Malena Rice

CONTACT INFORMATION	Yale Department of Astronomy 219 Prospect St. W. New Haven, CT 06511	Email: malena.rice@yale.edu Veb: www.astro.yale.edu/malenarice
RESEARCH INTERESTS	Orbital architectures; exoplanet demographics; pla system dynamics; exoplanet detection and charact	
APPOINTMENTS	Assistant Professor Department of Astronomy, Yale University	2023-present
	Research Faculty Department of Astronomy, Yale University	2022-2023
	51 Pegasi b Postdoctoral Fellow Department of Physics, Massachusetts Institute of	2022-2023 Technology
	NSF Graduate Research Fellow Department of Astronomy, Yale University	2017-2022
EDUCATION	Yale University, New Haven, CT Ph.D. in Astronomy with Distinction (Februar Dissertation: A Dynamical Synthesis of Planarism Advisor: Greg Laughlin M.S., M.Phil. in Astronomy (May 2020)	· · · · · · · · · · · · · · · · · · ·
	University of California, Berkeley, Berkeley, G. B.A. in Physics; B.A. in Astrophysics with H. Distinction in General Scholarship Honors Thesis: Debris Disk Analysis with the Advisor: Gaspard Duchêne	ligh Honors (May 2017)
FELLOWSHIPS & AWARDS	 2024 Scialog Fellow: Early Science with the LSS Yale Poorvu Center Rosenkranz Award for Peda Yale Faculty of Arts and Sciences (FAS) Dean's 2023 Rising Talent: Women's Forum for the Eco 2023 Scialog Fellow: Signatures of Life in the Ur Forbes 30 Under 30 (Science) IAU PhD Prize (Division F: Planetary Systems at 15 pegasi b Postdoctoral Fellowship (\$385k) NASA Hubble Fellowship Program - Sagan Fellow NSF Graduate Research Fellowship (\$102k) P.E.O. Scholar Award (\$20k) Yale 3-Minute Thesis Competition "Best in STE DDA/AAS Raynor L. Duncombe Student Resea Pierazzo International Student Travel Award (\$20k) NASA CT Space Grant Graduate Research Fellowship Award UC Berkeley Regents' and Chancellor's Scholars 	gogical Advancement (\$10k) 2024 Leadership Fellowship 2023 momy & Society 2023 miverse 2023 and Bioastronomy) 2022 2022-2023 whip (declined) 2022-2022 2017-2022 2017-2022 2017-2022 2017-2022 2021-2022 2021-2022 2021-2022 2021-2022 2021-2022 2021-2022 2021-2022 2021-2022 2021-2022 2021-2022 2021-2022 2021-2022 2021-2022 2021-2022 2021-2022 2021-2022 2021-2022 2021-2022

	 UC Berkeley Leadership Award (\$2k) UC Berkeley Regents' and Chancellor's Research Fellowship Society of Physics Students (SPS) Travel Award UCL International Students Dean's Summer Student Scholarship (£5k) NASA CA Space Grant Undergraduate Research Fellowship UC Berkeley Academic Opportunity Fund Award Berkeley Physics Undergraduate Research Scholarship 2016, 25 2016 2016 2016 2017 2018 2018 2019 2019 2010 2010 2011 2011 2012 2015 2016
LARGE GRANTS AWARDED	NASA XRP 2023 (CoI Rice, PI Songhu Wang; \$91.5k to Yale) 2024-2027 3D Geometries of Exoplanetary Systems: Mapping Eccentricity, Obliquity, and the Inner-Outer Planet Relation
	Heising-Simons Foundation Research Grant (PI Rice; \$128.3k) 2023-2028 Toward Cross-Disciplinary Exoplanet Studies
	Scialog Research Grant: Signatures of Life in the Universe (PI Rice; \$55k) 2023-2025 Investigating the Biological Potential of Moons in the Uranus System
	TESS GI Proposal, Cycle 6 Large Program (PI Rice; \$250k) 2023-2024 Expanding Outer Solar System Science With TESS
	Oracle for Research Project Award (PI Rice; \$86k in Cloud Credits) 2023-2024 Unveiling the Mysteries of the Solar System with the NASA TESS Mission
SMALL GRANTS AWARDED	 Yale Univ. Art Gallery – Poorvu Center Curriculum Dev. Grant AAS International Travel Grant DPS Education and Outreach Grant (awarded for astro[sound]bites) 2023-2024 2025-2024 2020, 2027
NATIONAL LEADERSHIP	NASA HWO Demographics and Architectures Sub-WG Co-Chair NASA ExoExplorers Steering Committee Member ExoPAG Representative, Cross-PAG SAG "New Great Observatories" Executive Committee Member, NASA ExoPAG TESS Users' Committee (TUC) Member, NASA TESS Mission 2023-2026 2023-2026
PUBLICATIONS (*group member)	 First-author: 10. Rice, M., *Gerbig, K., & Vanderburg, A. 2024 AJ 167, 126. The Orbita Geometries and Stellar Obliquities of Exoplanet-Hosting Multi-Star Systems 9. Rice, M., Wang, XY., Wang, S. et al. 2023 AJ 166, 266. Evidence for Low Level Dynamical Excitation in Near-Resonant Exoplanet Systems
	8. Rice, M., Wang, S., *Gerbig, K., Wang, XY. et al. 2023 AJ 165, 65. The Orbital Architecture of Qatar-6: A Fully Aligned 3-Body System?
	7. Rice, M., Wang, S., Wang, XY., Isaacson, H., Howard, A. et al. 2022 AJ 164 104. A Tendency Toward Alignment in Single-Star Warm-Jupiter Systems
	6. Rice, M., Wang, S., & Laughlin, G. 2022 ApJL 926, L17. Origins of Hot Jupiters from the Stellar Obliquity Distribution
	 Rice, M., Wang, S., Howard, A., Isaacson, H., Dai, F. et al. 2021 AJ 162, 182 SOLES I: The Spin-Orbit Alignment of K2-140 b
	4 Rice M & Laughlin G 2020 PSI 1 81 Exploring Trans-Neptunian Space

