

Ricardo Yarza

ryarza@ucsc.edu | ryarza.github.io

EDUCATION

PhD Astronomy and Astrophysics, University of California, Santa Cruz 2019–present
Advisor: Professor Enrico Ramirez-Ruiz

BS Engineering Physics, Tecnológico de Monterrey 2019

Study abroad, University of Illinois at Urbana–Champaign 2017–2018
Advisor: Professor Charles Gammie

PUBLICATIONS

For the most recent list, see any of the following: [NASA ADS](#), [Google Scholar](#), [ORCID](#).
Underline indicates mentored student.

In press or under review:

3. Kotten, B., Soares-Furtado, M., **Yarza, R.**, Nine, A., et al.
Lithium Enrichment in a Subgiant Star with a Brown Dwarf Companion: A Planetary Engulfment Candidate
Submitted to AAS journals
2. Lane, K. T., Stephan, A. P., Soares-Furtado, M., Stassun, K. G., & **Yarza, R.** 2026, [arXiv:2601.00949](#)
Observable Metal Pollution in Main-Sequence Stars: Simulations of Rocky Planets Engulfed by Stars in the 0.5 to 1.4 M_{\odot} Range
Submitted to AAS journals
1. Soares-Furtado, M., Limbach, M. A., Vanderburg, A., Bally, J., et al. incl. **Yarza, R.** 2024, [arXiv:2406.01492](#)
The TEMPO Survey II: Science Cases Leveraged from a Proposed 30-Day Time Domain Survey of the Orion Nebula with the Nancy Grace Roman Space Telescope
Submitted to OJAp

Published:

14. **Yarza, R.**, MacLeod, M., Idini, B., Murray-Clay, R., & Ramirez-Ruiz, E. 2025, [ApJL](#), **995**, L48
Evolution of the ZTF SLRN-2020 Star-Planet Merger
13. Bush, R. C., Wu, S. C., Everson, R. W., **Yarza, R.**, et al. 2025, [ApJL](#), **990**, L7
Black Hole Survival Guide: Searching for Stars in the Galactic Center that Endure Partial Tidal Disruption
12. Liu, C., **Yarza, R.**, & Ramirez-Ruiz, E. 2025, [ApJ](#), **979**, 40
Repeating Partial Tidal Encounters of Sun-like Stars Leading to Their Complete Disruption

11. Hutchinson-Smith, T., Everson, R. W., Twum, A. A., Batta, A., et al. incl. **Yarza, R.** 2024, [ApJ](#), **977**, 196
Rethinking Thorne–Żytkow Object Formation: The Fate of X-Ray Binary LMC X-4 and Implications for Ultra-long Gamma-Ray Bursts
10. Rosselli-Calderon, A., **Yarza, R.**, Murguia-Berthier, A., Rohoza, V., et al. 2024, [ApJ](#), **977**, 16
The Evolution of Binaries Embedded Within Common Envelopes
9. Farias, D., Gall, C., Narayan, G., Rest, S., et al. incl. **Yarza, R.** 2024, [ApJ](#), **977**, 152
SN 2021foa: The “Flip-flop” Type II_n/Ibn Supernova
8. Ransome, C. L., Villar, V. A., Tartaglia, A., Gonzalez, S. J., et al. incl. **Yarza, R.** 2024, [ApJ](#), **965**, 93
SN 2023ixf in Messier 101: The Twilight Years of the Progenitor as Seen by Pan-STARRS
7. Capistrant, B. K., Soares-Furtado, M., Vanderburg, A., Jankowski, A., et al. incl. **Yarza, R.** 2024, [AJ](#), **167**, 54
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
6. **Yarza, R.**, Razo-López, N. B., Murguia-Berthier, A., Everson, R. W., et al. 2023, [ApJ](#), **954**, 176
Hydrodynamics and Survivability during Post-main-sequence Planetary Engulfment
5. Aleo, P. D., Malanchev, K., Sharief, S., Jones, D. O., et al. incl. **Yarza, R.** 2023, [ApJS](#), **266**, 9
The Young Supernova Experiment Data Release 1 (YSE DR1): Light Curves and Photometric Classification of 1975 Supernovae
4. Liu, C., Mockler, B., Ramirez-Ruiz, E., **Yarza, R.**, et al. 2023, [ApJ](#), **944**, 184
Tidal Disruption Events from Eccentric Orbits and Lessons Learned from the Noteworthy ASASSN-14ko
3. Wong, G. N., Prather, B. S., Dhruv, V., Ryan, B. R., et al. incl. **Yarza, R.** 2022, [ApJS](#), **259**, 64
PATOKA: Simulating Electromagnetic Observables of Black Hole Accretion
2. **Yarza, R.**, Wong, G. N., Ryan, B. R., & Gammie, C. F. 2020, [ApJ](#), **898**, 50
Bremsstrahlung in GRMHD Models of Accreting Black Holes
1. Tovmassian, G., Szkody, P., **Yarza, R.**, & Kennedy, M. 2018, [ApJ](#), **863**, 47
K2 Study of the Magnetic Precataclysmic Variable V1082 Sagittarius

