

# 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	<b>Yale University, New Haven, CT</b> <b>Ph.D.</b> in Astronomy, May 2020 <i>Thesis: Data-Driven Dynamics of Planetary Systems</i> <i>Advisor: Prof. Greg Laughlin</i> <b>M.S., M.Phil.</b> in Astronomy, May 2018	July 2016 – May 2020
	<b>UC Santa Cruz, Santa Cruz, CA</b> Pursuit of Ph.D. in Astronomy & Astrophysics (transferred after completing first year)	Sept. 2015 – June 2016
	<b>University of Saint Thomas, Saint Paul, MN</b> <b>B.S.</b> in Physics; <b>B.A.</b> in Mathematics, May 2015 <i>Summa Cum Laude</i>	Sept. 2011 – May 2015
POSITIONS	<b>Assistant Professor</b> Department of Physics, Massachusetts Institute of Technology	July 2022 – present
	<b>NASA Sagan Fellow</b> Department of Astrophysical Sciences, Princeton University	July 2020 – June 2022
	<b>NSF Graduate Research Fellow</b> Department of Astronomy, Yale University <i>Advisor: Prof. Greg Laughlin</i>	2017 – 2020
	<b>Graduate Student Researcher</b> Department of Astronomy, Yale University (2016 – 2017) Department of Astronomy & Astrophysics, UCSC (2015 – 2016) <i>Advisor: Prof. Greg Laughlin</i>	2015 – 2017
AWARDS	- 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 2023 – 2025 - NASA Hubble Fellowship Program (NHFP) Sagan Fellowship 2020 – 2023 - 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 - Summer Sagan Workshop Travel Award 2016 - 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

- Physics I: Classical Mechanics (8.012), MIT Fall 2022
- 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

- Orion Foo, MIT undergraduate student, Fall 2022 – present
- Haedam Im, MIT undergraduate student, Fall 2022 – present
- Emma Loudon, Yale graduate student, Fall 2022 – present (IvyPlus Exchange Scholar Program)
- Nicole Sobski, Wellesley undergraduate student, Summer 2022 – present (MIT Undergraduate Research Opportunities Program)
- Nicole Gountanis, Princeton undergraduate student, Fall 2021 (Junior Project)
- Joshua Zou, Princeton undergraduate student, Summer 2021 (Undergraduate Summer Research Program)
- David Jensen, Princeton undergraduate student, Fall 2020 (Junior Project)
- Samantha Berek, Yale undergraduate student, 2018 – 2020 (“Astro Sib” Mentorship Program)
- Adrian Kulesza, Yale undergraduate student, Spring 2019 (research project in “Astrophysics Research Methods”)
- Rachel Cohen, Yale undergraduate student, Spring 2019 (research project in “Astrophysics Research Methods”)
- Marguerite Epstein-Martin, Yale undergraduate student, 2017 – 2018 (co-advised with Greg Laughlin)

## REFEREED PUBLICATIONS (\* = STUDENT SUPERVISED BY S.C.M.)

### First author

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

5. \*Jensen, D. & **Millholland, S.** “Inferred Properties of Planets in Mean-Motion Resonances are Biased by Measurement Noise.” 2022, *AJ*, 164, 144
4. Weiss, L., **Millholland, S.**, Petigura, E., Adams, F., Batygin, K., Bloch, A., & Mordasini, C. “Architectures of Compact Multi-planet Systems: Diversity and Uniformity.” 2022, *Protostars and Planets VII* book chapter, arXiv: 2203.10076
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

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.” 2022, *Nature Astronomy*, accepted
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

## OBSERVING PROGRAMS

- Keck I, HIRESr, “Non-Transiting Hot Jupiters: Hidden Companions to Known Exoplanets”, 2020B, 2 nights, Co-I (PI: Malena Rice)
- ORM, STELLA/SES, “Radial velocity confirmation of non-transiting planets from Kepler” 2020B, 40 hrs, Co-I (PI: Jorge Lillo-Box)
- Keck I, HIRESr, “Non-Transiting Hot Jupiters: Hidden Companions to Known Exoplanets”, 2020A, 2 nights, Co-I (PI: Songhu Wang)
- Keck I, HIRESr, “Are Hot Jupiters Dynamically Hot?”, 2020A, 2 nights, Co-I (PI: Songhu Wang)
- Keck I, HIRESr, “Non-Transiting Hot Jupiters: Hidden Companions to Known Exoplanets”, 2019B, 4 nights, Co-I (PI: Songhu Wang)
- CAHA, CAFE, “Radial velocity confirmation of non-transiting planets from Kepler” 2019B, 5 nights, Co-I (PI: Jorge Lillo-Box)
- Keck I, HIRESr, “Do Multi-planet Systems Share Alignment with Their Parent Stars?”, 2018A, 1 night, Co-I (PI: Songhu Wang)