Plane

HIRES Spectra with The Cannon

from 'Oumuamua and DSHARP

with TESS: A Targeted Search for Planet Nine and Distant TNOs in the Galactic

3. Rice, M. & Brewer, J. 2020 ApJ 898, 119. Stellar Characterization of Keck

2. Rice, M. & Laughlin, G. 2019 ApJL 844, L22. Hidden Planets: Implications

Rice, M. & Laughlin, G. 2019 AJ 158, 19. The Case for a Large-Scale Occultation Network

Second- or third-author:

- 13. Wang, X.-Y., **Rice**, M., Wang, S., et al. 2024 (in review).
- 12. *Gerbig, K., Rice, M., Zanazzi, J.J., Christian, S., & Vanderburg, A. 2024 (in review).
- 11. Radzom, B., Dong, J., Rice, M., et al. 2024 (in review, AJ). Evidence for Primordial Alignment: Insights from Stellar Obliquity Measurements for Compact Sub-Saturn Systems
- 10. *Hu, Q., Rice, M., Wang, X.-Y., et al. 2024 AJ 167, 175. The PFS view of TOI-677 b: A Spin-Orbit Aligned Warm Jupiter in a Dynamically Hot System
- 9. *Gussman, J. & Rice, M. 2024 ApJL 961, L24. Inferring Stellar Parameters from Iodine-Imprinted Keck/HIRES Spectra with Machine Learning
- 8. Lubin, J., Wang, X.-Y., Rice, M., et al. 2023 ApJL 959, L5. TOI-1670 c, a 40-day Orbital Period Warm Jupiter in a Compact System, is Well-Aligned
- 7. *Wright, J., Rice, M., Wang, X.-Y., et al. 2023 AJ 166, 217. SOLES VII: The Spin-Orbit Alignment of WASP-106 b, a Warm Jupiter Along the Kraft Break
- 6. Dong, J., Wang, S., **Rice, M.**, et al. 2023 ApJL 951, L29. TOI-1859b: A 64-Day Warm Jupiter on an Eccentric, Misaligned Orbit
- Hixenbaugh, K., Wang, X.-Y., Rice, M., & Wang, S. 2023 ApJL 949, L35. The Spin-Orbit Misalignment of TOI-1842b: The First Measurement of the Rossiter-McLaughlin Effect for a Warm Sub-Saturn around a Massive Star
- 4. Wu, D.-H., Rice, M., & Wang, S. 2023 AJ 165, 171. Evidence for Hidden Nearby Companions to Hot Jupiters
- 3. Wang, X.-Y., Rice, M., et al. 2022 ApJL 926, L8. The Aligned Orbit of WASP-148b, the Only Known Hot Jupiter with a Nearby Warm Jupiter Companion, from NEID and HIRES
- 2. Duchêne, G., **Rice, M.**, et al. 2020 AJ 159, 251. The Gemini Planet Imager View of the HD 32297 Debris Disk
- 1. Edwards, B., **Rice**, **M.**, Zingales, T., Tessenyi, M., Waldmann, I., Tinetti, G. et al. 2018 Experimental Astronomy 47, 29. Exoplanet Spectroscopy and Photometry with the Twinkle Space Telescope

Other co-author:

- 48. Saunders, N., Grunblatt, S.K., Chontos, A., et al. (incl **Rice, M.**) 2024 (in review).
- 47. Pidhorodetska, D., Kane, S.R., Gilbert, E.A., et al. (incl **Rice, M.**) 2024 (in review).
- 46. Algasim, A., Grieves, N., Rosario, N., et al. (incl Rice, M.) 2024 (in review).
- 45. Xiao, G.-Y., Feng, F., Shectman, S.A., et al. (incl. Rice, M.) 2024 (in review).
- 44. Radzom, B.T., Wang, S., Pu, B., Rice, M. & Wu, D.-H. 2024 (in review).
- 43. Polanski, A.S., Lubin, J., Beard, C., et al. (incl. **Rice, M.**) 2024 (in press, ApJS). The TESS-Keck Survey XX: 15 New TESS Planets and a Uniform RV Analysis of all Survey Targets
- 42. Grunblatt, S.K., Saunders, N., Huber, D., et al. (incl. **Rice, M.**) 2024 (in press, AJ). TESS Giants Transiting Giants. IV. A low-density hot Neptune orbiting a red giant star

