Sarah C. Millholland

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Research Interests

Exoplanet detection & characterization; demographics & orbital architectures of planetary systems; planetary dynamics and celestial mechanics; planetary atmospheres

Education

Yale University, New Haven, CT July 2016 – May 2020
Ph.D. in Astronomy, May 2020
Thesis: Data-Driven Dynamics of Planetary Systems
Advisor: Prof. Greg Laughlin
M.S., M.Phil. in Astronomy, May 2018

UC Santa Cruz, Santa Cruz, CA Sept. 2015 – June 2016
Pursuit of Ph.D. in Astronomy & Astrophysics
(transferred after completing first year)

University of Saint Thomas, Saint Paul, MN Sept. 2011 – May 2015
B.S. in Physics; **B.A.** in Mathematics, May 2015
Summa Cum Laude

Positions

Assistant Professor July 2022 – present
Department of Physics, Massachusetts Institute of Technology

NASA Sagan Fellow July 2020 – June 2022
Department of Astrophysical Sciences, Princeton University
Supervisor: Prof. Joshua Winn

NSF Graduate Research Fellow 2017 – 2020
Department of Astronomy, Yale University
Advisor: Prof. Greg Laughlin

Graduate Student Researcher 2015 – 2017
Department of Astronomy, Yale University (2016 – 2017)
Department of Astronomy & Astrophysics, UCSC (2015 – 2016)
Advisor: Prof. Greg Laughlin

Awards

- Vera Rubin Early Career Prize of the Division of Dynamical Astronomy 2024
- Brouwer Prize ("awarded to Yale astronomy graduates for contributions of unusual merit to any branch of astronomy") 2021
- Lyman Spitzer Jr. Postdoctoral Fellowship, Princeton University 2020 – 2022
- NASA Hubble Fellowship Program (NHFP) Sagan Fellowship 2020 – 2022
- Tinsley Award ("best paper by a Yale astronomy graduate student"; for Millholland & Laughlin 2017b) 2018
- DDA/AAS Raynor L. Duncombe Prize for Student Research 2018
- Yale Conference Travel Fellowship 2017
- NSF Graduate Research Fellowship 2017 – 2020
- UCSC Regents Fellowship 2015
- NSF Graduate Research Fellowship Honorable Mention 2015
- Barry M. Goldwater Scholarship (national science scholarship) 2014 – 2015
- Smith Academic Scholarship 2014 – 2015

- Danger Mathematics Scholarship — 2013 – 2014, 2014 – 2015
- UST Collaborative Inquiry Research Scholarship — 2014
- Walczak Mathematics Scholarship — 2013 – 2014
- B. John Barry Academic Scholarship — 2012 – 2013
- UST Endowed Scholarship — 2011 – 2015

Teaching

- Classical Mechanics III (8.09/8.309, graduate level), MIT — Spring 2024
- Physics I: Classical Mechanics (8.012), MIT — Fall 2022, Fall 2023
- Physics II: Electricity and Magnetism (8.02), MIT — Spring 2023
- Teaching Fellow, Planets and Stars, Yale University — Spring 2017
- Teaching Fellow, Physics of Planetary Systems, UCSC — Spring 2016
- Teaching Fellow, Overview of the Universe, UCSC — Fall 2016
- Teaching Assistant, Modern Physics, UST — Springs 2014, 2015
- Observatory Lab Instructor, Introduction to Astronomy, UST and the UST Observatory — Fall 2012 – Spring 2015

Advising

Postdoctoral Researchers

- Timothy Hallatt, MIT postdoctoral researcher, Fall 2024 – present

Graduate students

- Ritika Sethi, MIT graduate student, Fall 2023 – present
- Emma Louden, Yale graduate student, Fall 2022 – present
- Anna Simpson, MIT graduate student, Fall 2023 – Spring 2024