## SEMINARS & COLLOQUIA (\* = INVITED)

- \* Institute for Theory and Computation Colloquium, Center for Astrophysics — Harvard & Smithsonian, Nov. 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

- “Edge-of-the-Multis: Evidence for Truncation of the Outer Architectures of Compact Multiple-Planet Systems.” Exoplanets IV Conference, Las Vegas, Nevada, May 2022
- “Edge-of-the-Multis: Evidence for Truncation of the Outer Architectures of Compact Multiple-Planet Systems.” Division of Dynamical Astronomy Meeting, Flatiron Institute, New York, New York, April 2022
- “A 3D View of Planetary Orbital Architectures.” 2021 NHFP Symposium, virtual conference, October 2021
- “Evidence for a Non-Dichotomous Solution to the Kepler Dichotomy.” AAS Meeting #238, virtual conference, June 2021
- “Evidence for a Non-Dichotomous Solution to the Kepler Dichotomy.” Division of Dynamical Astronomy Meeting, virtual conference, May 2021
- “Testing Obliquity-Driven Sculpting of Exoplanetary Systems with PLATO.” PLATO ESP Workshop on Planetary Interiors and System Architectures, virtual conference, November 2020
- “Formation of Ultra-Short-Period Planets by Obliquity-Driven Tidal Runaway.” 2020 NHFP Symposium, virtual conference, September 2020
- “Formation of Ultra-Short-Period Planets by Obliquity-Driven Tidal Runaway.” Division of Dynamical Astronomy Meeting, virtual conference, August 2020
- “The Role of Tidal Inflation in Explaining Sub-Saturn Structures.” Boston Area Exoplanet Science Meeting #7, virtual conference, April 2020
- “Obliquity-Driven Sculpting of Exoplanetary Systems.” AAS Meeting #235, Honolulu, HI, January 2020
- “Tidally-Induced Radius Inflation of Sub-Neptunes.” Extreme Solar Systems IV, Reykjavik, Iceland, August 2019
- “Tidally-Induced Radius Inflation of Sub-Neptunes.” Emerging Researchers in Exoplanet Science (ERES) V, Cornell University, Ithaca, NY, June 2019
- “Excitation of Planetary Obliquities Through Planet-Disk Interactions.” Division of Dynamical Astronomy Meeting, Boulder, CO, June 2019
- “Obliquity Tides and their Role in Understanding the Kepler Planet Period Ratio Distribution.” Kepler & K2 Science Conference V, Glendale, CA, March 2019
- “The Surprising Role of Obliquity Tides in Short-Period Exoplanets.” Boston Area Exoplanet Science Meeting #5, Boston University, Boston, MA, January 2019
- “Consequences of Large Planetary Obliquities in Extrasolar Systems.” 2018 CT