- 41. Battley, M.P., Collins, K.A., Ulmer-Moll, S., et al. (incl. **Rice, M.**) 2024 (in press, A&A). NGTS-30 b/TOI-4862 b: An ~1 Gyr Old 98-day Transiting Warm Jupiter
- Lange, S., Akana Murphy, J.M., Batalha, N.M., et al. (incl. Rice, M.) 2024 (in press, AJ). The TESS-Keck Survey. VII. A Superdense Sub-Neptune Orbiting TOI-1824
- 39. Hord, B.J., Kempton, E. M.-R., Mikal-Evans, T., et al. (incl. **Rice, M.**) 2024 AJ 167, 233. Identification of the Top TESS Objects of Interest for Atmospheric Characterization of Transiting Exoplanets with JWST
- 38. Desai, A., Turtelboom, E., Dressing, C., et al. (incl. **Rice, M.**) 2024 AJ 167, 194. The TESS-Keck Survey. XVIII.: A Sub-Neptune and Spurious Long-Period Signal in the TOI-1751 System
- 37. Thomas, C.A., Weiss, L.M., Isaacson, H., et al. (incl. **Rice, M.**) 2024 AJ 167, 160. A Tale of Two Peas-In-A-Pod: The Kepler-323 and Kepler-104 Systems
- 36. Rubenzahl, R.A., Dai, F., Howard, A., et al. (incl. **Rice, M.**) 2024 AJ 167, 153. The TESS-Keck Survey. XII. A Dense 1.8 R⊕ Ultra-Short-Period Planet Possibly Clinging to a High-Mean-Molecular-Weight Atmosphere After the First Gigayear
- 35. Hom, J., Patience, J., Chen, C.H., et al. (incl. **Rice, M.**) 2024 MNRAS 528, 6959. A Uniform Analysis of Debris Disks with the Gemini Planet Imager II: Constraints on Dust Density Distribution Using Empirically-Informed Scattering Phase Functions
- Dalba, P.A., Kane, S.R., Isaacson, H., et al. (incl. Rice, M.) 2024 ApJS 271,
 Giant Outer Transiting Exoplanet Mass (GOT 'EM) Survey. IV. Long-term Doppler Spectroscopy for 11 Stars Thought to Host Cool Giant Exoplanets
- 33. Crotts, K.A., Matthews, B.C., Duchêne, G., et al. (incl. **Rice, M.**) 2024 ApJ 961, 245. A Uniform Analysis of Debris Disks with the Gemini Planet Imager I: An Empirical Search for Perturbations from Planetary Companions in Polarized Light Images
- 32. Householder, A., Weiss, L., Owen, J.E., et al. (incl. **Rice, M.**) 2024 AJ 167, 84. Investigating the Atmospheric Mass Loss of the Kepler-105 Planets Straddling the Radius Gap
- 31. Beard, C., Robertson, P., Dai, F., et al. (incl **Rice, M.**) 2024 AJ 167, 70. The TESS-Keck Survey XVI: Precise Mass Measurements in a Young, High Multiplicity Transiting Planet System using Radial Velocities and Transit Timing Variations
- 30. Thompson, W., Lawrence, J., Blakely, D., et al. (incl. **Rice, M.**) 2023 AJ 166, 164. Octofitter: Fast, Flexible, and Accurate Orbit Modelling to Detect Exoplanets
- 29. Akana Murphy, J.M., Batalha, N.M., Scarsdale, N., et al. (incl. **Rice, M.**) 2023 AJ 166, 153. The TESS-Keck Survey. XVI. Mass Measurements for 12 Planets in Eight Systems
- MacDougall, M., Petigura, E., Gilbert, G., et al. (incl. Rice, M.) 2023 AJ 166,
 The TESS-Keck Survey. XV. Precise Properties of 108 TESS Planets and Their Host Stars
- 27. Hon, M., Huber, D., Rui, N.Z., et al. (incl. **Rice, M.**) 2023 Nature 618, 917. A Close–in Jovian Planet Orbiting a Helium-Burning Red Giant Star

- Zink, J.K., Hardegree-Ullman, K.H., Christiansen, J.L., et al. (incl. Rice, M.)
 2023 AJ 165, 262. Scaling K2. VI. Reduced Small Planet Occurrence in High Galactic Amplitude Stars
- Zhang, S.Y., Duchêne, G., Ansdell, M., et al. (incl. Rice, M.) 2023 AJ 165,
 Testing the Interaction Between a Substellar Companion and a Debris Disk in the HR 2562 System
- Brinkman, C.L., Weiss, L.M., Dai, F., et al. (incl. Rice, M.) 2023 AJ 165,
 TOI-561 b: A Low Density Ultra-Short Period "Rocky" Planet around a Metal-Poor Star
- 23. Grunblatt, S.K., Saunders, N., Hattori, S., et al. (incl. **Rice, M.**) 2023 AJ 165, 44. TESS Giants Transiting Giants III: An Eccentric Warm Jupiter Supports a Period-Eccentricity Relation for Giant Planets Transiting Evolved Stars
- 22. Yang, Y., Yan, H., Wang, L, et al. (incl. **Rice, M.**) 2022 ApJ 939, 18. Spectropolarimetry of the Thermonuclear Supernova SN 2021rhu High Calcium Polarization 79 Days After Peak Luminosity
- MacDougall, M., Petigura, E., Fetherolf, T., et al. (incl. Rice, M.) 2022 AJ 164, 97. The TESS-Keck Survey. XIII. An Eccentric Hot Neptune with a Similar-Mass Outer Companion around TOI-1272
- Polanski, A.S., Crossfield, I.J.M., Howard, A.W., Isaacson, H., & Rice, M. 2022 RNAAS 6, 155. Chemical Abundances for 25 JWST Exoplanet Host Stars with KeckSpec
- 19. LIFE Collaboration et al. (incl. **Rice, M.**) 2022 A&A 664, A21. Large Interferometer for Exoplanets (LIFE): I. Improved Exoplanet Detection Yield Estimates for a Large Mid-Infrared Space-Interferometer Mission
- 18. Turtelboom, E.V., Weiss, L.M., Dressing, C.D., et al. (incl. **Rice, M.**) 2022 AJ 163, 293. The TESS-Keck Survey. XI. Mass Measurements for Four Transiting sub-Neptunes orbiting K dwarf TOI 1246
- 17. Johnson, M.C., David, T.J., Petigura, E.K., et al. (incl. **Rice, M.**) 2022 AJ 163, 247. An Aligned Orbit for the Young Planet V1298 Tau b
- Worku, K., Wang, S., Burt, J., Rice, M., et al. 2022 AJ 163, 158. Revisiting the Full Sets of Orbital Parameters for the XO-3 System: No Evidence for Temporal Variation of the Spin-Orbit Angle
- Grunblatt, S.K., Saunders, N., Sun, M., et al. (incl. Rice, M.) 2022 AJ 163,
 TESS Giants Transiting Giants (GTG) II: The Hottest Jupiters Orbiting Evolved Stars
- 14. Lubin, J., Van Zandt, J., Holcomb, R., et al. (incl. **Rice, M.**) 2022 AJ 163, 101. TESS-Keck Survey IX: Masses of Three Sub-Neptunes Orbiting HD 191939 and the Discovery of a Warm Jovian Plus a Distant Sub-Stellar Companion
- Dalba, P.A., Kane, S.R., Dragomir, D., et al. (incl. Rice, M.) 2022 AJ 163, 61.
 The TESS-Keck Survey. VIII. Confirmation of a Transiting Giant Planet on an Eccentric 261-day Orbit with the Automated Planet Finder Telescope
- MacDougall, M.G., Petigura, E.A., Angelo, I., et al. (incl. Rice, M.) 2021 AJ 162, 265. The TESS-Keck Survey. VI. Two Eccentric sub-Neptunes Orbiting HIP-97166
- Llop-Sayson, J., Wang, J., Ruffio, J.-B., et al. (incl. Rice, M.) 2021 AJ 162, 181.
 Constraining the Orbit of ε Eridani b with Radial Velocities, Hipparcos IAD-Gaia DR2 Astrometry, and Multi-epoch Vortex Coronagraphy Upper Limits