AWARDS

Chancellor’s Fellowship UC Santa Cruz	Fall 2025
Future Investigators in NASA Earth and Space Science and Technology NASA	2022–2025

Doctoral Fellowship University of California Institute for Mexico and the United States	2020–2025
Raynor L. Duncombe Student Research Prize Division on Dynamical Astronomy, American Astronomical Society	2023
Frontera Computational Science Fellowship Texas Advanced Computing Center, The University of Texas at Austin	2022–2023
Regents Fellowship UC Santa Cruz	2019

TALKS

Theoretical Astrophysics Center Seminar, UC Berkeley	Dec 2025
48th Bay Area Exoplanet Meeting / 7th OWL Exoplanet Summer Program	Jul 2025
ITC Luncheon Talk, Center for Astrophysics, Harvard & Smithsonian	May 2024
Meeting of the American Physical Society	April 2024
54th meeting of the AAS Division on Dynamical Astronomy	May 2023
Texas Advanced Computing Center, The University of Texas at Austin	May 2023
Exoplanet Systems and Stellar Life Cycles, Aspen Center of Physics	Mar 2023
Friday Lunch Time Astrophysics Seminar (FLASH), UC Santa Cruz	Dec 2022
Seminar in Geophysical and Astrophysical Fluid Dynamics, UC Santa Cruz	Nov 2022
Exoplanet Summer Program, Other Worlds Laboratory	July 2022
Texas Advanced Computing Center, The University of Texas at Austin	July 2022
240th meeting of the American Astronomical Society	June 2022

SERVICE

Referee for <i>Astronomy & Astrophysics</i> , <i>The Astrophysical Journal</i>	
Session Chair, <i>Neutron Stars and Stellar Objects</i> Meeting of the American Physical Society	April 2024
Executive Secretary, NASA Astrophysics Theory Program review panel	Oct 2023
Designed and gave workshops on N-body simulation, data visualization, and <i>Gaia</i> EDR3	

MENTORING

Mentored students:

- Richard Truong, undergraduate at San Francisco State University
- Brooke Kotten, undergraduate at the University of Wisconsin, Madison
Now graduate student at the University of Michigan
- Valeriia Rohoza, undergraduate at Northwestern
Now graduate student at Columbia
- Alejandra Meza, high school student at Pacific Collegiate School
Now physics undergraduate at UC Berkeley

- Alejandra Rosselli-Calderon, MS student at Brown
Now graduate student at UC Santa Cruz

Lamat program	2020–present
Society of Physics Students Mentoring Program	2021
Young Scholars Program : Derek Davis, junior at Urbana High School	Summer 2018

TEACHING

Teaching assistant, UC Santa Cruz:

- | | |
|---|-------------|
| – Astronomy 118: <i>Physics of planetary systems</i>
Taught one lecture; wrote and gave final exam | Spring 2022 |
| – Astronomy 116: <i>Physics of stars</i> | Spring 2021 |
| – Astronomy 119: <i>Introduction to scientific computing</i> | Fall 2020 |
| – Astronomy 16: <i>Astrobiology: life in the universe</i> | Spring 2020 |
| – Astronomy 6: <i>The space-age solar system</i> | Winter 2020 |

PRESS

Discovery Alert: Earth-sized Planet Has a “Lava Hemisphere” Chelsea Gohd, NASA	Jan 2024
---	----------

The Juicy Secrets of Stars That Eat Their Planets Becky Ferreira, The New York Times	Aug 2022
---	----------

Astronomers Reveal New Details of How Stars Devour Planets Nola Taylor Tillman, Scientific American	Aug 2022
--	----------