Exoplanets Meeting, Wesleyan University, Middletown, CT, July 2018

- “Obliquity-Driven Sculpting of Exoplanetary Systems.” Emerging Researchers in Exoplanet Science (ERES) IV, Pennsylvania State University, State College, PA, June 2018
- “On  $f$  for 9.” Planet Nine Workshop, California Institute of Technology, Pasadena, CA, May 2018
- “On the Obliquities of Planets in Close-in, Coplanar Systems.” Division of Dynamical Astronomy Meeting, San Jose, CA, April 2018
- “New Constraints on the Multi-Resonant Planetary System, Gliese 876.” Numerical Integration Methods in Planetary Science, University of Toronto at Scarborough, Toronto, Ontario, August 2017
- “Constraints on Planet Nine in a Mean-Motion Resonant Framework.” Numerical Integration Methods in Planetary Science, University of Toronto at Scarborough, Toronto, Ontario, August 2017
- “Supervised Learning Detection of Sixty Non-Transiting Hot Jupiter Candidates.” Kepler & K2 Science Conference IV, NASA Ames Research Center, Moffett Field, CA, June 2017
- “Supervised Learning Detection of Sixty Non-Transiting Hot Jupiter Candidates.” Emerging Researchers in Exoplanet Science (ERES) III, Yale University, New Haven, CT, June 2017
- “Supervised Learning Detection of Sixty Non-Transiting Hot Jupiter Candidates.” 2017 CT Exoplanets Meeting, Wesleyan University, Middletown, CT, May 2017
- “Constraints on Planet Nine in a Mean-Motion Resonant Framework.” 2017 Aspen Winter Conference, Formation and Dynamical Evolution of Exoplanets, Aspen, CO, March 2017

#### CONFERENCE POSTERS

- **Millholland, S.**, Petigura, E., & Batygin, K. “Tidal Inflation Reconciles Low-Density Sub-Saturns with Core Accretion.” Exoplanets III Conference, virtual conference, July 2020
- Adams, A., **Millholland, S.** & Laughlin, G. “Detecting Planet Obliquity in Thermal Phase Curves.” Summer Sagan Workshop, Pasadena, CA, July 2018
- **Millholland, S.** & Laughlin, G. “Obliquity-Driven Sculpting of Exoplanetary Systems.” Exoplanets II Conference, Cambridge, UK, July 2018
- **Millholland, S.**, Laughlin, G., Butler, P., et al. “New Dynamical Constraints on the Multi-Resonant System, GJ 876.” Summer Sagan Workshop, Pasadena, CA, July 2016
- **Millholland, S.**, Laughlin, G., Burt, J., et al. “A Search for Non-Transiting Hot Jupiters with Transiting Super-Earth Companions.” Exoplanets I Conference, Davos, Switzerland, July 2016
- **Millholland, S.** & Ruch, G. “An Analysis of the Fixed Star Approximation in Transit Light Curve Models.” IAU General Assembly, Meeting #29, id.2255909, Honolulu, HI, August 2015
- **Millholland, S.**, Savcheva, A. & DeLuca, E., “Magnetic Field Modeling of Complex, Flare Producing Active Regions.” American Geophysical Union Fall Meeting, abstract #SH13A-4079, San Francisco, CA, December 2014
- **Millholland, S.**, Maruyama, N., Maute, A., et al. “Modeling Sudden Stratospheric Warming Events Using the Ionosphere-Plasmasphere Electrodynamics Model.” American Geophysical Union Fall Meeting, abstract #SA23A-2034, San Francisco, CA, December 2013
- **Millholland, S.** & Ruch, G., “Modeling and Fitting Exoplanet Transit Light Curves.” AAS Meeting #221, id.343.10, Long Beach, CA, January 2013