- Dai, F., Howard, A.W., Batalha, N.M., et al. (incl. Rice, M.) 2021 AJ 162, 62.
 TKS X: Confirmation of TOI-1444b and a Comparative Analysis of the Ultrashort-period Planets with Hot Neptunes
- 9. Wang, S., Winn, J.N., Addison, B.C., Dai, F., **Rice, M.**, et al. 2021 AJ 162, 50. The Aligned Orbit of the Eccentric Warm Jupiter K2-232 b
- 8. Wang, X.-Y., Wang, Y.-H., Wang, S., Wu, Z.-Y., **Rice, M.**, et al. 2021 ApJS 255, 15. Transiting Exoplanet Monitoring Project (TEMP). VI. The Homogeneous Refinement of System Parameters for 39 Transiting Hot Jupiters with 127 New Light Curves
- 7. Crotts, K., Matthews, B., Esposito, T., et al. (incl. **Rice, M.**) 2021 ApJ 915, 58. A Deep Polarimetric Study of the Asymmetrical Debris Disk HD 106906
- Kosiarek, M., Crossfield, I., Berardo, D., et al. (incl. Rice, M.) 2021 AJ 161,
 Physical Parameters of the Multi-Planet Systems HD 106315 and GJ 9827
- Esposito, T., Kalas, P., Fitzgerald, M.P., et al. (incl. Rice, M.) 2020 AJ 160, 24. Debris Disk Results from the Gemini Planet Imager Exoplanet Survey's Polarimetric Imaging Campaign
- Blunt, S., Wang, J., Angelo, I., Ngo, H., et al. (incl. Rice, M.) 2020 AJ 159, 89. orbitize!: A Comprehensive Orbit-Fitting Software Package for the High-Contrast Imaging Community
- Nixon, C.A., Ansty, T.M., Lombardo, N.A., Bjoraker, G.L., Achterberg, R.K., Annex, A., Rice, M., et al. 2019 ApJS 244, 14. Cassini Composite Infrared Spectrometer (CIRS) Observations of Titan 2004-2017
- Ren, B., Choquet, É., Perrin, M.D., Duchêne, G., Debes, J.H., Pueyo, L., Rice, M. et. al. 2019 ApJ 882, 64. An Exo-Kuiper Belt with an Extended Halo around HD 191089 in Scattered Light
- Esposito, T.M., Duchêne, G., Kalas, P., Rice, M., Choquet, É., Ren, B., Perrin, M.D. et al. 2018 AJ 156, 2. Direct Imaging of the HD 35841 Debris Disk: A Polarized Dust Ring from Gemini Planet Imager and an Outer Halo from HST/STIS

RESEARCH ADVISING

Joseph Hand, University of Kansas (undergraduate)	June 2024 - August 2024
Kyra Bettwy, Yale University (undergraduate)	May 2024 - July 2024
Kenny Phan, Yale University (undergraduate)	May 2024 - July 2024
Emily Sanzone, Yale University (undergraduate)	May 2024 - July 2024
Lucas Zimmerman, Yale University (undergraduate)	May 2024 - July 2024
Thiago Ferreira, Yale University (graduate)	Aug 2023-
Yurou (Nina) Liu, Yale University (undergraduate)	June 2023-
Ben Cassese, Columbia University (graduate)	Sep 2022-
Konstantin Gerbig, Yale University (graduate)	Aug 2022-
Hanna Adamski, Yale University (undergraduate)	Jan 2021-
Qingru Hu, Tsinghua University (undergraduate)	March 2023 - March 2024
Jude Gussman, Indiana University (undergraduate/postb	oacc) Sep 2020 - Jan 2024
Jeremiah Reynoso, Morehouse College (undergraduate)	June 2023 - Oct 2023
Josette Wright, Indiana University (postbacc)	July 2023 - Oct 2023
Mahderekal Regassa, Wellesley College (undergraduate)	Oct 2022 - Dec 2022
Ella Cassidy, Wellesley College (undergraduate)	Oct 2022 - Dec 2022