Undergraduate students

- Sidhant Suar, Fall 2023 – present
- Haedam Im, MIT, Fall 2022 – present
- DJ Liveoak, MIT, Summer 2023 – present
- Brennen Black, MIT, Spring 2023 – present
- Orion Foo, MIT, Fall 2022 – Fall 2023
- Teo Lara, MIT, Spring 2023 – Summer 2023
- Jan Toomlaid, MIT, Spring 2023 – Summer 2023
- Felicia Xiao, MIT, Summer 2023
- Nicole Sobski, Wellesley, Summer 2022 – Spring 2023
- Nicole Gountanis, Princeton, Fall 2021
- Joshua Zou, Princeton, Summer 2021
- David Jensen, Princeton, Fall 2020
- Samantha Berek, Yale, 2018 – 2020

Refereed Publications

First author (underline=student supervised by S.C.M.)

16. **Millholland, S.**, MacLeod, M., & Xiao, F. "Empirical Constraints on Tidal Dissipation in Exoplanet Host Stars." 2024, ApJ, in review
15. **Millholland, S.**, Lara, T., & Toomlaid, J. "Spin Dynamics of Planets in Resonant Chains." 2024, ApJ, 961, 203
14. **Millholland, S.**, He, M., & Zink, J. "Edge-of-the-Multis: Evidence for a Transition in the Outer Architectures of Compact Multi-Planet Systems." 2022, AJ, 164, 72
13. **Millholland, S.** & Winn, J. "Split Peas in a Pod: Intra-System Uniformity of Super-Earths and Sub-Neptunes." 2021, ApJL, 920, L34

12. **Millholland, S.**, He, M., Ford, E., et al. "Evidence for a Non-Dichotomous Solution to the Kepler Dichotomy: Mutual Inclinations of Kepler Planetary Systems from Transit Duration Variations." 2021, AJ, 162, 166
11. **Millholland, S.** & Spalding, C. "Formation of Ultra-Short-Period Planets by Obliquity-Driven Tidal Runaway." 2020, ApJ, 905, 71
10. **Millholland, S.**, Petigura, E., & Batygin, K. "Tidal Inflation Reconciles Low-Density Sub-Saturns with Core Accretion." 2020, ApJ, 897, 7
9. **Millholland, S.** "Tidally Induced Radius Inflation of Sub-Neptunes." 2019, ApJ, 886, 72
8. **Millholland, S.** & Batygin, K. "Excitation of Planetary Obliquities Through Planet-Disk Interactions." 2019, ApJ, 876, 119
7. **Millholland, S.** & Laughlin, G. "Obliquity-Driven Sculpting of Exoplanetary Systems." 2019, Nature Astronomy, 3, 424
6. **Millholland, S.** & Laughlin, G. "Obliquity Tides May Drive WASP-12b's Rapid Orbital Decay." 2018, ApJL, 869, L15
5. **Millholland, S.**, Laughlin, G., Teske, J., et al. "New Constraints on Gliese 876 – Exemplar of Mean-Motion Resonance." 2018, AJ, 155, 106
4. **Millholland, S.**, Wang, S., & Laughlin, G. "*Kepler* Multi-Planet Systems Exhibit Unexpected Intra-system Uniformity in Mass and Radius." 2017, ApJL, 849, L33
3. **Millholland, S.** & Laughlin, G. "Supervised Learning Detection of Sixty Non-Transiting Hot Jupiter Candidates." 2017, AJ, 154, 83
2. **Millholland, S.** & Laughlin, G. "Constraints on Planet Nine's Orbit and Sky Position within a Framework of Mean-motion Resonances." 2017, AJ, 153, 91
1. **Millholland, S.**, Wang, S., & Laughlin, G. "On the Detection of Non-Transiting Hot Jupiters in Multiple Planet Systems." 2016, ApJL, 823, L7

Second author (underline=student supervised by S.C.M.)

