

# MELINDA SOARES-FURTADO, PH.D.

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## PROFESSIONAL APPOINTMENTS

Assistant Professor of Astronomy & Physics, University of Wisconsin–Madison	2024–present
NASA Hubble Postdoctoral Fellow, University of Wisconsin–Madison	2021–2024
Postdoctoral Fellow, University of Wisconsin–Madison	2020–2021
Advanced Placement Math & Physics Instructor, Mount Madonna School	2012–2013

## EDUCATION

Princeton University	Astrophysical Science	Ph.D., 2020
Princeton University	Astrophysical Science	M.S., 2016
University of California, Santa Cruz	Physics	B.S., 2014

## RESEARCH EXPERIENCE

Graduate Student Researcher, Princeton University, Astrophysical Sciences <i>Advisor: Prof. Gáspár Bakos</i>	2014–2020
Undergraduate Student Researcher, UC Santa Cruz, Physics & Astronomy <i>Advisors: Profs. Enrico Ramirez-Ruiz &amp; David Williams</i>	2009–2014

## PEER-REVIEWED PUBLICATIONS — MENTORED STUDENTS ARE UNDERLINED

37. Sheffler, J., Clark, M., **Soares-Furtado, M.** et al. *A Multi-Method Age Determination for the Ursa Major Moving Group*, submitted to AJ.
36. Narayan, R., **Soares-Furtado, M.** et al. *Twinkle Twinkle Little Star, Roman Sees Where You Are: Predicting Exoplanet Transit Yields in the Rosette Nebula with the Nancy Grace Roman Space Telescope*, submitted to AJ.
35. Lane, K., Stephan, A., **Soares-Furtado, M.** et al. *Observable Metal Pollution in Main-Sequence Stars: Simulations of Rocky Planets Engulfed by Stars in the 0.5 to 2.0  $M_{\odot}$  Range*, submitted to ApJ.
34. Sullivan, K., **Soares-Furtado, M.** et al. *Evidence for Separation-Dependent X-ray Emission for Young Binary Stars in the Upper Scorpius Star-Forming Region*, submitted to AJ.
33. Kotten, B., **Soares-Furtado, M.** et al. *Lithium Enrichment in a Subgiant Star with a Brown Dwarf Companion: A Planetary Engulfment Candidate*, submitted to AJ.
32. Distler, A., **Soares-Furtado, M.** et al. *TESS Hunt for Young and Maturing Exoplanets (THYME) XIII: A Comoving-Based Age Constraint for KELT-20*, submitted to AJ.
31. Rosselli-Calderon, A. et al. (including **Soares-Furtado, M.**) *Chemical Enrichment of Metal-Poor Stars Orbiting Massive Black Hole Companions*, in press, ApJL.
30. Aloisi, R., Vanderburg, A., **Soares-Furtado, M.** et al. *Searching for Exoplanets Born Outside the Milky Way: VOYAGERS Survey Design*, in press, PASP.
29. O'Shea, T., Heinz, S., **Soares-Furtado, M.** et al. *Shooting for the Stars: Jet-mode feedback and AGN Jet Deceleration from Stellar Mass-loading*, in press, ApJ.
28. Aldarondo Quiñones, N. et al. (including **Soares-Furtado, M.**) *Reassessing the Relationship Between Stellar X-ray Luminosity and Age with eROSITA Data Release 1*, 2025, PASP, 137, 11. [2511.07630]
27. Vowell, N. et al. (including **Soares-Furtado, M.**) *11 New Transiting Brown Dwarfs and Very Low Mass Stars from TESS*, 2025, AJ, 170, 2. [2501.09795]
26. Schulte, J. et al. (including **Soares-Furtado, M.**) *Migration and Evolution of giant ExoPlanets (MEEP) II: Super-Jupiters and Lithium-rich Host Stars*, 2025, MNRAS, 543, 1. [2509.02666]
25. Jankowski, A., Becker, J., **Soares-Furtado, M.** et al. *The Ambiguous Age and Tidal History for the Ultra-Hot Jupiter TOI-1937Ab*, 2025, PASP, 137, 3. [2503.15802]
24. Distler, A., **Soares-Furtado, M.** et al. *TESS Hunt for Young and Maturing Exoplanets (THYME) XII: A Young Mini-Neptune on the Upper Edge of the Radius Valley in the Hyades Cluster*, 2025, AJ, 169, 3. [2410.11990]
23. Limbach, M. et al. (including **Soares-Furtado, M.**) *The MIRI Exoplanets Orbiting White Dwarfs (MEOW) Survey: Mid-Infrared Excess Reveals a Giant Planet Candidate around a Nearby White Dwarf*, 2024, ApJL, 973, 1. [2408.16813]
22. Hinkel, N., Youngblood, A., **Soares-Furtado, M.** *Host Stars and How Their Compositions Influence Exoplanets*, 2024, RMG, 90, 1. [2404.15422]
21. Schulte, J. et al. (including **Soares-Furtado, M.**) *Migration and Evolution of Giant Exoplanets (MEEP) I: Nine Newly Confirmed Hot Jupiters from the TESS Mission*, 2024, AJ, 168, 1. [2401.05923]

