

Ana Glidden, PhD

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Exoplanet Atmospheres | Habitability | Planet-Star Modeling

Professional Appointments

Postdoctoral Associate Massachusetts Institute of Technology Department of Earth, Atmospheric & Planetary Sciences	Jan. 2024 - Present <i>Group: Prof. Sara Seager</i>
NSF Astronomy & Astrophysics Postdoctoral Fellow Center for Astrophysics Harvard & Smithsonian (CfA)	Beginning Sept. 2026 <i>Group: Prof. Andrew Vanderburg</i>

Education

Ph.D. in Planetary Science Massachusetts Institute of Technology, Cambridge, MA Thesis Title: Isotopes as a Tool for Exploring Exoplanet Atmospheres 🔗 , GPA: 5.0/5.0	Sept. 2018 - Feb. 2024 <i>Advisor: Prof. Sara Seager</i>
B.S. in Physics Massachusetts Institute of Technology, Cambridge, MA	Sept. 2014 - Apr. 2016
Astrophysics, English California Institute of Technology, Pasadena, CA	Oct. 2012 - Jun. 2014

Press & Media

Press Releases & News	
AAS Nova "JWST Searches for an Atmosphere on TRAPPIST-1e"	2025
NASA "NASA Webb Looks at Earth-Sized, Habitable-Zone Exoplanet TRAPPIST-1 e" Estimated reach of 1.7 billion; picked up by multiple US and international media outlets including New York Times , Scientific American , CNN , SETI , Sky & Telescope , Astrum Space , and MIT News	2025
Media Interviews	
SETI Live "TRAPPIST-1 e Revealed: Peering Inside an Exoplanet's Atmosphere"	2025

Publication Summary

Author of **47 publications**, including **7 lead author papers** with one featured in [AAS Nova](#) | [ADS library](#) [🔗](#)

Funding & Awards

\$330,000 · NSF Astronomy & Astrophysics Postdoctoral Fellowship	2026-2029
CfA AstroAI Fellowship (declined) Center for Astrophysics Harvard & Smithsonian	2026-2029
Trottier Postdoctoral Fellowship at IREx (declined) Université de Montréal	2026-2029
Eric and Wendy Schmidt AI in Science Postdoctoral Fellowship (declined) UC San Diego	2026-2028
Gordon and Betty Moore Foundation Postdoctoral Fellowship (declined) Johns Hopkins	2026-2030
Courtois Scientific Vanguard Fund Postdoctoral Fellowship (declined) Université de Montréal	2026-2029
\$1650 (total) · Four-time recipient of the School of Science Quality of Life grant MIT	2024-2026
Nova Research Highlight American Astronomical Society	2025
Spot Appreciation Award MIT	2025
\$71,020 · Robert R. Shrock Fellow MIT	2022-2023
\$84,778 · Ida M. Green Fellow MIT	2018-2019
NASA Silver Achievement Medal TESS Project Team	2018
MIT Spot Appreciation Award MIT	2017
Undergraduate Writing Prize Winner for a Research Proposal Caltech	2013
Joanna Wall Muir Summer Undergrad Research Fellowship Caltech	2013

Accepted Proposals

Co-Principal Investigator · JWST Cycle 5 AR	2026
Granulation in Color: Tracing Stellar Flicker Across Wavelengths	ID: 11527
Co-I · JWST Cycle 5 AR	2026
Characterizing Infrared Stellar Flares on TRAPPIST-1 Using Archival JWST Data	ID: 11007
Co-I · JWST Cycle 4 GO · 37.7 hrs	2025
It's (poly)Morphin' Time! Solving the quartz quandary of WASP-17b	ID: 8309
Co-I · JWST Cycle 3 GO · 134.5 hrs	2024
Using Stellar Contamination Proxy TRAPPIST-1 b to Search for an Atmosphere on TRAPPIST-1 e	ID: 6456, 9256
Co-I · JWST Cycle 2 AR	2023
Towards Solving the Stellar Inhomogeneity Contamination of Exoplanet Transmission Spectra Problem with Star Spot and Faculae Spectra	ID: 3593

Professional Development & Certifications

LEAPS Fellow LEADership and Professional Strategies & Skills MIT	2026
Research Mentoring Certificate MIT	2026
Kaufman Teaching Certificate MIT	2025
Practical HPC for SuperCloud Certificate Lincoln Laboratory MIT	2024