	Divya Kumari, Hillsborough High School	March 2022 - July 2022
	Rachel Feng, Central Bucks High School	Jun 2021 - Sep 2021
	Kaitlyn Sarkissian, Royal High School	Jun 2021 - Aug 2021
	Alexandra Cruz, Saint Pedro Poveda College (high school)	Jun 2020 - Aug 2020
SELECT NON-RESEARCH	Simran Dhillon, Royal High School Mentorship on preparation for an astrophysics career	2022-2023
MENTORSHIP	Denyz Melchor, UCLA Mentored through DDA Mentoring Program	2022-2023
	Grace Burton, Yale University Mentored through Yale's Astro Sibs program	2021-2022
	Kidus Dawit, High School (now undergraduate, Yale Univer- Mentored through Yale Young Global Scholars	rsity) 2021
	Abby Mintz , Yale University (now PhD student, Princeton Mentored through Yale's Astro Sibs program	University) 2018-2019
SEMINARS & COLLOQUIA	Weizmann Institute Astronomy & Astrophysics Seminar (Reh Canadian Inst. for Theoretical Astrophysics Seminar (Toront University of Maine Physics and Astronomy Colloquium (Ore Columbia University Astronomy Colloquium (New York, NY Observatório Nacional (Brazil) Astrophysics Seminar (webinar Indiana University Astronomy Colloquium (Bloomington, IN Five College Astronomy Department Colloquium (Mebinar) University of Washington Bothell Colloquium (webinar) University of Cambridge Exoplanet Seminar (webinar) MIT EAPS Department Lecture Series (Cambridge, MA) McGill Space Institute Astronomy Seminar (Montreal – Cane Harvard CfA Exoplanet Pizza Lunch (Cambridge, MA) University College London Special Seminar (London – Englan Harvard CfA Exoplanet Pizza Lunch (Cambridge, MA) Yale Astronomy Colloquium (webinar) Ohio State Exoplanet Talk Series (webinar) Caltech Planetary Science Seminar (Pasadena, CA) UCLA Tuesday Lunch Talk (webinar) University of Michigan Star and Planet Formation Seminar (Penn State CEHW Seminar (webinar) MIT Brown Bag Seminar (Cambridge, MA) Princeton Exoplanet Discussion Group Seminar (Princeton, Muniv. of Pennsylvania Astronomy Seminar (Philadelphia, PA) UIUC Center for Astrophysical Surveys (CAPS) Seminar (webinar) Harvard ITC Colloquium (webinar) STScI Exoplanet, Star, and Planet Formation Seminar (webinar) MIT TESS Science Group Seminar (webinar) MIT TESS Science Group Seminar (webinar) CCA Stars & Exoplanets Meeting (webinar) CCA Stars & Exoplanets Meeting (webinar)	o - Canada) April 2024 ono, ME) March 2024 ono, ME) March 2024 ono, ME) March 2023 or) May 2023 or) March 2023 MA) Dec 2022 Nov 2022 Nov 2022 Nov 2022 orda) Nov 2022 orda) Oct 2022 March 2022 Jan 2022 Jan 2022 Jan 2022 Dec 2021 Nov 2021 oct 2021 oct 2021 oct 2021 Sep 2021 VJ) Sep 2021 ordan or
	San Francisco State University Colloquium (San Francisco, C UC Berkeley CIPS Seminar (Berkeley, CA) Keck Observatory Seminar (Waimea, HI) NASA Astrobiology Institute Extended Science Talk (webina	Feb 2020 Nov 2019
	University of Hong Kong Seminar (Pok Fu Lam - Hong Kong	

	University of Chicago Exoplanet Seminar (Chicago, IL) Yale Exoplanet Seminar (New Haven, CT – USA)	April 2019 March 2019
	UC Berkeley Astronomy Lunch Talk (Berkeley, CA – USA)	April 2017
INVITED	Chen Research Group Meeting (Florida Institute of Technology)	July 2023
JOURNAL CLUB/RESEARCH GROUP PRESENTATIONS	Virtual Solar System Minor Bodies Journal Club Paper: Exploring Trans-Neptunian Space with TESS: A Targeted Search for and Distant TNOs in the Galactic Plane (Rice & Laughlin 2020)	Nov 2020 or Planet Nine
	Princeton Institute for Advanced Study Astro-Coffee Paper: Exploring Trans-Neptunian Space with TESS: A Targeted Search for and Distant TNOs in the Galactic Plane (Rice & Laughlin 2020)	Nov 2020 or Planet Nine
CONFERENCE RESEARCH TALKS	*IAU General Assembly, Division F Days (Cape Town, South Africa) **AAS DDA Meeting #55 (Toronto, Canada) Futnome Solar Systems V (Christophyrob, New Zooland)	Aug 2024 May 2024 March 2024
(*INVITED; **REVIEW)	Extreme Solar Systems V (Christchurch, New Zealand) *Small Bodies Assessment Group Meeting # 30 (Tucson, AZ) AAS General Meeting #243 (New Orleans, LA)	Feb 2024 Jan 2024
	**Open Problems in the Astrophysics of Gas Giants (Puerto Natales, Ch *51 Pegasi b Summit 2023 (San Francisco, CA) AAS DDA Meeting #54 (East Lansing, MI)	Aug 2023 May 2023
	AAS General Meeting #241 (Seattle, WA) *AAS #241 – Science from the TESS Extended Mission (Seattle, WA)	Jan 2023 Jan 2023
	*Lowell Discovery Telescope Partners Meeting (Boston, MA) *TESS Science Team Meeting #29 (Cambridge, MA) *51 Pegasi b Summit 2022 (San Francisco, CA)	Nov 2022 Oct 2022 Aug 2022
	*CT Exoplanet Picnic 2022 (Middletown, CT) AAS General Meeting #240 (Pasadena, CA)	Aug 2022 June 2022
	Exoplanets IV (Las Vegas, NV) AAS DDA Meeting #53 (New York, NY) *Science from the TESS Extended Mission (virtual)	May 2022 April 2022 Feb 2022
	*Twinkle and the Next Generation of Exoplanet Scientists (virtual) Bay Area Exoplanets #28 (virtual)	Sep 2021 Sep 2021
	2021 Keck Science Meeting (San Diego, CA) TESS Science Conference II (virtual) AAS DDA Meeting #52 (virtual)	Sep 2021 Aug 2021 May 2021
	AAS General Meeting #237 (virtual) DPS 52 Conference (virtual)	Jan 2021 Oct 2020
	Europlanet Science Congress (EPSC) 2020 (virtual) AAS DDA Meeting #51 (virtual) Binary Asteroids V (Fort Collins, CO)	Sep 2020 Aug 2020 Sep 2019
	Extreme Solar Systems IV (Reykjavík, Iceland) Great Barriers in Planet Formation Disc-ussion (Melbourne, Australia) Expressing Personaleurs in Excellence V (Ithere, NV)	Aug 2019 July 2019 June 2019
	Emerging Researchers in Exoplanet Science V (Ithaca, NY) Large Surveys with Small Telescopes (Bamberg, Germany) Boston Area Exoplanets #5 (Boston, MA) AAS General Meeting #233 (Seattle, WA)	March 2019 Jan 2019 Jan 2019
RESEARCH	Exoplanets III (virtual)	July 2020
POSTERS	Asia Oceania Geosciences Society Meeting 2019 (Singapore) Great Barriers in Planet Formation (Palm Cove, Australia) 2018 International HPC Summer School (Ostrava, Czech Republic)	July 2019 July 2019 July 2018
	Exoplanets II (Cambridge, UK) Emerging Researchers in Exoplanet Science IV (State College, PA)	July 2018 July 2018