9. Liveoak, D. & **Millholland, S.** "Formation of Close-in Neptunes Around Low-Mass Stars Through Breaking Resonant Chains." 2024, ApJ, in press
8. Louden, E. & **Millholland, S.** "Polar Neptunes are Stable to Tides." 2024, ApJ, in press
7. Gupta, A., **Millholland, S.**, Im, H., et al. "A hot Jupiter progenitor on a super-eccentric, retrograde orbit." 2024, Nature, 632, 50
6. Sobski, N. & **Millholland, S.** "Can Cold Jupiters Sculpt the Edge-of-the-Multis?" 2023, ApJ, 954, 137
5. Weiss, L., **Millholland, S.**, Petigura, E., Adams, F., Batygin, K., Bloch, A., & Mordasini, C. "Architectures of Compact Multi-planet Systems: Diversity and Uniformity." 2023, Protostars and Planets VII book chapter, arXiv: 2203.10076
4. Jensen, D. & **Millholland, S.** "Inferred Properties of Planets in Mean-Motion Resonances are Biased by Measurement Noise." 2022, AJ, 164, 144
3. Lillo-Box, J., **Millholland, S.**, & Laughlin, G. "Follow-up of Non-Transiting Planets Detected by Kepler: Confirmation of Three Hot Jupiters and Validation of Three Other Planets." 2021, A&A, 654, 9
2. Spalding, C. & **Millholland, S.** "Stellar Oblateness versus Distant Giants in Exciting *Kepler* Planet Mutual Inclinations." 2020, AJ, 160, 105
1. Adams, A. D., **Millholland, S.**, & Laughlin, G. "Signatures of Obliquity in Thermal Phase Curves of Hot Jupiters." 2019, AJ, 158, 3

Other co-author (underline=student supervised by S.C.M.)

19. Kunimoto, M., Zifan, L., **Millholland, S.**, et al. "Two Earth-size Planets and an Earth-size Candidate Transiting the Nearby Star HD 101581." 2024, AAS Journals, in review
18. Lu, T., An, Q., Li, G., **Millholland, S.**, Brandt, G. M., Brandt, T. D. "Planet-Planet Scattering and ZLK Migration: The Dynamical History of HAT-P-11." 2024, ApJ, in review
17. Dai, F., Goldberg, M., Batygin, K., et al. including **Millholland, S.** [14 total] "The Prevalence of Resonance Among Young, Close-in Planets." 2024, AJ, in press
16. Burt, J., Hooton, M., Mamajek, E., Barragán, O, **Millholland, S.**, et al. [15 total] "TOI-1685 b is a Hot Rocky Super-Earth: Updates to the Stellar and Planet Parameters of a Popular JWST Cycle 2 Target." 2024, ApJL, 971, L12
15. Leleu, A., Delisle, J., Burn, R., Izidoro, A., Udry, S., Dumusque, X., Lovis, C., **Millholland, S.**, et al. [15 total] "Resonant Sub-Neptunes are Puffier." 2024, A&A, 687, L1
