidelberg Institute for Theoretical Studies (HITS)	Heidelberg, Germany Oct 2022 - present
MSc	Engineering Physics Universidade de Lisboa - Instituto Superior Técnico ERASMUS @ Freie Universität Berlin	Lisbon, Portugal Sep 2019 - Sep 2022
BSc	Engineering Physics Universidade de Lisboa - Instituto Superior Técnico	Lisbon, Portugal Sep 2016 - July 2020

Refereed and submitted Publications

- * F. D. Moyano, H. Ge, Z. Han, **B. Bordadágua**, M. Uzundag, P. Podsiadlowski, V. Schaffenroth, X. Chen, Z. Liu (submitted to MNRAS). *Asteroseismic rotation rates of hot subdwarf B stars hint at transient accretion from leftover common envelope matter.*
- * **B. Bordadágua**, F. Ahlborn, Q. Coppée, J. P. Marques, K. Belkacem and S. Hekker (2025). *The efficiency of mixed modes for angular momentum transport.* *A&A*, 699, A310. DOI: 10.1051/0004-6361/202555405 [↗](#). arXiv: 2506.13283 [↗](#) [astro-ph.SR]
- * A. Ghosh, L. Ribeiro-Rodrigues, G. Ruffolo, V. Alfano, C. Domingos, N. Rei, D. K. Tosh, D. M. Rombo, T. P. Morais, C. A. Valente, S. Xapelli, **B. Bordadágua**, A. Rainha-Campos, C. Bentes, E. Aronica, M. J. Diógenes, S. H. Vaz, J. A. Ribeiro, E. Palma, K. A. Jacobson, A. M. Sebastião (2024). *Selective modulation of epileptic tissue by an adenosine A3 receptor-activating drug.* *British Journal of Pharmacology*, 181(24), 5041–5061. DOI: 10.1111/bph.17319 [↗](#)
Contribution: Developer of the data-analysis C++ program designed to automatically analyse epileptiform activity.

Conference Contributions

9th TESS/16th Kepler Asteroseismic Science Consortium Workshop Title of Poster: Combining the effects of mixed modes and magnetic instabilities in angular momentum transport - Zenodo ↗	ISTA - Klosterneuburg, Austria 7-11 Jul 2025
Stars Day Title of invited talk: The efficiency of mixed modes for angular momentum transport	FCUP - Porto, Portugal 20 Dec 2024
8th TESS/15th Kepler Asteroseismic Science Consortium Workshop Title of contributed talk: The efficiency of mixed modes for angular momentum transport - Zenodo ↗	FCUP - Porto, Portugal 16 Jul 2024
PLATO Stellar Science Conference 2023 Title of Poster: Mixed modes slow down red giants core rotation - Zenodo ↗	Milazzo, Italy 26 - 30 Jun 2023

Computing skills

Programming languages: Fortran, C/C++, Python, Wolfram Mathematica, Root [basics]
 Writing and presenting: LATEX, Markdown
 Graphics: GIMP, Blender [basics]
 Astrophysics codes: MESA, GYRE, CESAM2k20 [basics]
 Other: Linux/Unix, Parallel & GPU computing [basics]






Employment

PhD candidate Heidelberg Institute for Theoretical Studies (HITS)	Heidelber, Germany Oct 2022 – present
Summer Student Program Laboratório de instrumentação e física experimental de partículas (LIP) <i>Topic of research:</i> Solar modulation of cosmic rays: solving the equation of transport of cosmic rays in 2D	Lisbon, Portugal Jul 2018 – Sep 2018

Teaching

Teaching assistant at <i>MESA Summer School 2025</i> <i>Lecturer:</i> Dr. Joey Mombarg <i>Topic:</i> Rotating stellar structure and evolution models: 1D vs 2D	KU Leuven, Belgium Jul 2025
Teaching assistant for <i>Astronomical Techniques</i> course [Summer Semester 2024] <i>Lecturer:</i> Priv.-Doz. Dr. Anna Pasquali	Heidelberg University, Germany
Teaching assistant for <i>Cosmology</i> course [Winter Semester 2023/24] <i>Lecturer:</i> Prof. Dr. Matteo Maturi	Heidelberg University, Germany

Outreach

Explore Science 	Co-organizer of the HITS hands-on station named 'Sing like a Star - Sort like a Pro!' @Explore Science 2026.	Mannheim, Germany since Jan 2026
Girls' Day 	Main organizer of the Girls' Day @HITS entitled "Die Musik der Sterne".	Heidelberg, Germany 3 Mar 2025
Student Seminars 	Student Seminar titled "Starquakes unveil core rotation of red giants", given for an audience of physics students at IST - University of Lisbon.	Online 9 Jun 2021
After School 	After School is an online platform for extracurricular science courses aimed at elementary and high school students. Instructor in 4 Astrophysics and Relativity courses, and Developer of the Astrophysics course.	Online Mar 2021 - Jun 2022
NFIST 	NFIST is the physics student association at IST - University of Lisbon. Main organizer and coordinator of several science outreach events [Vice-president from Sep 2017-Sep 2018].	Lisbon, Portugal Sep 2017 - Sep 2019