AAS General Meeting #231 (National Harbor, MD)	Jan 2018
2017 BPURS Poster Presentation (Berkeley, CA)	March 2017
AAS General Meeting $\#229$ (Grapevine, TX)	Jan 2017
Conference for Undergraduate Women in Physics (Los Angeles, CA)	Jan 2017
DPS 48 / EPSC 11 Conference (Pasadena, CA)	Oct 2016
Exoplanets I (Davos, Switzerland)	July 2016
UC Berkeley Undergrad. Astr. Research Showcase (Berkeley, CA)	April 2016
2016 BPURS Poster Presentation (Berkeley, CA)	March 2016
NASA GSFC Poster Session (Greenbelt, Maryland)	July 2015

AWARDED TELESCOPE TIME

Keck Observatory (KPF) – 6 nights (PI), 3 nights (CoI) IfA 2023A, Yale 2023B-Keck Observatory (HIRES) – 10 nights (PI), 8 nights (CoI) Yale 2019B-2024A CTIO (Blanco/DECam) – 3 nights (CoI) NOIRLab 2024A JWST (NIRCam) - 7.42 hours (CoI) JWST Cycle 2 Magellan Observatory (PFS) – 5 nights (PI) MIT 2022B-2023B Palomar Observatory (WaSP) – 9 nights (PI) Yale 2023B, 2024B Gemini Observatory (Subaru) – 1 night (CoI) NOIRLab 2023B FCAD 2023BPerkins Telescope Observatory – 4 nights (CoI) WIYN Observatory (NEID) - 2 nights (PI) NNExplore 2023A Lick Observatory (Nickel) – 1 night (CoI) UCSC 2021A

OBSERVING EXPERIENCE

- Hale Telescope (5.1 m), WaSP Palomar Observatory, California: 5 nights
- Magellan II (6.5 m), PFS Las Campanas Observatory, Chile: 8 nights
- Keck I (10 m), HIRES W.M. Keck Observatory, Hawaii: 53 nights
- Nickel Telescope (1 m) Lick Observatory, California: 1 night
- Leuschner Telescope (30 inch) Leuschner Observatory, California: 1 night

TEACHING APPOINTMENTS

ASTR 575/375, Yale University (Instructor of record)

Spring 2025

 \Rightarrow Exoplanets; graduate-level overview of the physics of planet formation and evolution.

ASTR 050, Yale University (Instructor of record)

Spring 2024

⇒ The Ethics of Space Exploration; newly designed freshman seminar examining the ethical implications of space exploration, aerospace endeavors, and astronomical research.

ASTR 255/PHYS 295, Yale University (Instructor of record)

Fall 2023, 2024

⇒ Research Methods in Astrophysics; designed for astronomy and astrophysics majors. Provides an overview of instrumentation, spectroscopy, photometry, radio astronomy, and relevant tools in Python.

Yale Young Global Scholars (Instructor of record) Summer 2022, Summer 2021

⇒ Program for high school students to explore university-level topics. Served as the instructor of record for custom-designed astrophysics seminars as part of the Innovations in Science & Technology track. Led discussions, simulations, and mentoring groups.

ASTR 105, Yale University (Graduate Teaching Fellow) Spring 2018, Fall 2018

⇒ Introductory order-of-magnitude class, led by Prof. Greg Laughlin.

ASTR 130, Yale University (Graduate Teaching Fellow)

Fall 2017

⇒ Introductory exoplanets/astrobiology class, led by Prof. Debra Fischer.

ASTR 120, UC Berkeley (Undergraduate Student Instructor)

Fall 2016

⇒ Upper-division optical and infrared astronomy laboratory, led by Dr. Gaspard Duchêne.

ScoreBeyond Tutor

2016-2018

⇒ SAT/ACT tutoring with *ScoreBeyond*; developed lesson plans and guided students through problems and test-taking skills. 600+ tutoring hours completed.

Academic Tutor - Independent

2011-2018

⇒ Volunteer and paid positions tutoring students in a variety of topics.

INVITED
CLASSROOM/
WORKSHOP
LECTURES

Yale University (New Haven, CT)

July 2024

Workshop: Yale Young Global Scholars (high school level) Lecture: Frontiers in Exoplanetary System Studies

Yale University (New Haven, CT)

July 2023, 2024

 $Workshop:\ Yale\ Summer\ Program\ in\ Astrophysics\ (high\ school\ level)$

Lecture: Frontiers in Exoplanetary System Studies

Lake Como School of Advanced Studies (Como, Italy)

June 2023

 $Workshop:\ Brave\ New\ Worlds\ II-\ Understanding\ the\ Planets\ of\ Other\ Stars$

Lecture Series: Orbital Architectures of Planetary Systems

Williams College Winter Study (Williamstown, MA)

Jan 2024, Jan 2023

Course: Exoplanets and the Search for Life

Lecture: Exoplanet Orbits: Implications for Habitability

Ohio State University (virtual)

Sep 2022

Course: Topics in Astrophysics (ASTRON 2895) Lecture: An Overview of the Planet Nine Hypothesis

SELECTED OUTREACH

Smithsonian Journeys Expert – Total Solar Eclipse Tour

April 2024

Accompanied the Astronomy & Nature in the Texas Hill Country Solar Eclipse Tour; delivered two 1-hour talks and participated on an eclipse panel as part of the Smithsonian Journeys program.