20. Ong, J., Hon, M., **Soares-Furtado, M.** et al. *Gasing Pangkah I: Asteroseismology and Preliminary Characterisation of a Rapidly-Rotating Red Giant in the TESS SCVZ*, 2024, ApJ, 966, 1. [2402.16971]
19. **Soares-Furtado, M.**, Capistrant, B. et al. *TESS Hunt for Young and Maturing Exoplanets (THYME) XI: An Earth-sized Planet Orbiting a Nearby, Solar-like Host in the 400 Myr Ursa Major Moving Group*, 2024, AJ, 167, 2. [2401.04785]
18. Howell, S., Howell, A., Street, R., **Soares-Furtado, M.** et al. *The Dynamic Universe: Realizing the Potential of Classical Time Domain and Multimessenger Astrophysics*, 2024, Front. Astron. Space Sci., 11. [2024.1304616]
17. Yarza, R. et al. (including **Soares-Furtado, M.**) *Hydrodynamics and Survivability During Post-Main-Sequence Planetary Engulfment*, 2023, ApJ, 954, 2. [2203.11227]
16. Kolborg, A. et al. (including **Soares-Furtado, M.**) *Constraints on the Frequency and Mass Content of R-Process Events Derived from Turbulent Mixing in Galactic Disks*, 2023, ApJL, 936, 2. [2304.01144]
15. Limbach, M., **Soares-Furtado, M.** et al. *The TEMPO Survey I: Predicting Yields of Transiting Moons, Planets, and Satellites from a 30-day Survey of Orion with the Roman Space Telescope*, 2023, PASP, 135, 1043. [2209.12916]
14. Limbach, M. et al. (including **Soares-Furtado, M.**) *A New Method for Finding Nearby White Dwarf Exoplanets and Detecting Biosignatures*, 2022, MNRAS, 517, 2. [2209.12914]
13. Capistrant, B., **Soares-Furtado, M.** et al. *A Population of Dipper Stars from the Transiting Exoplanet Survey Satellite Mission*, 2022, ApJS, 263, 1. [2209.03379]
12. Tayar, J., Moyano, F., **Soares-Furtado, M.** et al. *Spinning up the Surface: Evidence for Planetary Engulfment or Unexpected Angular Momentum Transport*, 2022, ApJ, 940, 1. [2208.01678]
11. Vigna-Gómez, A. et al. (including **Soares-Furtado, M.**) *Mergers Prompted by Dynamical Resonances in Compact, Multiple-Star Systems*, 2022, MNRAS Lett., 515, 1. [2204.10600]
10. Kolborg, A. et al. (including **Soares-Furtado, M.**) *Supernova-Driven Turbulent Metal Mixing in High Redshift Galactic Disks: Metallicity Fluctuations in the Interstellar Medium and its Imprints on Metal Poor Stars in the Milky Way*, 2022, ApJL, 936, 2. [2111.02619]
9. Grunblatt, S. et al. (including **Soares-Furtado, M.**) *Planets Orbiting Evolved TESS Stars (POETS) II: The Hottest Jupiters Orbiting Evolved Stars*, 2022, AJ, 163, 3. [2201.04140]
8. **Soares-Furtado, M.** et al. *Lithium Enrichment Signatures of Planetary Engulfment Events in Evolved Stars*, 2021, AJ, 162, 6. [2002.05275]
7. **Soares-Furtado, M.** et al. *A Catalog of Periodic Variables in Open Clusters M35 and NGC 2158*, 2020, ApJS, 246, 1. [1911.00832]
6. Naiman, J., **Soares-Furtado, M.**, Ramirez-Ruiz, E. *Modeling Gas Evacuation Mechanisms in present-Day Globular Clusters: Stellar Winds from Evolved Stars & Pulsar Heating*, 2019, MNRAS, 491, 4. [1310.8301]
5. Rappaport, S. et al. (including **Soares-Furtado, M.**) *Deep Long Asymmetric Occultation in EPIC 204376071*, 2019, MNRAS, 485, 2. [1902.08152]
4. MacLeod, M., Cantiello, M., **Soares-Furtado, M.** *Planetary Engulfment in the Hertzsprung-Russell Diagram*, 2018, ApJL, 853, 1. [1801.04274]
3. Zhu, W., Huang, C. X., Udalski, A., **Soares-Furtado, M.** et al. *Extracting Microlensing Signals from K2 Campaign 9*, 2017, PASP, 129, 980. [1704.08692]
2. **Soares-Furtado, M.** et al. *Image Subtraction Reduction of Open Clusters M35 & NGC 2158 in the K2 Campaign 0 Super Stamps*, 2017, PASP, 129, 974. [1703.00030]
1. Aliu, E. et al. (including **Soares-Furtado, M.**) *Long Term Observations of B2 1215+30 with VERITAS*, 2013, ApJ, 779, 2. [1310.6498]