14. Burdge, K., El-Badry, K., Kara, E., Canizares, C., Chakrabarty, D., Frebel, A., **Millholland, S.**, Rappaport, S., Simcoe, R., Vanderburg, A. "The black hole low mass X-ray binary V404 Cygni is part of a wide hierarchical triple, and formed without a kick." 2024, Nature, in review
13. Fairnington, T., Nabbie, E., Huang, C., Zhou, G., Foo, O., **Millholland, S.**, et al. "TOI-5126: A hot super-Neptune and warm Neptune pair discovered by TESS and CHEOPS." 2024, MNRAS, 527, 8768
12. Louden, E., Laughlin, G., & **Millholland, S.** "Evidence for Two Dissipation Regimes Among the Short-Period Exoplanets." 2023, ApJL, 958, L21
11. Murgas, F., Castro-González, A., Pallé, Pozuelos, F., **Millholland, S.**, Foo, O., et al. "Two super-Earths at the edge of the habitable zone of the nearby M dwarf TOI-2095." 2023, A&A, 677, A182
10. Lu, T., Rein, H., Tamayo, D., Hadden, S., Mardling, R., **Millholland, S.**, & Laughlin, G. "Self-Consistent Spin, Tidal and Dynamical Equations of Motion in the `REBOUNDx` Framework." 2023, ApJ, 948, 41
9. Bozhilov, V., Antonova, D., Hobson, M., Brahm, R., Jordán, A., et al. including **Millholland, S.** "A 2:1 Mean-Motion Resonance Super-Jovian Pair Revealed by TESS, FEROS, and HARPS." 2023, ApJL, 946, L36
8. Zhao, L., Kunovac, V., Brewer, J., Llama, J., **Millholland, S.**, et al. [11 total] "Measured Spin-Orbit Alignment of Ultra-Short Period Super-Earth 55 Cancri e." 2023, Nature Astronomy, 7, 198
7. Stefansson, G., Mahadevan, S., Petrovich, C., Winn, J., Kanodia, S., **Millholland, S.**, et al. [37 total] "The Warm Neptune GJ 3470b has a Polar Orbit." 2022, ApJL, 931, L15
6. Azari, A., Biersteker, J., Dewey, R., Doran, G., et al. including **Millholland, S.** [16 total] "Integrating Machine Learning for Planetary Science: Perspectives for the Next Decade." 2021, BAAS, 53, 128 (white paper)
5. Davis, A., Wang, S., Jones, M., Eastman, J., Günther, M., Stassun, K., et al. including **Millholland, S.** [51 total] "TOI 564 b and TOI 905 b: Grazing and Fully Transiting Hot Jupiters Discovered by TESS." 2020, AJ, 160, 229
4. Bryan, M., Chiang, E., Bowler, B. P., Morley, C. V, **Millholland, S.**, Blunt, S., Ashok, K. B., Nielsen, E., Ngo, H., Mawet, D., Knutson, H. A. "Obliquity Constraints on an Extrasolar Planetary-Mass Companion." 2020, AJ, 159, 181