WEB BLOG PUBLICATIONS	- “Tilting Planets and Sculpting Orbits”, invited guest post by S. Millholland at <i>Nature Research Behind the Paper</i> , March 2019. ( <a href="#">Click here to follow link.</a> )
OUTREACH TALKS AND PUBLICATIONS	<ul style="list-style-type: none"> <li>- Aldrich Astronomical Society Meeting, Dec. 2022 (talk)</li> <li>- Yale Young Global Scholars Research Showcase (<a href="http://globalscholars.yale.edu">http://globalscholars.yale.edu</a>), Yale University, June &amp; July 2022 (virtual talks)</li> <li>- Exploring Science Program, Yale University, August 2020 (virtual talk)</li> <li>- Yale Young Global Scholars Research Showcase, Yale University, July 2019 (talk)</li> <li>- Institute for Learning in Retirement, Albertus Magnus College, October 2018 (talk)</li> <li>- Yale Young Global Scholars Research Showcase, Yale University, June &amp; July 2018 (talks)</li> <li>- Leitner Family Observatory &amp; Planetarium, February 2018 (talk)</li> <li>- Pathways Summer Scholars Program Science Café (<a href="http://pathwayssummerscholars.yale.edu">http://pathwayssummerscholars.yale.edu</a>), Yale University, July 2017 (talk)</li> <li>- Yale Young Global Scholars Research Showcase, Yale University, July 2017 (talk)</li> <li>- Pathways Summer Scholars Enrichment Workshop, Yale University, July 2017 (talk &amp; workshop)</li> <li>- Yale Open Labs Science Café (<a href="http://theopenlabs.org">http://theopenlabs.org</a>), Yale University, April 2017 (talk)</li> <li>- 9th Annual Women in Leadership Conference, Yale University, February 2017 (invited panel member)</li> <li>- “The Search for Planet Nine”, a publication for the Hartford Courant News in Education series, <i>Science Matters!</i>, January 2017 (article)</li> <li>- LAMAT REU Program, UC Santa Cruz, July 2016 (talk)</li> <li>- “Reading Scientific Literature”, LAMAT REU Program, UC Santa Cruz, June 2016 (workshop)</li> <li>- Public Observing Night, University of St. Thomas Observatory, March 2013 (talk &amp; public observing)</li> <li>- Minnesota Optical Society Meeting, March 2013 (talk)</li> </ul>
PROFESSIONAL ACTIVITIES & SERVICE	<p><b>Reviews</b></p> <ul style="list-style-type: none"> <li>- Referee for Nature Astronomy, AJ, ApJ, ApJL, PSJ, A&amp;A, MNRAS, PASP</li> <li>- Proposal reviewer, NSF</li> <li>- Proposal reviewer, NASA</li> <li>- External reviewer, Canada-France-Hawaii Telescope</li> <li>- External reviewer, OPTICON Telescope Transnational Access</li> </ul> <p><b>Organizing Committees</b></p> <ul style="list-style-type: none"> <li>- Committee member, Division of Dynamical Astronomy Committee 2021 –</li> <li>- Scientific Organizing Committee Member, 2022 – 2023 Division of Dynamical Astronomy 54th Annual Meeting</li> <li>- Scientific Organizing Committee Member, 2021 – 2022 Division of Dynamical Astronomy 53rd Annual Meeting</li> <li>- Organizer, Princeton Planetary Dynamics Reading Group 2020 – 2022</li> <li>- Scientific Organizing Committee Member, 2017, 2019, 2021 Emerging Researchers in Exoplanet Science (ERES) Conference III (Yale), V (Cornell) and VI (virtual)</li> <li>- Organizing committee, UCSC astronomy prospective student visit 2015</li> </ul> <p><b>Diversity &amp; Inclusion Involvement</b></p> <ul style="list-style-type: none"> <li>- Co-organizer, Seminar Series on Equity, Diversity and Inclusion 2020 – 2021</li> </ul>

	for the Departments of Physics and Astrophysics at Princeton	
	- 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
	<b>Professional Affiliations &amp; Mentorship</b>	
	- Member, American Astronomical Society	
	- Member, Division of Dynamical Astronomy of the AAS	
	- Mentor, Goldwater Scholar Community Mentorship Program	2021 –
	- Mentor, DDA Mentorship Program	2021 –
	- Mentor, Princeton Astrophysics Mentorship Program	2021 –
SELECTED OUTREACH	- Yale Open Labs ( <a href="http://theopenlabs.org">http://theopenlabs.org</a> )	2016 – 2018
	Committee chair for Science Café Talk Series	2017 – 2018
	Executive board member	2016 – 2017
	- Organizer of Yale Young Global Scholars Program visits to the Astro. Department ( <a href="http://globalscholars.yale.edu">http://globalscholars.yale.edu</a> )	2017, 2018
	- Public Night Volunteer, Lick Observatory	Summer 2016
	- Astronomy Public Night Leader, UST Observatory	2012 – 2015
SELECTED MEDIA COVERAGE	- <b>Tilted planets</b> (Millholland & Laughlin 2019) featured in Scientific American, Sky & Telescope, Popular Science, Science Daily, Live Science, Space.com, Yale News.	
	- <b>Intra-system uniformity</b> (Millholland et al. 2017) featured in AAS Nova, Nature Research Highlights.	
	- <b>Machine learning detection of hot Jupiters</b> (Millholland & Laughlin 2017b) featured in National Geographic, Sky & Telescope, FOX 61 Connecticut News (television), University of St. Thomas News, Yale News.	
	- <b>Featured subject</b> for University of St. Thomas television and online advertisements	