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## OTHER PUBLICATIONS — MENTORED STUDENTS ARE UNDERLINED

2. Clark, M., Sullivan, K., **Soares-Furtado, M.** *Moderate-Separation Binary Companions May Influence Young Stellar X-ray Luminosity*, 2024, RNAAS, 8, 12. [2024RNAAS...8..318C]
1. **Soares-Furtado, M.**, Kubiak, S. *Aging Ungracefully*, 2023, Sky & Telescope, 145, 1, p.14. [link]

## SELECTED FELLOWSHIPS, GRANTS, & AWARDS

NASA Topical Workshops, Symposia, and Conferences Award, Total budget: \$39,999	2025
Postdoctoral Excellence in Mentoring Award, University of Wisconsin-Madison	2023
NASA Topical Workshops, Symposia, and Conferences Award, Total budget: \$69,550	2023
PI: E. Zweibel, Science-PI: M. Soares-Furtado	
NASA Hubble Fellowship, Total budget: \$364,527	2021–2024
TESS DDT Proposal, Principal Investigator, <i>Investigation of Pulsating Blue Stragglers in M67</i>	2021
TESS DDT Proposal, Principal Investigator, <i>Investigation of Pulsating Blue Stragglers in NGC 6819</i>	2021
NASA Postdoctoral Program Fellowship ( <i>declined</i> ), Total budget: \$237,162	2020
First Place Poster, Kepler & K2 Science Conference V	2019
National Science Foundation Graduate Research Fellowship, Total budget: \$102,000	2015–2018
TESS Cycle 1 Guest Investigator Program, Total budget: \$200,000	2018
PI: J. Hartman, Co-I: M. Soares-Furtado	
Permanent Exhibit Selection, <i>Art of Science</i> , Princeton University	2017
Kenneth & Ann Thimann Scholarship, UCSC	2014
SLUG Fellowship, UCSC	2013
Lamat Fellowship, UCSC	2013
First Place Oral presentation, AAAS National ERN Conference	2012
Steven Chu Award for Undergraduate Research, APS Annual Conference	2011
Ron Ruby Memorial Scholarship for Teaching Excellence, UCSC	2010
Regents Scholarship, UCSC	2008–2010

## SELECTED SCIENTIFIC PRESENTATIONS

66 presentations, including 46 invited colloquia, seminars, and technical presentations.