3. Wang, S., Jones, M., Shporer, A., Fulton, B. J., Paredes, L. A., Trifonov, T., Kossakowski, D., Eastman, J., Redfield, S., Günther, M. N., Kreidberg, L., Huang, C. X., **Millholland, S.**, et al. [60 total] "HD 202772Ab: A Transiting Hot Jupiter Around a Bright, Mildly Evolved Star in a Visual Binary Discovered by TESS." 2019, AJ, 157, 51

2. Becker, J. C., Khain, T., Hamilton, S. J., Adams, F. C., Gerdes, D. W., Zullo, L., Franson, K., **Millholland, S.**, et al. [66 total] "Discovery and Dynamical Analysis of an Extreme Trans-Neptunian Object with a High Orbital Inclination." 2018, AJ, 156, 81

1. Janvier, M., Savcheva, A., Pariat, E., Tassev, S., **Millholland, S.**, Bommier, V., McCauley, P., McKillop, S., Dougan, F. "Evolution of Flare Ribbons, Electric Currents and Quasi-separatrix Layers During an X-class Flare." 2016, A&A, 591, A141

Seminars & Colloquia (*=invited)

- * Astrophysics Seminar, Institute for Advanced Study, November 2024
- * Astrophysics Seminar, Southwest Research Institute, October 2024
- * Physics Colloquium, Colby College, October 2024
- * Five College Astronomy Department Colloquium, University of Massachusetts Amherst, March 2024
- * Physics Colloquium, Clark University, March 2024
- * Exoplanet Seminar, University of Geneva, Sept. 2023
- * Astronomy Colloquium, The Ohio State University, April 2023
- * Physics & Applied Math Seminar, University of St. Thomas, March 2023
- * Institute for Theory and Computation Colloquium, Center for Astrophysics — Harvard & Smithsonian, Nov. 2022
- * Planetary Lunch Seminar, Massachusetts Institute of Technology, Sept. 2022
- * Astrophysics Colloquium, Chalmers University of Technology, May 2022
- * Astronomy Colloquium, University of Wisconsin-Madison, March 2022
- * Stellar Astrophysics Center Seminar, Aarhus University, November 2021
- * Astronomy Colloquium, California Institute of Technology, October 2021
- * Astronomy Colloquium, Columbia University, October 2021
- * Astronomy Colloquium, University of Rochester, September 2021
- * Astrophysics Seminar, Astrophysical Fluid Dynamics Group at DAMTP, University of Cambridge, May 2021
- * Astronomy Colloquium, University of California Los Angeles, March 2021
- * Center for Integrative Planetary Science Seminar, University of California Berkeley, March 2021
- * Exoplanets and Protoplanetary Disks Research Group Talk, Imperial College London, March 2021
- * Canadian Institute for Theoretical Astrophysics Seminar, University of Toronto, March 2021
- * Center for Astrophysical Sciences Seminar, Johns Hopkins University, Feb. 2021
- * Astronomy Seminar, Carnegie Earth and Planets Laboratory, Feb. 2021
- * Astrophysics Colloquium, Massachusetts Institute of Technology, Feb. 2021
- * Colloquium, Center for Computational Astrophysics, Flatiron Institute, Oct. 2020
- * JILA Astrophysics Seminar, University of Colorado Boulder, Oct. 2020
- * JPL Exoplanet Journal Club Talk, NASA Jet Propulsion Laboratory, Aug. 2020
- * Special Seminar, Climate and Space Sciences and Engineering, University of Michigan, Feb. 2020
- * Cosmos Seminar, The University of Texas at Austin, Oct. 2019

- * Institute for Theory and Computation Seminar, Center for Astrophysics — Harvard & Smithsonian, Oct. 2019
- Friday Lunch Time Astrophysics Seminar, University of California Santa Cruz, Oct. 2019
- Tuesday Lunch Talk, University of California Los Angeles, Oct. 2019
- Astronomy Tea Talk, California Institute of Technology, Oct. 2019
- Exoplanet Tea Talk, Massachusetts Institute of Technology, Sept. 2019
- * Planetary Lunch Seminar, Cornell University, Sept. 2019
- Astronomy Seminar, Columbia University, Sept. 2019
- Star and Planet Formation Seminar, University of Michigan, March 2019
- Exoplanet Lunch Seminar, Princeton University, Feb. 2019
- * Center for Exoplanets & Habitable Worlds Seminar, Penn State University, Feb. 2019
- * Extrasolar Planets Seminar, NASA Goddard Space Flight Center, April 2018
- * Planetary Science Seminar, California Institute of Technology, Dec. 2017
- * Stars & Planets Seminar, Harvard-Smithsonian Center for Astrophysics, Nov. 2017
- Exoplanet Pizza Lunch, Harvard-Smithsonian Center for Astrophysics, March 2017

Conference Talks (*=invited)