Co-author, Astronomy as a Field: A Guide for Aspiring Astrophysicists Dec 2023 Guide for women and girls interested in astronomy, developed as part of the SIRIUS B VERGE program to support aspiring astronomers from underrepresented backgrounds.

Astro[sound]bites Podcast - Co-Founder/Co-Host

2019-2022

The official audio spinoff of the Astrobites blog. Graduate students discuss recently published astronomy research results and life in academia. Co-host on 56 episodes (Episodes 0 through 55).

Astronomy on Tap New Haven - Head Coordinator

2018-2021

Primary organizer of the New Haven branch of Astronomy on Tap, an outreach program designed to engage the local community by conveying current astronomy research through informal talks.

Yale Girls' Science Investigations - Regular Volunteer

2017-2021

Program designed to empower local middle schools girls to develop skills for success in STEM through hands-on science experiments. Events $\sim 4x/year$.

Open Labs at Yale - Regular Volunteer

2017-2021

Outreach group that organizes "Science Cafés", virtual *Exploring Science* evenings, and other educational events geared towards local middle school students.

Leitner Family Observatory and Planetarium - Presenter

2017-2020

Regular presenter for weekly public planetarium shows at Yale's campus planetarium, the LFOP.

INVITED OUTREACH & SERVICE TALKS

SIRIUS B VERGE Exoplanets Guest Lecture (1 hr)	Jan 2024
Mexborough & Swinton Astronomical Society Lecture Series (1 hr)	$\mathrm{Jan}\ 2024$
Pathways to Science New Student Orientation (5 min; 900+ audience)	Sep 2023
International School of Boston Guest Lecture (1 hr)	April 2023
The Garden: "The Bright Night Sky" series (50 min)	Oct 2022
Westchester Amateur Astronomers Lecture Series (1 hr)	Oct 2022
Yale/NASA Symposium: Astrobiology & Human Exploration (20 min)	April 2022
Yale Scientific Magazine Careers Talk (30 min)	April 2022
Bridgeport Public Schools Guest Lecture (1 hr)	March 2022
Ask-An-Astronomer: Planet Nine Edition (1 hr)	Dec 2021
Leitner Family Observatory & Planetarium Guest Lecture (1 hr)	May 2021
Indiana University Astronomy Club (1 hr)	Feb 2021

Astronomy on Tap State College (30 min)	Jan 2021
Royal High School Visiting Speaker (30 min)	Dec 2020
Lakeside School Women in STEM Lecture Series (20 min)	Nov 2020
Las Cruces Public Schools Scientist Highlight (1 hr)	Oct 2020
Yale Exploring Science (30 min)	June 2020
MathCounts Girls' Science Day (30 min; keynote speaker)	Dec 2018
Yale Open Labs (30 min)	Nov 2018
Astronomy on Tap New Haven (30 min)	Sep 2018

EDUCATION & OUTREACH CONFERENCE CONTRIBUTIONS

Workshop for Astronomy Beyond the Common Senses (online)

Conference Proceedings: Astronomy for Accessibility and Inclusion. Astro/sound/bites: An audio resource for informal education (Saunders, W.R., Rice, M., & Gagliano, A.)

AAS General Meeting #237 (online)

Aug 2022

iPoster Plus (poster + oral presentation). Astro/sound/bites: A new audio resource for conveying recent astronomy research

DPS 52 Conference (online)

Oral presentation. Astro/sound/bites: A new audio resource for conveying recent astronomy research

EDUCATION & OUTREACH CERTIFICATIONS

• Kavli Foundation SciComm Essentials Certificate

- Yale Poorvu Center Public Communication Certificate 2021 2018
- Yale Certificate of College Teaching Preparation (CCTP)

DEPARTMENT & UNIVERSITY LEADERSHIP

Yale Equity-Minded Teaching Seminar

2023-2024

2022

Competitively selected for participation in the inaugural Yale Equity-Minded Teaching Seminar for faculty members across the university, as the sole representative from the physical sciences.

Yale Astronomy Time Allocation Committee (TAC)

2023-2024

Ranked proposals for observing time allocated by Yale (for the Palomar and Keck Observatories).

Co-Director of Graduate Admissions (DGA), Yale Astronomy

2023-2024

MIT/Magellan Time Allocation Committee (TAC)

2022-2023

Ranked proposals for observing time allocated by MIT for the Magellan telescopes at Las Campanas Observatory.

McDougal/Poorvu Graduate Teaching Fellow

2018-2022

Developed and led 36 pedagogy workshops for Yale graduate students and postdocs. Read and discussed recent literature in pedagogical studies; provided constructive feedback for instructors.

Yale ACDC – Co-Founder/Board Member

Founded the Yale Astronomy Climate and Diversity Committee (ACDC) to support inclusivity and address structural climate-related concerns in the department. Co-lead of the Sub-Committee for Undergraduate-Based Affairs (SCUBA).

Fall Teaching at Yale Day Coordinator

Fall 2021

Primary organizer of the Fall 2021 Teaching at Yale Day for incoming Yale graduate instructors.

Granville Academy Leadership Team

Co-organizer and co-lead of the week-long Granville Academy program of diversity and inclusion workshops designed for summer undergraduate research students in physics and astronomy.