Previous Appointments and Experience

Software Support Engineer Massachusetts Institute of Technology	Jun. 2016 - Aug. 2018
Transiting Exoplanet Survey Satellite (TESS)	Cambridge, MA
Undergraduate Research Opportunities Program (UROP) Massachusetts Institute of Technology	2015 - 2016
Advisor: Prof. Robert Simcoe	Cambridge, MA
Undergraduate Researcher Center for Astrophysics Harvard & Smithsonian (CfA)	2014 - 2016
Advisor: Dr. Martin Elvis	Cambridge, MA
Joanna Wall Muir Summer Undergraduate Research Fellow California Institute of Technology	2013 - 2014
Advisor: Prof. Fiona Harrison	Pasadena, CA
NASA/IPAC Teacher Archive Research Program California Institute of Technology	2012 - 2013
Advisor: Dr. Varoujan Gorjian	Pasadena, CA

Professional Service & Leadership

Journal Referee <i>Nature Astronomy</i>	2026-Present
Review Panelist National Science Foundation (NSF) Astronomy Section	2026
Lead Organizer MIT Exoplanet Tea journal club	2024 - 2026
Local Organizing Committee Boston Area Planetary Science Meetings	2025 - Present
Local Organizing Committee TESS Science Conference	2024
Co-President of Student Advisory Council California Institute of Technology	2013

Public Outreach & Volunteering

Organizer MIT Exoplanet Learning Program	2022-Present
Volunteer MIT Museum	2025-2026
Volunteer Science outreach kit designer	2025
Volunteer Natural science educational non-profit	2023-Present
Volunteer Sweet Paws Rescue and Cape Ann Animal Aid, foster for 107 cats and counting	2020-Present
Mentor Graduate application mentor for prospective students	2020-2023
Mentor STEM outreach program for middle school students	2015

Teaching & Mentorship

Research Co-Mentor

M. Yunus Graduate summer research project, CfA AstroAI	2026-Present
N. Waehner Graduate summer research project, CfA AstroAI	2026-Present
Z. Collins Undergraduate research project, MIT	2025-Present
L. Sampson High school research project, MIT	2025
Guest Lecturer Extrasolar Planets: Physics and Detection Techniques, MIT (3 classes)	2023-2025
Teaching Assistant Essentials of Planetary Science, MIT	Fall 2022

Conference Posters

11. Exoplanets 6 Porto, Portugal	Jun. 2026
10. AAS Exoplanet Atmospheres Denver, CO	Mar. 2026
9. EAPS Research Day Cambridge, MA	Sept. 2025
8. Know Thy Star 2 Pasadena, CA	Feb. 2025
7. TESS Science Conference III Cambridge, MA	Jul. 2024
6. Giant Magellan Telescope Community Science Meeting Washington, DC	Sept. 2023
5. Space Telescope Science Institute Spring Symposium Baltimore, MD	May 2023
4. 233rd American Astronomical Society Meeting Seattle, WA	Jan. 2019
3. 231st American Astronomical Society Meeting National Harbor, MD	Jan. 2018
1, 2. 221st American Astronomical Society Meeting Long Beach, CA (2 team posters)	Jan. 2013

Workshop, School & Conference Participation

AstroAI Workshop CfA, Cambridge, USA	June 2026
Nautilus Space Observatory Science Workshop MIT, Cambridge, USA	May 2026
Stars & Planets Workshop MIT, Cambridge, USA	Aug. 2025
Stellar Contamination Workshop MIT, Cambridge, USA	Sept. 2024
TESS Science Conference II Online	Aug. 2021
TESS Science Conference I MIT, Cambridge, USA	Jul. 2019

Talks & Seminars

☆ indicates invited (N=3)

12. ☆ Trottier Institute for Research on Exoplanets (IREx) Université de Montréal, Canada	Feb. 2026
11. Boston Area Planetary Science Meeting Boston University, Boston, MA	Jan. 2026
10. ☆ JWST Flight Operations Team Remote	Dec. 2025
9. Exoplanet Journal Club MIT, Cambridge, MA	Sept. 2025
8. Boston Area Planetary Science Meeting Harvard University, Cambridge, MA	Jan. 2025
7. 245th American Astronomical Society Meeting National Harbor, MD	Jan. 2025
6. University of Graz REVEAL Meeting Graz, Austria	Nov. 2024
5. ☆ CfA Exoplanet Pizza Lunch CfA Harvard & Smithsonian, Cambridge, MA	Apr. 2024
4. Ph.D. Defense Talk MIT, Cambridge, MA	Dec. 2023
3. Emerging Researchers in Exoplanet Science Symposium Yale, New Haven, CT	Jun. 2023
2. Space Telescope Science Institute Spring Symposium Baltimore, MD	May 2023
1. New England Regional Quasar and AGN Meeting Dartmouth, Hanover, NH	Jun. 2015