### Colloquia:

University of Wisconsin–La Crosse	2025
University of Virginia	2024
Minnesota Institute for Astrophysics	2024
University of Colorado, Boulder	2023
University of Nevada, Las Vegas	2023
University of Illinois Urbana–Champaign (2x)	2022 & 2023
Harvard Institute for Theory & Computation	2023
University of Wisconsin–Madison, Department of Physics	2022
MIT Kavli Institute for Astrophysics & Space Research	2022
University of California, Los Angeles	2022
NASA Goddard Space Flight Center	2021
Astrophysics Research Centre, Queen’s University Belfast	2021
Kavli Institute for Theoretical Physics, UC Santa Barbara	2021
University of Wisconsin–Madison, Department of Astronomy (2x)	2019 & 2020
Pomona College	2019
University of the Virgin Islands	2019

### Recent Invited Seminars:

Roman Science Collaboration Exoplanet & Solar System Working Group	2025
Princeton University Extrasolar Planet Discussion Group	2025
CIERA, Northwestern University Observational Astronomy Meetings (2x)	2021 & 2024
NASA Hubble Fellowship Program Symposium (3x)	2021, 2022, & 2023
MIT Planetary Lunch Colloquium Series	2022
Penn State Center for Exoplanets & Habitable Worlds	2022
Harvard University Exoplanet Lunch Series (3x)	2016, 2019, & 2022
Probes of Transport in Stars, Kavli Institute for Theoretical Physics	2021
Michigan State University	2021
Carnegie Earth & Planets Laboratory	2021
Division on Dynamical Astronomy of the AAS	2021
UCLA–UCSC Joint Astrophysics Seminar Series	2021
American Museum of Natural History	2020
Carnegie Department of Terrestrial Magnetism	2019
Harvard University Stars & Planets Seminar Series	2019
Princeton University Envision Conference, Ethics & Space Policy	2019
Harvard University Institute for Theory & Computation	2017

### Recent Invited Conference Presentations:

American Physical Society’s April Meeting: <i>Quarks to Cosmos</i>	2024
33rd Annual Wisconsin Space Conference	2023
Probes of Transport in Stars, UCSB Kavli Institute for Theoretical Physics	2021
NASA’s Kepler & K2 SciCon V	2019

## OBSERVATIONAL EXPERIENCE

Australian National University 2.3-m telescope at Siding Spring Observatory (15 nights)  
Southern African Large Telescope at the South African Astronomical Observatory (14 nights)  
VERITAS (Very Energetic Radiation Imaging Telescope Array System) at Whipple Observatory (12 nights)  
WIYN 3.5-m telescope at Kitt Peak National Observatory (9 nights)  
Magellan Telescopes (Walter Baade 6.5-m) at Las Campanas Observatory (2 nights)

## TEACHING EXPERIENCE

Instructor, <i>Our Exploration of the Solar System</i> (AST 104), UW–Madison	2024, 2025
Guest Instructor, <i>The Physical Universe</i> (AST 200), UW–Madison	2024
Guest Instructor, <i>Stellar Interiors and Evolution</i> (AST 715), UW–Madison	2023
Summer Instructor, Lamat REU Program (NSF #1852393)	2021–2023
Guest Instructor, <i>Stellar Structure &amp; Evolution</i> (AST 123), Pomona College	2019
Assistant Instructor, <i>The Universe</i> (AST 205), Princeton University	2015
Head Instructor, <i>AP Physics, AP Calculus, &amp; Python Programming</i> , Mount Madonna School	2012–2013
Physics Section Leader & Lecturer, UC Santa Cruz Academic Excellence Program	2009–2011
<i>Intro. to Waves &amp; Optics; Intro. to Elementary Mechanics; Intro. to Electricity &amp; Magnetism</i>	