- Exoplanets V, Leiden, Netherlands, June 2024
- * Invited talk, NASA SEEC Symposium: Pathways to Characterizing Non-Transiting Planets, NASA GSFC, April 2024
- Extreme Solar Systems V, Christchurch, New Zealand, March 2024
- * Invited review, Division of Dynamical Astronomy Meeting, East Lansing, MI, May 2023
- * Invited review, Protostars & Planets VII (review of PPVII Chapter 24), Kyoto, Japan, April 2023
- AAS Meeting #241, Seattle, WA, January 2023
- Exoplanets IV, Las Vegas, NV, May 2022
- Division of Dynamical Astronomy Meeting, Flatiron Institute, New York, NY, April 2022
- 2021 NHFP Symposium, virtual conference, October 2021
- AAS Meeting #238, virtual conference, June 2021
- Division of Dynamical Astronomy Meeting, virtual conference, May 2021
- PLATO ESP Workshop on Planetary Interiors and System Architectures, virtual conference, November 2020
- 2020 NHFP Symposium, virtual conference, September 2020
- Division of Dynamical Astronomy Meeting, virtual conference, August 2020
- Boston Area Exoplanet Science Meeting #7, virtual conference, April 2020
- AAS Meeting #235, Honolulu, HI, January 2020
- Extreme Solar Systems IV, Reykjavik, Iceland, August 2019
- Emerging Researchers in Exoplanet Science (ERES) V, Cornell University, Ithaca, NY, June 2019
- Division of Dynamical Astronomy Meeting, Boulder, CO, June 2019
- Kepler & K2 Science Conference V, Glendale, CA, March 2019
- Boston Area Exoplanet Science Meeting, Boston University, Boston, MA, Jan. 2019
- 2018 CT Exoplanets Meeting, Wesleyan University, Middletown, CT, July 2018
- Emerging Researchers in Exoplanet Science (ERES) IV, Pennsylvania State University, State College, PA, June 2018
- Planet Nine Workshop, California Institute of Technology, Pasadena, CA, May 2018
- Division of Dynamical Astronomy Meeting, San Jose, CA, April 2018

- Numerical Integration Methods in Planetary Science, University of Toronto at Scarborough, Toronto, Ontario, August 2017
- Numerical Integration Methods in Planetary Science, University of Toronto at Scarborough, Toronto, Ontario, August 2017
- Kepler & K2 Science Conference IV, NASA Ames Research Center, Moffett Field, CA, June 2017
- Emerging Researchers in Exoplanet Science (ERES) III, Yale University, New Haven, CT, June 2017
- 2017 CT Exoplanets Meeting, Wesleyan University, Middletown, CT, May 2017
- 2017 Aspen Winter Conference, Formation and Dynamical Evolution of Exoplanets, Aspen, CO, March 2017

Web Blog Publications

- "Tilting Planets and Sculpting Orbits", invited guest post by S. Millholland at *Nature Research Behind the Paper*, March 2019

Professional Activities & Service

Reviews

- Reviewer for Nature, Nature Astronomy, AJ, ApJ, ApJL, PSJ, A&A, MNRAS, PASP
- Panel reviewer, NSF (AAG, CAREER)
- Panel reviewer, NASA (XRP, TESS GI, HST TAC)
- External reviewer, Canada-France-Hawaii Telescope
- External reviewer, OPTICON Telescope Transnational Access

Organizing Committees

- Executive Committee, Division of Dynamical Astronomy 2021 – 2024
- SOC, Exoplanets V 2023 – 2024
- SOC, Extreme Solar Systems V 2023 – 2024
- SOC, DDA 54th Annual Meeting 2022 – 2023
- SOC, DDA 53rd Annual Meeting 2021 – 2022
- Organizer, Princeton Planetary Dynamics Reading Group 2020 – 2022
- SOC, Emerging Researchers in Exoplanet Science (ERES) Conference III (Yale), V (Cornell) and VI (virtual) 2017, 2019, 2021

MIT Physics Departmental Service

- Physics Values Committee 2023 – present
- Graduate Admissions Committee 2024
- MSRP Admissions Committee 2023
- Grader for Classical Mechanics Written Exam 2023, 2024
- Physics Core Requirements Review Ad Hoc Committee 2023
- Kavli Postdoctoral Fellowship Review Committee 2023
- Torres Postdoctoral Fellowship Review Committee 2023
- 51 Pegasi b Fellowship Review Committee 2023, 2024
- Organizing Committee, Prospective Graduate Student Open House 2023
- Astro Oral Exam Committee 2023

Diversity & Inclusion Involvement

- Committee member, MIT Physics Values Committee 2023 –
- Co-organizer, Seminar Series on Equity, Diversity and Inclusion for the Departments of Physics and Astrophysics at Princeton 2020 – 2021
- Committee member, Improving equity and inclusion in graduate admissions at the Department of Astrophysics at Princeton 2020