Publications

Summary: **47 Refereed, 7 First Author, 3,000+ citations, h-index: 26** and 1 under review. See my full [ADS library](#) 

Lead Author

7. **Ana Glidden** et al. Leveraging Impact Parameter to Mitigate the Transit Light Source Effect: Early Insights from TRAPPIST-1, accepted for publication in ApJL, Aug. 18, 2026 
6. **Ana Glidden** et al. (2026) Overestimated Pressure Broadening Misleads Model Spectra in Cool M Dwarf Stars, ApJL, Volume 997, Issue 1, L8, DOI 10.3847/2041-8213/ae3137 
5. **Ana Glidden** et al. (2025) JWST-TST DREAMS: Secondary Atmosphere Constraints for the Habitable Zone Planet TRAPPIST-1e, ApJL, Volume 990, Issue 2, DOI 10.3847/2041-8213/adf62e ; **AAS Nova featured as one of the most-downloaded articles published in AAS journals in 2025**
4. **Ana Glidden** et al. (2023) Can Isotopologues be used as Biosignature Gases in Exoplanet Atmospheres? Life, 13(12), 2325, DOI 10.3390/life13122325 
3. **Ana Glidden** et al. (2022) Can Carbon Fractionation Provide Evidence for Aerial Biospheres in the Atmospheres of Temperate Sub-Neptunes? ApJ, Volume 930, 62, DOI 10.3847/1538-4357/ac625f 
2. **Ana Glidden** et al. (2016) Predominantly Low Metallicities Measured in a Stratified Sample of Lyman Limit Systems at $z=3.7$, ApJ, Volume 833, 270, DOI 10.3847/1538-4357/833/2/270 
1. **Ana Glidden** et al. (2016) A Model for Type 2 Coronal Line Forest (CLiF) AGNs, ApJ, Volume 824, 34, DOI 10.3847/0004-637X/824/1/34 

Second Author

1. Michael Koss, **Ana Glidden** et al. (2016) NuSTAR Resolves the First Dual AGN Above 10 keV in SWIFT J2028.5+2543, ApJL, Volume 824, Issue 1, DOI 10.3847/2041-8205/824/1/L4 

Co-Author

39. Natalie Allen et al., including **Ana Glidden** (2025), JWST TRAPPIST-1 e/b Program: Motivation and First Observations, AJ, Issue 2, 105, DOI 10.3847/1538-3881/ae28cb 
38. Jacob Lustig-Yaeger, et al., including **Ana Glidden** (2025), JWST-TST DREAMS: The Nightside Emission and Chemistry of WASP-17b, ApJL, Volume 994, Issue L4, DOI 10.3847/2041-8213/ae17ae 
37. Sukrit Ranjan, Nicholas F. Wogan, **Ana Glidden**, et al. (2025), The Photochemical Plausibility of Warm Exo-Titans Orbiting M-Dwarf Stars, ApJL, Volume 993, Issue L39, DOI 10.3847/2041-8213/ae1026 
36. Amélie Gressier et al., including **Ana Glidden** (2025), JWST-TST DREAMS: Sulfur dioxide in the atmosphere of the Neptune-mass planet HAT-P-26 b from NIRSpec G395H transmission spectroscopy, AJ, Volume 170, Issue 5, DOI 10.3847/1538-3881/ae0929 
35. Néstor Espinoza, Natalie H. Allen, **Ana Glidden** et al. (2025), JWST-TST DREAMS: NIRSpec/PRISM Transmission Spectroscopy of the Habitable Zone Planet TRAPPIST-1 e, ApJL, Volume 990, Issue 2, DOI 10.3847/2041-8213/adf42e 
34. Rachana Agrawal et al., including **Ana Glidden** (2025), Warm, water-depleted rocky exoplanets with surface ionic liquids: A proposed class for planetary habitability, PNAS, 122, 33, DOI 10.1073/pnas.2425520122 
33. Dana R. Louie et al., including **Ana Glidden** (2025), JWST-TST DREAMS: A Precise Water Abundance for Hot Jupiter WASP-17b from the NIRISS SOSS Transmission Spectrum, AJ, 169, 86, DOI 10.3847/1538-3881/ad9688 
32. Amélie Gressier et al., including **Ana Glidden** (2025), JWST-TST DREAMS: A Supersolar Metallicity in WASP-17 b's Dayside Atmosphere from NIRISS SOSS Eclipse Spectroscopy, AJ, Volume 169, Issue 2, DOI 10.3847/1538-3881/ad97bf 
31. Rosa E. Keers et al., including **Ana Glidden** (2024), Reliable Transmission Spectrum Extraction with a Three-Parameter Limb Darkening Law, ApJL, 977, L7, DOI: 10.3847/2041-8213/ad8b51 