Yale Spring Teaching Forum Coordinator

Member of the core leadership team organizing the 2021 Yale Spring Teaching Forum, "Looking Back and Pushing Forward: Reflecting on Remote Learning at Yale".

Yale Exoplanets & Stars Seminar Coordinator

2020-2021

McDougal/Poorvu Graduate Writing Fellow

2020-2021

For 1.5 years, served as a scientific writing consultant for graduate students and postdocs at the Yale Graduate Writing Lab. Ran oral and written communication workshops, led NSF GRFP peer review groups, and conducted one-on-one consulting sessions for abstracts, grant/fellowship proposals, and other academic writing.

Yale Astro Sibs Program – Co-Founder/Coordinator

2018-202

Developed and led a mentorship program between graduate students/postdocs and undergraduates in the Yale Astronomy Department.

Yale Poorvu Center Student Advisory Committee Member

2019-2020

UC Berkeley Undergrad. Astronomy Society – Founder/Head Coordinator 2015-2017

Founded and developed the undergraduate society for astrophysics majors at UC Berkeley. Provided professional development events and networking opportunities for all undergraduate astronomy majors. Programs included an annual UC Berkeley undergraduate astronomy research showcase, bi-weekly undergraduate socials, monthly departmental socials, graduate school/internship application workshops, and visiting scientist events.

UC Berkeley Study Abroad Student Ambassador

2015-2017

Advocated study abroad programs with a focus on STEM majors and international collaboration.

UC Berkeley Astronomy Mentoring Program - Undergraduate Coordinator 2016-2017

Developed and led a mentorship program between graduate students/postdocs and undergraduates in the UC Berkeley Astronomy Department.

UC Berkeley AstroCDS - Undergraduate Coordinator

2016-2017

Revived and led the UC Berkeley Astronomy Career Development Seminar (AstroCDS) program, which organizes informal talks and dinners with Berkeley Astronomy PhDs in industry.

PROFESSIONAL SERVICE: REVIEWS Reviewer, NSF NOIRLab Time Allocation Committee (2 cycles)

Reviewer, NSF Astronomy and Astrophysics Research Grants (AAG)

Reviewer, Yale Undergraduate Admissions Committee

Exoplanets and Disks Discussion Panelist, JWST

Reviewer, Yale Center for Astronomy & Astrophysics Postdoctoral Fellowship

Reviewer, Yale Marshall/Mitchell/Rhodes Scholarship Committee

Reviewer, NASA Postdoctoral Program

Panel Chair, NASA FINESST Program (Planetary Science Division)

Reviewer, NASA FINESST Program (Astrophysics Division) Reviewer, NSF A&A Postdoctoral Fellowship (AAPF) Program

Reviewer, NASA Astrophysics: Pioneers Program

Reviewer, Yale Undergraduate Research Journal (YURJ)

Reviewer, Nat. Fund for Sci. and Tech. Dev., Chile (FONDECYT)

Judge, AAS Chambliss Poster Competition

Executive Secretary, NASA Exoplanets Research Program (XRP)

PROFESSION	łl
SERVICE:	
JOURNALS	

Review Editor, Frontiers in Astronomy and Space Sciences - Exoplanets
Guest Editor, Nature Scientific Reports Collection on Exoplanets
2022Editorial Board Member, Nature Scientific Reports
2022-

Reviewer for PNAS, PASP, Nat. Astron., PSJ, ApJS, A&A, MNRAS, P&SS 2021-

CONFERENCE LEADERSHIP

TESS Science Conference III – Scientific Organizing Committee 2024
Building the AstroCodEx – Hack Day Conference Co-Organizer 2024

New meeting to build effective activities to teach astronomy research methods in the classroom.

New York Area Exoplanets Meeting (NYAEM) – Scientific Organizing Committee 2024 Co-developed meeting concept; first iteration planned for May 2024

	DDA Special Session – Co-organizer (joint with Songhu Wang) Session title: On the Formation and Dynamical Evolution of Hot Jupiters	2024
INVITED PANELS	Yale McDougal Graduate Teaching Fellows Tenure-Track Career Panel Women's Forum USA: Women's Ladder to Success in STEM	April 2024 March 2023
	NSF A&A Postdoctoral Fellows Symposium: Mentoring Students Panel	Jan 2023
	P.E.O. Panel Discussion: Today's Women, Today's Challenges	April 2022
	Yale 3-Minute Thesis Competition: How to Present Engagingly	Jan 2022
	Yale Young Global Scholars: Womxn in STEM	July 2021
	Yale Astronomy Summer Undergraduate Program: Graduate School Pane	l July 2020
	Wellesley College: Graduate School Panel	May 2020
	Yale Graduate Writing Lab: Writing a Prospectus in the Sciences	Feb 2020
	Yale SACNAS/STARS II: Applying to Graduate School	Oct 2019
PROFESSIONAL SOCIETIES	American Astronomical Society (AAS; divisions DPS and DDA) Yale Women in Physics (WiP) American Physical Society (APS) UC Berkeley Society of Women in the Physical Sciences (SWPS) UC Berkeley Society of Physics Students (SPS) UC Berkeley Regents' and Chancellor's Scholars Association (RCSA)	2016- 2019-2022 2016-2017 2014-2017 2014-2017 2013-2017

SELECTED MEDIA *Nature Masterclasses* Writing a Research Paper: 2nd Edition (2024): Par-COVERAGE ticipated as a featured expert offering insights throughout a five-module online course.

TESS Shift-Stacking Survey (Rice & Laughlin 2020) featured in Scientific American, National Geographic, Space.com, EarthSky, Inverse, Scientias.nl, Yale News, DPS 2020 press conference.

Interstellar Object Origins (Rice & Laughlin 2019b) featured in New York Times, Washington Post, Discover Magazine, PBS Nova, Nature, CNN, Scientific American, Yale News.