## ADVISING EXPERIENCE

Key: \* co-advised; P published together

### Graduate Students:

Maggie Ju (UW–Madison)	2025–present
Claire Zwicker (UW–Madison)	2024–present
Julia K. Sheffler <sup>P</sup> (UW–Madison)	2023–present
Ricardo Yarza <sup>*P</sup> (UC Santa Cruz; FINESST Fellow)	2021–present
Andrew Nine <sup>*P</sup> (UW–Madison)	2022–2023
Anne Noer Kolborg <sup>*P</sup> (UC Santa Cruz)	2021–2023
Rachel McClure <sup>*</sup> (UW–Madison; NSF GRFP Fellow)	2020–2022

### Undergraduate & Postbaccalaureate Students:

Sarah Parker (UW–Madison)	2025–present
Annelise Alvin (UW–Madison)	2025–present
Jenna Karcheski <sup>P</sup> (UW–Madison)	2025–present
Ritvik Narayan <sup>P</sup> (UW–Madison)	2024–present
Nadja Aldarondo Quiñones <sup>*P</sup> (U. Puerto Rico)	2024–present
Adam Distler <sup>P</sup> (UW–Madison)	2023–present
Max Clark <sup>P</sup> (UW–Madison)	2023–present
Brooke Kotten <sup>P</sup> (UW–Madison; NSF GRFP Fellow)	2023–present
Nicholas Marston (UW–Madison)	2023–present
Alyssa Jankowski <sup>P</sup> (UW–Madison)	2022–2024
Lily Robinthal <sup>*</sup> (UW–Madison)	Summer 2022
Sara Kubiak <sup>P</sup> (UW–Madison)	Summer 2022
Benjamin Capistrant <sup>P</sup> (UW–Madison)	2021–2022
Rianna Kuenzi (UW–Madison)	2021–2022
Tyler Barna <sup>P</sup> (Rutgers)	2018–2019

## SELECTED PROFESSIONAL SERVICE EXPERIENCE

Science Organizing Committee, Great Lakes Exoplanet Area Meeting	2025
Member of the NASA/IPAC Infrared Science Archive User Panel	2025
Reviewer, Monthly Notices of the Royal Astronomical Society	2025
Science Organizing Committee Member, Exoplanets VI	2025–present
Science Organizing Committee Member, IAU Symposium	2025–present
<a href="#">Advisory Board Member</a> , Lamat Institute	2021–present
Member, TESS Follow-Up Working Group	2021–present
Member of the AURA Future Leaders Program, AURA Annual Member Representatives Meeting	2024
Media Fellow, University of Wisconsin–Madison	2024
Session Chair, Extreme Solar Systems V	2024
Reviewer, National Science Foundation Panel	2024
Reviewer, NASA Panel (3x)	2023–2024
Referee, <i>Nature</i> , <i>Nature Communications</i> , <i>Monthly Notices of the Royal Astronomical Society</i>	2021–2024
Lead Organizer, Aspen Center for Physics 2023 winter conference	2022–2023
<i>Exoplanet Systems and Stellar Life Cycles: Late-Stage and Post-MS Systems</i>	
LAMAT REU Admissions Committee Member	2021–2022
Co-organizer & host of the TESS (TSC2) Splinter Session	2021

## SELECTED DEPARTMENTAL/UNIVERSITY SERVICE EXPERIENCE

L&S Community of Graduate Research Scholars (CGRS) Advisory Committee	2025
UW–Madison Graduate Admissions Chair	2025–2026
UW–Madison Colloquium Organizer	2024–2025
UW–Madison Southern African Large Telescope Allocation Committee	2023–2024
UW–Madison Graduate Admissions Committee	2021–2024
UW–Madison Graduate Application Advice Panel	2021–2024
UW–Madison Sherry Hour, Co-Organizer	2021–2024
UW–Madison Monday Science Seminar, Co-Organizer	2020–2023
UW–Madison Board of Visitors, Presenter	2022 & 2024
SACNAS & NSBP Conferences, Graduate Applicant Recruiter	2020–2021
Princeton Advisory Council, Presenter	2020

## SELECTED OUTREACH SERVICE EXPERIENCE

I have given **62 talks**, including **51 invited** presentations.