30. Daniel Valentine et al., including **Ana Glidden** (2024), JWST-TST DREAMS: Nonuniform Dayside Emission for WASP-17b from MIRI/LRS, AJ, Volume 168, Issue 3, DOI 10.3847/1538-3881/ad5c61 [↗](#)
29. Jean-Baptiste Ruffio et al., including **Ana Glidden** (2024), JWST-TST High Contrast: Achieving Direct Spectroscopy of Faint Substellar Companions Next to Bright Stars with the NIRSpec Integral Field Unit, AJ, Volume 168, Issue 2, DOI 10.3847/1538-3881/ad5281 [↗](#)
28. Amaury H.M.J. Triaud et al., including **Ana Glidden** (2023), Atmospheric Carbon Depletion as a Tracer of Water Oceans and Biomass on Temperate Terrestrial Exoplanets, Nature Astronomy, DOI 10.1038/s41550-023-02157-9 [↗](#)
27. David Grant et al., including **Ana Glidden** (2023), JWST-TST DREAMS: Quartz Clouds in the Atmosphere of WASP-17b, ApJL, 956, L29, DOI 10.3847/2041-8213/acfc3b [↗](#)
26. Mattia Libralato et al., including **Ana Glidden** (2023), JWST-TST Proper Motions. I. High-precision NIRISS Calibration and Large Magellanic Cloud Kinematics, ApJ, Volume 950, Issue 2, DOI 10.3847/1538-4357/acd04f [↗](#)
25. JWST Transiting Exoplanet Community Early Release Science Team, including **Ana Glidden** (2023), Identification of Carbon Dioxide in an Exoplanet Atmosphere, Nature, 614, 649–652, DOI 10.1038/s41586-022-05269-w [↗](#)
24. Steven Giacalone et al., including **Ana Glidden** (2022), Validation of 13 Hot and Potentially Terrestrial TESS Planets, AJ, Volume 163, Issue 2, DOI 10.3847/1538-3881/ac4334 [↗](#)
23. Natalia Guerrero et al., including **Ana Glidden** (2021), The TESS Objects of Interest Catalog from the TESS Prime Mission, ApJS, Volume 254, Issue 2, DOI 10.3847/1538-4365/abefe1 [↗](#)
22. Benjamin Tofflemire et al., including **Ana Glidden** (2021), TESS Hunt for Young and Maturing Exoplanets (THYME). V. A Sub-Neptune Transiting a Young Star in a Newly Discovered 250 Myr Association, AJ, Volume 161, Issue 4, DOI 10.3847/1538-3881/abdf53 [↗](#)
21. Sara Seager et al., including **Ana Glidden** (2021), HD 219134 Revisited: Planet d Transit Upper Limit and Planet f Transit Nondetection with ASTERIA and TESS, AJ, Volume 161, Issue 3, DOI 10.3847/1538-3881/abcd3d [↗](#)
20. R. Luque et al., including **Ana Glidden** (2021), A planetary system with two transiting mini-Neptunes near the radius valley transition around the bright M dwarf TOI-776, A&A, Volume 645, id.A41, DOI 10.1051/0004-6361/202039455 [↗](#)
19. Andrew Mann et al., including **Ana Glidden** (2020), TESS Hunt for Young and Maturing Exoplanets (THYME). III. A Two-planet System in the 400 Myr Ursa Major Group, AJ, Volume 160, Issue 4, DOI 10.3847/1538-3881/abae64 [↗](#)
18. Ian Wong et al., including **Ana Glidden** (2020), Systematic Phase Curve Study of Known Transiting Systems from Year One of the TESS Mission, AJ, Volume 160, Issue 4, DOI 10.3847/1538-3881/ababad [↗](#)
17. J. Kemmer et al., including **Ana Glidden** (2020), Discovery of a hot, transiting, Earth-sized planet and a second temperate, non-transiting planet around the M4 dwarf GJ 3473 (TOI-488), A&A, Volume 642, id.A236, DOI 10.1051/0004-6361/202038967 [↗](#)
16. Andrew Vanderburg et al., including **Ana Glidden** (2020), A Giant Planet Candidate Transiting a White Dwarf, Nature, 585, 363–367, DOI 10.1038/s41586-020-2713-y [↗](#)
15. Romy Rodríguez Martínez et al., including **Ana Glidden** (2020), KELT-25 b and KELT-26 b: A Hot Jupiter and a Substellar Companion Transiting Young A Stars Observed by TESS, AJ, Volume 160, Issue 3, DOI 10.3847/1538-3881/ab9f2d [↗](#)
14. Pamela Rowden et al., including **Ana Glidden** (2020), TIC 278956474: Two Close Binaries in One Young Quadruple System Identified by TESS, AJ, Volume 160, Issue 2, DOI 10.3847/1538-3881/ab9d20 [↗](#)
13. Joshua Pepper et al., including **Ana Glidden** (2020), TESS Reveals HD 118203 b to be a Transiting Planet, AJ, Volume 159, Issue 6, DOI 10.3847/1538-3881/ab84f2 [↗](#)
12. N. Astudillo-Defru et al., including **Ana Glidden** (2020), A hot terrestrial planet orbiting the bright M dwarf L 168-9 unveiled by TESS, A&A, Volume 636, id.A58, DOI 10.1051/0004-6361/201937179 [↗](#)
11. Matías R. Díaz et al., including **Ana Glidden** (2020), TOI-132 b: A short-period planet in the Neptune desert transiting a $V = 11.3$ G-type star, MNRAS, Volume 493, Issue 1, DOI 10.1093/mnras/staa277 [↗](#)

