



### Affiliation

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### Bibliometry

( NASA/ADS)

119 refereed publications

(16 as first author)

h-index: 45

68 non-refereed publications

>5100 citations to refereed

papers

>6300 citations in total

### Conferences and seminars

Work presented in

75 conferences/events

with 42 talks

(12 invited, 30 contributed)

50 institute seminars

SOC Member in 21 meetings

## Summary

Associate professor at the Nicolaus Copernicus Astronomical Center of the Polish Academy of Sciences. I am an expert on the determination of chemical abundances from high-resolution spectra of late-type stars. My research areas are stellar evolution and Galactic stellar populations. My team is exploring novel methodologies to extract complete, precise, and accurate chemical abundances from large samples of stellar spectra.

## Employment

since 2018 *Associate professor*  
2015–2018 *Assistant professor*  
2012–2015 *Postdoctoral researcher* (Full-time independent research)  
**Nicolaus Copernicus Astronomical Center** Poland  
2009–2012 *Fellow* (75% independent research, 25% functional duties)  
**European Southern Observatory** Garching bei Muenchen, Germany  
01.–09.2009 *Postdoctoral researcher*  
**University of São Paulo** São Paulo, Brazil

## Education and degrees

Jun. 2018 **Habilitation** field of physical sciences, discipline astronomy CAMK, Poland  
2005–2008 **PhD in astrophysics** University of São Paulo, Brazil  
2006–2007 **Visiting PhD student** European Southern Observatory, Germany  
2003–2005 **Master degree in astrophysics** University of São Paulo, Brazil  
1998–2003 **Bachelor degree in astronomy** Federal University of Rio de Janeiro, Brazil

## Large international projects

- **CUBES**: The Cassegrain U-Band Efficient Spectrograph, a new near-UV, medium-resolution spectrograph for the VLT. National co-PI (Since July 2020)
- **Gaia Science Team**: member of the GST, a committee that advises ESA on aspects related to the scientific performance and goals of Gaia (since Nov. 2022)
- **WST**: Wide-field Spectroscopic Telescope. Proposed 10m-class spectroscopic facility. Steering committee member. Co-leader of the Galactic Science WG (since Feb. 2022)
- **HRMOS**: Member of the core science team that is developing the science case for a new high-resolution multi-object spectrograph for the VLT (since June 2020).
- **Gaia-ESO Survey**: Co-coordinator, with Andreas Korn (Uppsala, Sweden) of the "UVES FGK Spectrum Analysis Working Group" (2010-2021).
- **4MOST**: Member of the Stellar Clusters community survey (since December 2020).
- **PLATO**: ESA mission to be launched in 2026. Member of WP 122 "Non-seismic diagnostics and model atmospheres" (since November 2020).
- **ChETEC-INFRA**: European "starting network" developing tools and providing infrastructure access to support nuclear astrophysics studies. Associated partner (since May 2021).
- **Maunakea Spectroscopic Explorer (MSE)**: Member of the Science Team (since August 2018).
- **WG on Cosmostatistics**: Member of the Working Group on Cosmostatistics of the International Astrostatistics Association.

## Recent research funding

- **DAINA research grant** from the Polish National Science Center (NCN). Project: The history of C, N, and O in the Galaxy (2025-2027): 793k PLN.
- **Horizon Infra-Dev 2024** from the European Commission. Project: "The Wide-Field Spectroscopic Telescope" (2025-2028): 3M EUR (to the WST consortium, lead by CNRS, FR); 85k EUR (SAGA Team, PL)
- **OPUS+LAP research grant** from the Polish National Science Center (NCN). Project: "The old Milky Way: a holistic approach for the accurate analysis of metal-poor stars" (2024-2026): 2.0M PLN.
- **Sonata Bis research grant** from the Polish National Science Center (NCN). Project: "Playing CHESS with stars" (2020-2025): 2.2M PLN.

## Research supervision

- **Completed:** 12 undergrad research internships; two co-supervised PhD students; four post-docs
- **On-going:**

since May 2025	<b>Arthur Alencastro Puls</b> Post-doc	CAMK, Poland
since Apr. 2025	<b>Thibault Boulet</b> Post-doc	CAMK, Poland
since Sep. 2024	<b>Deepak</b> Post-doc	CAMK, Poland
since Oct. 2021	<b>John E. Martínez Fernández</b> PhD student	CAMK, Poland
since Oct. 2021	<b>Sergen Özdemir</b> PhD student	CAMK, Poland
since Dec. 2019	<b>André Rodrigo da Silva</b> PhD student	CAMK, Poland