- Organizer, Panel Discussion at Emerging Researchers in Exoplanet Science V: "Diversity & Inclusion in Astronomy" 2019

Professional Affiliations & Mentorship

- Member, American Astronomical Society
- Member, Division of Dynamical Astronomy of the AAS
- Mentor, Goldwater Scholar Community Mentorship Program 2021 – 2023
- Mentor, DDA Mentorship Program 2021 – 2023
- Mentor, Princeton Astrophysics Mentorship Program 2021 – 2022

Public Talks and Articles

- Amateur Telescope Makers of Boston, November 2024 (talk)
- Skyscrapers Astronomical Society of Rhode Island, August 2023 (talk)
- Warrior-Scholar Project, MIT, July & August 2023 (lectures)
- Assembly Speaker Series, Commonwealth School, April 2023 (talk)
- STEAM Speaker Series, International School of Boston, March 2023 (talk)
- Astronomy Club, International School of Boston, Jan. 2023 (talk)
- Aldrich Astronomical Society Meeting, Dec. 2022 (talk)
- Yale Young Global Scholars Research Showcase (http://globalscholars.yale.edu), Yale University, June & July 2022 (virtual talks)
- Exploring Science Program, Yale University, August 2020 (virtual talk)
- Yale Young Global Scholars Research Showcase, Yale University, July 2019 (talk)
- Institute for Learning in Retirement, Albertus Magnus College, October 2018 (talk)
- Yale Young Global Scholars Research Showcase, Yale University, June & July 2018 (talks)
- Leitner Family Observatory & Planetarium, February 2018 (talk)
- Pathways Summer Scholars Program Science Café (http://pathwayssummerscholars.yale.edu), Yale University, July 2017 (talk)
- Yale Young Global Scholars Research Showcase, Yale University, July 2017 (talk)
- Pathways Summer Scholars Enrichment Workshop, Yale University, July 2017 (talk & workshop)
- Yale Open Labs Science Café (http://theopenlabs.org), Yale University, April 2017 (talk)
- 9th Annual Women in Leadership Conference, Yale University, February 2017 (invited panel member)
- "The Search for Planet Nine", a publication for the Hartford Courant News in Education series, *Science Matters!*, January 2017 (article)
- LAMAT REU Program, UC Santa Cruz, July 2016 (talk)
- "Reading Scientific Literature", LAMAT REU Program, UC Santa Cruz, June 2016 (workshop)
- Public Observing Night, University of St. Thomas Observatory, March 2013 (talk & public observing)
- Minnesota Optical Society Meeting, March 2013 (talk)

Selected Outreach

- Over 20 public talks to date (see list above)
- Physics lecturer, Warrior-Scholar Project (https://www.warrior-scholar.org/) 2023
- Guest speaker, MIT Physics First-Year Graduate Student Seminar 2023
- Yale Open Labs (http://theopenlabs.org) 2016 – 2018
  - Committee chair for Science Café Talk Series 2017 – 2018
  - Executive board member 2016 – 2017
- Organizer of Yale Young Global Scholars Program visits 2017, 2018

to the Astro. Department (http://globalscholars.yale.edu)

- Public Night Volunteer, Lick Observatory — Summer 2016
- Astronomy Public Night Leader, UST Observatory — 2012 – 2015

Selected Media Coverage

- **Hot Jupiter progenitor** (Gupta, Millholland, et al. 2024) featured in EarthSky, Phys.org, MIT News, and others.
- **Tilted planets** (Millholland & Laughlin 2019) featured in Scientific American, Sky & Telescope, Popular Science, Science Daily, Live Science, Space.com, Yale News.
- **Intra-system uniformity** (Millholland et al. 2017) featured in AAS Nova, Nature Research Highlights.
- **Machine learning detection of hot Jupiters** (Millholland & Laughlin 2017b) featured in National Geographic, Sky & Telescope, FOX 61 Connecticut News (television), University of St. Thomas News, Yale News.
- **Featured subject** for University of St. Thomas television and online advertisements