### Invited Service

Panelist, UW–Madison L&S Graduate Research Scholars	2024–2025
Speaker, UW Space Place (3x)	2023–2025
Speaker, Lamat REU Mentor Speaker Series	2020–2024
Presenter, <i>Learn With An Expert</i> , Milwaukee Public Museum	2023
Presenter, <i>Science on Tap</i> , Milwaukee Public Museum	2023
Instructor, Lamat REU Professional Development Workshops	2021–2023
Presenter, <i>Astronomy on Tap</i> , UNLV, UPenn, Princeton, UW–Madison (4x)	2018–2023
Speaker, Society of Physics Students, UNLV, UCSC (2x)	2015–2023
Speaker, Madison Astronomical Society	2022
Panelist for the Committee on the Status of Women in Astronomy	2021
Speaker, European Astronomical Society Annual Meeting	2021
<i>Building Social Support Networks for Mothers in Astronomy</i>	
Speaker, NSF NoirLab DEI Seminar	2021
Speaker, AeroSTEM Academy	2021
Speaker, The National Society of Black Physicists, University of the Virgin Islands	2019
Keynote Speaker & Co-organizer, National Chemistry Week, “ <i>Life Beyond Earth</i> ” (932 attendees)	2018

### Contributed Service

SETI Institute NASA Community College Network, Committee Member	2022–present
The Astrono-Mom Conversation Series, Founder & Organizer	2020–present
Astronomy & Physics Graduate School Applicant Discord Server, Founder & Moderator	2021–present
Mastering the Graduate School Application Process, Organizer & Mentor	2018–present
Solar System Annual Science Workshop, Lincoln Elementary School, Organizer & Speaker	2022
NASA Hubble Fellowship Program Symposium, Committee Member	2021
NASA Hubble Fellowship Program Application Workshop, Panelist	2021
Astronomy on Tap Trenton Chapter, Co-Founder & Co-Organizer	2019–2020
Young Women’s Conference in STEM, Princeton University, Co-Organizer	2017

## MEDIA & PRESS

Defector, *Team Fiery Sun Death Or Team Lifeless Husk*, B. Ferreira, 2025.  
On Wisconsin, *How to Study a Star*, M. Provost, 2024.  
BBC, *The Mysterious Pairs of Planets We Still Can’t Explain*, J. O’Callaghan, 2024.  
Scientific American, *Don’t Panic, But A Lot of Stars Seem to Eat Their Own Planets*, R. G. Andrews, 2024.  
New Scientist, *Where are all the exomoons?*, J. O’Callaghan, 2024.  
Astronomy Magazine, *Nearest young Earth-sized Planet Could Shed Light on How Terrestrial Worlds Evolve*, S. Kuthunur, 2024.  
Inside UW, *Earth-sized planet discovered in ‘our solar backyard’*, C. Barncard, 2024.  
The Independent, *Scientists find Earth-sized planet shockingly nearby*, A. Griffin, 2024.  
Ars Technica, *Astronomers found ultra-hot, Earth-sized exoplanet with a lava hemisphere*, J. Ouellette, 2024.  
The Atlantic, *A Different Vision for Earth’s Demise*, J. O’Callaghan, 2024.  
Planetarium Film, *Lights Out! Eclipses: Whys, Wonders, & Wows*, Directed by Bob Bonadurer, 2023.  
Quanta Magazine, *New Clues for What Will Happen When the Sun Eats the Earth*, J. O’Callaghan, 2023.  
AAS YouTube Series, *Lithium Enrichment Signatures of Planetary Engulfment Events in Evolved Stars*, 2022.  
Badger Talks, *Devoured Worlds: Lessons From Planet-Ingesting Stars*, 2023.  
The New York Times, *The Juicy Secrets of Stars That Eat Their Planets*, B. Ferreira, 2022.  
Scientific American Magazine, *Women Are Creating a New Culture for Astronomy*, A. Finkbeiner, 2022.  
Princeton University Press, *Astronomy on Tap Brings Astrophysicists & the Community Together*, L. Wright, 2019.  
New Scientist Magazine, *Stars That Devour Their Planets Get Brighter & Faster*, J. Wenz, 2018.