## Recent refereed publications

- [1] Heike Rauer et al. "The PLATO mission". In: *Experimental Astronomy* 59.3, 26 (June 2025), p. 26. doi: [10.1007/s10686-025-09985-9](https://doi.org/10.1007/s10686-025-09985-9). arXiv: [2406.05447](https://arxiv.org/abs/2406.05447) [[astro-ph.IM](#)].
- [2] M. L. L. Dantas et al. "Probing the origins: I. Generalised additive model inference of birth radii for Milky Way stars in the solar vicinity". In: *A&A* 696, A205 (Apr. 2025), A205. doi: [10.1051/0004-6361/202453034](https://doi.org/10.1051/0004-6361/202453034).
- [3] A. R. da Silva and R. Smiljanic. "Discovery of a pair of very metal-poor stars enriched in neutron-capture elements: The proto-disk r-II star BPS CS 29529-0089 and the Gaia-Sausage-Enceladus r-I star TYC 9219-2422-1". In: *A&A* 696, A122 (Apr. 2025), A122. doi: [10.1051/0004-6361/202453295](https://doi.org/10.1051/0004-6361/202453295). arXiv: [2503.04926](https://arxiv.org/abs/2503.04926).
- [4] Hélio D. Perottoni et al. "The S-PLUS Ultra-Short Survey: First data release". In: *A&A* 691, A138 (Nov. 2024), A138. doi: [10.1051/0004-6361/202348801](https://doi.org/10.1051/0004-6361/202348801). arXiv: [2407.05004](https://arxiv.org/abs/2407.05004) [[astro-ph.SR](#)].
- [5] A. Bragaglia et al. "The Gaia-ESO Survey: No sign of multiple stellar populations in open clusters from their sodium and oxygen abundances". In: *A&A* 687, A124 (July 2024), A124. doi: [10.1051/0004-6361/202245144](https://doi.org/10.1051/0004-6361/202245144).

## Selected non-refereed publications

- [6] Vincenzo Mainieri et al. The Wide-field Spectroscopic Telescope (WST) Science White Paper. Mar. 2024. doi: [10.48550/arXiv.2403.05398](https://doi.org/10.48550/arXiv.2403.05398). arXiv: [2403.05398](https://arxiv.org/abs/2403.05398) [[astro-ph.IM](#)].
- [7] Laura Magrini et al. HRMOS White Paper: Science Motivation. Dec. 2023. doi: [10.48550/arXiv.2312.08270](https://doi.org/10.48550/arXiv.2312.08270). arXiv: [2312.08270](https://arxiv.org/abs/2312.08270) [[astro-ph.IM](#)].
- [8] S. Lucatello et al. Stellar Clusters in 4MOST. *The Messenger*, Vol. 190, p. 13. Mar. 2023.
- [9] The MSE Science Team et al. The Detailed Science Case for the Maunakea Spectroscopic Explorer, 2019 edition. Apr. 2019. arXiv: [1904.04907](https://arxiv.org/abs/1904.04907) [[astro-ph.IM](#)].
- [10] G. Gilmore et al. The Gaia-ESO Public Spectroscopic Survey. *The Messenger*, Vol. 147, p. 25. 2012.

## Service, teaching, and administrative work (selected list)

- Grant reviews for: University of Wroclaw (2021); FNRS Belgium (since 2022); Fondecyt Chile (2022); ERC (2023).
- Member of mid-term review PhD committee at the University of Wroclaw (July 2021; Sep. 2024).
- Lectures on Observational Astrophysics for the Geoplanet Doctoral School, Warsaw, PL (Autumn 2021).
- Member of the Awards Committee of the Nicolaus Copernicus Astronomical Center (Sep. 2021 – Feb. 2023).
- Member of the Scientific Council of the Nicolaus Copernicus Astronomical Center: 2019-2022; 2023-2026.
- Review of observing proposals: Gemini (2012, Brazilian TAC), OPTICON (six periods), ESO (three periods).
- Member of the working group on scientific ethics of the European Astronomical Society (September 2016 - January 2018) - the Ethics Statement of the EAS that was formally adopted on January 2018.
- Manuscript referee: ApJL (2011), A&A (since 2012), PASJ (2014), MNRAS (since 2015), AN (2018), ExA (2022), ApJ (2024).

## Participation in conferences and meetings (five most recent)

11 - 13 February 2025	<b>HRMOS Busy Week</b> Contributed talk	Florence, IT
03, 04, 17, 18 February 2025	<b>WST kick-off meeting</b> Contributed talk	on-line
18 – 22 November 2024	<b>IAU Symposium 395</b> Poster	Paraty, BR
23 – 24 October 2024	<b>The Rubin-LSST Polish Consortium Annual Meeting 2024</b> Participant	Warsaw, PL
17 – 19 January 2024	<b>CUBES Science Meeting</b> Contributed talk	Naples, IT

## Organization of conferences and meetings (five most recent)

23 – 27 Jun. 2025	<b>EAS Annual Meeting 2025: Symposium: Gaia: The (TWO) Billion Star Galaxy Census: Anticipating the Leap in Understanding of Planets, Stars, the Milky Way with Gaia DR4</b> SOC member	Cork, Ireland
23 – 27 Jun. 2025	<b>EAS Annual Meeting 2025: Special Session: WST: the Wide-field spectroscopic facility</b> SOC member	Cork, Ireland
23 – 27 Jun. 2025	<b>EAS Annual Meeting 2025: Special Session: The HRMOS instrument: very high spectral resolution combined with multi-object capabilities</b> SOC member	Cork, Ireland
15 – 20 Sep. 2024	<b>Nuclear Physics in Astrophysics XI</b> SOC member	Dresden, Germany
1 – 5 Jul. 2024	<b>EAS Annual Meeting 2024: Symposium: Gaia: The (Two) billion star Galaxy census: from the solar system to our Milky Way and beyond</b> SOC member	Padova, Italy

## Media and science dissemination (recent)

- Highlighted research at the website of the Nicolaus Copernicus Astronomical Center, October 2023: Unsupervised Machine Learning Helps to Decipher the Galactic Halo. Also published at the website of the Geoplanet Doctoral School.
- Highlighted research at the Nicolaus Copernicus Astronomical Center website, June 2023: History of the old stellar populations of the Milky Way.
- Highlighted research at the Nicolaus Copernicus Astronomical Center website, February 2023: Visitors from the heart of the Milky Way.