

SEARRA FOOTE

LUNAR AND PLANETARY LABORATORY, UNIVERSITY OF ARIZONA

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Education

Lunar and Planetary Laboratory, University of Arizona

Ph.D. in Planetary Sciences, Minor in Astrobiology

expected 2028

Advisor: Tyler D. Robinson

M.S. in Planetary Sciences

2025

School of Earth and Space Exploration, Arizona State University

Bachelor of Science in Earth and Space Exploration (Astrobiology and Biogeosciences)

2022

Minor in Biological Sciences

2022

Professional Experience

Graduate Research Assistant, HABLAB at the Lunar and Planetary Laboratory (Tyler D. Robinson) 2022- Present

Undergraduate Researcher, ELIFE at the School of Earth and Space Exploration (Sara Imari Walker) 2019- 2022

Student Success Coach, Student Success Center at Arizona State University 2021-2022

Mentor and Social Facilitator, The Sundial Program at Arizona State University 2019-2021

Teaching Assistant, The Physics Department at Arizona State University 2021

Network Fellow, The Access Network 2020-2021

Publications and Other Works

Foote, S., Sinhadc, P., Mathis, C., & Walker, S. I. (2023). False positives and the challenge of testing the alien hypothesis. *Astrobiology*, 23(11), 1189-1201, <https://doi.org/10.1089/ast.2023.0005>

Sheikh, S., Berea, A., Davis, R., De la Torre, G. G., DeMarines, J., Fisher, T., **Foote, S...** & Wright, J. T. (2021). Technosignatures as a priority in planetary science. *Bulletin of the American Astronomical Society*, 53(4), 1-7, doi: 10.3847/25c2cfef.93bdf43

Envisioning an Ideal Departmental Community, 2021, <https://bit.ly/4q8cbd4>

Achieving the Equitable Classroom Environment: Recommendations for SESE Faculty to Increase Student Retention, 2020, <https://bit.ly/4qaWlyD>

Awards and Achievements

Jet Propulsion Laboratory Strategic University Research Partnerships (JPL SURP) Award 2024-2026

New American University President's Award 2018- 2022

Dean's List 2018-2022

Sun City Elk's Most Valuable Student Scholarship 2018

Outreach

Co-Organizer, The Art of Planetary Science at the Lunar and Planetary Laboratory 2024-Present

Organizing Committee, Arizona Astrobiology Symposium 2023-2024

Miscellaneous Outreach Events: 2016-Present

Engaged in various outreach activities such as chairing sessions at conferences, participating in STEM Nights at local elementary schools, and representing our department at local events

Presentations

1. **Oral Presenter**, 247th Meeting of the American Astronomical Society January 2026

Next Generation Exoplanet Mission Simulations: Atmospheric Constraints

2. **Poster Presenter**, Jet Propulsion Laboratory Research Poster Day December 2025

Next Generation Exoplanet Mission Simulations: Atmospheric Constraints

3. **Poster Presenter**, SPIE Optics and Photonics Conference July 2025

A New Era in Exoplanet Characterization with the Habitable Worlds Observatory: Improving Parameters for Better Mission Yields

4. **Poster Presenter**, Towards the Habitable Observatory Conference July 2025

A New Era in Exoplanet Characterization with the Habitable Worlds Observatory: Improving Parameters for Better Mission Yields

5. **Poster Presenter**, Arizona Astrobiology Symposium March 2025
A New Era in Exoplanet Characterization with the Habitable Worlds Observatory: Improving Parameters for Better Mission Yields
6. **Oral Presenter**, High Contrast Imaging of Exoplanets Meeting September 2024
A New Era in Exoplanet Characterization: Yield Modeling for the Habitable Worlds Observatory
7. **Poster Presenter**, Exoplanets 5 June 2024
A New Era in Exoplanet Characterization with the Habitable Worlds Observatory
8. **Oral and Poster Presenter**, Sagan Exoplanet Summer Hybrid Workshop July 2023
Solving the Mesosphere Mystery: Modeling the Middle Atmospheres of Hot Jupiters and Beyond
https://nexsci.caltech.edu/workshop/2023/posters/30_SearraFoote.png
9. **Poster Presenter**, Emerging Researchers in Exoplanet Science May 2021
The Search for Life (<https://doi.org/10.5281/zenodo.4758546>)
10. **Poster Presenter**, School of Earth and Space Exploration Research Symposium at ASU March 2021
The Search for Life (<https://sese-research-symposium-2021.virtualpostersession.org/>)
11. **Oral Presenter**, ASU School of Earth and Space Exploration Colloquium February 2021
Achieving the Equitable Classroom Environment: Recommendations for SESE Faculty to Increase Student Retention
<https://youtu.be/WBP67zPsPbU>
12. **Oral Presenter**, Conference for Undergraduate Women in Physics January 2021
Interdisciplinarity in the Search for Life (<https://meetings.aps.org/Meeting/CUWIP21/Session/U15.8>)
13. **Poster Presenter**, Arizona Astrobiology Symposium October 2020
Innovation and Complex Life (<https://www.essoar.org/doi/10.1002/essoar.10503853.1>)
14. **Poster Presenter**, NASA TechnoClimes Workshop August 2020
Innovation and Complex Life (<https://www.essoar.org/doi/10.1002/essoar.10503853.1>)
15. **Oral Presenter**, Sundial “No Jargon” Conference at ASU April 2019, April 2020
Astrobiology
16. **Oral Presenter**, Sundial “No Jargon” Conference at ASU April 2018
Gaseous Galaxies