10. Maximilian N. Günther et al., including **Ana Glidden** (2020), Stellar flares from the first TESS data release: exploring a new sample of M dwarfs, AJ, 159, 60, DOI 10.3847/1538-3881/ab5d3a [↗](#)
9. Samuel N. Quinn et al., including **Ana Glidden** (2019), Near-resonance in a System of Sub-Neptunes from TESS, AJ, 158, 177, DOI 10.3847/1538-3881/ab3f2b [↗](#)
8. Liang Yu et al., including **Ana Glidden** (2019), Identifying Exoplanets with Deep Learning. III. Automated Triage and Vetting of TESS Candidates, AJ, Volume 158, Issue 1, DOI 10.3847/1538-3881/ab21d6 [↗](#)
7. Xavier Dumusque et al., including **Ana Glidden** (2019), Hot, rocky and warm, puffy super-Earths orbiting TOI-402 (HD 15337), A&A, Volume 627, id.A43, DOI 10.1051/0004-6361/201935457 [↗](#)
6. L. G. Bouma et al., including **Ana Glidden** (2019), WASP-4b Arrived Early for the TESS Mission, AJ, Volume 157, Issue 6, DOI 10.3847/1538-3881/ab189f [↗](#)
5. Joseph E. Rodriguez et al., including **Ana Glidden** (2019), An Eccentric Massive Jupiter Orbiting a Subgiant on a 9.5-day Period Discovered in the Transiting Exoplanet Survey Satellite Full Frame Images, AJ, Volume 157, Issue 5, DOI 10.3847/1538-3881/ab11d9 [↗](#)
4. Avi Shporer et al., including **Ana Glidden** (2019), TESS Full Orbital Phase Curve of the WASP-18b System, AJ, Volume 157, Issue 5, DOI 10.3847/1538-3881/ab0f96 [↗](#)
3. Roland Vanderspek et al., including **Ana Glidden** (2019), TESS Discovery of an ultra-short-period planet around the nearby M dwarf LHS 3844, ApJL, 871, L24, DOI 10.3847/2041-8213/aafb7a [↗](#)
2. Chelsea Huang et al., including **Ana Glidden** (2018), TESS Discovery of a Transiting Super-Earth in the pi Mensae System, ApJL, 868, L39, DOI 10.3847/2041-8213/aaef91 [↗](#)
1. Marvin Rose et al., including **Ana Glidden** (2015), Intermediate Inclinations of Type 2 Coronal-Line Forest AGN, MNRASL, Volume 451, Issue 1, DOI 10.1093/mnrasl/slv056 [↗](#)