

## Dr. Meredith A. MacGregor

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CONTACT INFORMATION	Johns Hopkins University Baltimore, MD 21218	Department of Physics and Astronomy mmacgregor@jhu.edu
RESEARCH INTERESTS	Circumstellar disk structure and evolution Astrobiology and origin of life Stellar activity and impact on habitability	Planetary system formation Planet–disk interactions Radio interferometry
EDUCATION	<b>Harvard University</b> , Cambridge, MA  Ph.D., Astronomy and Astrophysics, May 2017 <ul style="list-style-type: none"><li>• Thesis Title: ‘Millimeter Studies of Nearby Debris Disks’</li><li>• Advisor: Dr. David J. Wilner</li></ul> M.A., Astronomy and Astrophysics, May 2013 <b>Harvard University</b> , Cambridge, MA  B.A., Astronomy and Astrophysics, Physics, June 2011 <ul style="list-style-type: none"><li>• <i>Cum Laude</i></li><li>• Thesis Title: ‘A Search for Fast Optical Transients’</li><li>• Advisor: Prof. Edo Berger</li></ul>	
ACADEMIC POSITIONS	<b>Assistant Professor</b> Johns Hopkins University Department of Physics and Astronomy <b>Assistant Professor</b> University of Colorado Boulder Department of Astrophysical and Planetary Sciences <b>Associate Director</b> Center for Astrophysics and Space Astronomy (CASA) <b>NSF Postdoctoral Fellow, Carnegie Fellow</b> Carnegie Department of Terrestrial Magnetism <i>Supervisor: Dr. Alycia J. Weinberger</i> <b>Postdoctoral Researcher</b> Harvard-Smithsonian Center for Astrophysics <i>Supervisor: Dr. David J. Wilner</i> <b>Graduate Research Assistant</b> Dept. of Astronomy, Harvard University <i>Advisor: Dr. David J. Wilner</i> <b>Undergraduate Research Assistant</b> Dept. of Astronomy, Harvard University <i>Advisor: Prof. Edo Berger</i> <b>NSF REU</b> National Radio Astronomy Observatory <i>Advisor: Dr. Jeffery G. Mangum</i> <b>NSF REU</b> Maria Mitchell Observatory <i>Advisor: Dr. Vladimir Strelmitski</i>	Aug. 2023 – present  Jan. 2020 – Aug. 2023  May 2021 – June 2022  Sept. 2017 – Jan. 2020  May 2017 – Sept. 2017  Sept. 2011 – May 2017  Dec. 2009 – June 2011  May 2010 – Aug. 2010  May 2009 – Aug. 2009
PUBLICATIONS	49 publications in total (13 first author, 7 second author, 17 co-author, 1 popular science, 1 textbook, and 10 unrefereed) with 1386 citations and an h-index of 23 (from Google Scholar). A complete listing is provided at the end.	

Several of these publications have been widely covered in the press including The New York Times, CNN, Scientific American, National Geographic, Science News, AAS Nova, Astronomy Picture of the Day (APOD), Forbes, Popular Science, and Popular Mechanics.

## AWARDS

### Prizes

Bart J. Bok Prize Lectureship 2023

### Fellowships and Scholarships

Scialog Fellow, Signatures of Life in the Universe 2020, 2021, 2022  
 NSF Astronomy and Astrophysics Postdoctoral Fellowship 2017  
 Carnegie Postdoctoral Fellowship, Carnegie DTM 2017  
 Jansky Postdoctoral Fellowship (declined) 2017  
 John P. And Carol J. Merrill Graduate Fellowship 2013  
 National Science Foundation Graduate Research Fellowship 2011  
 Smith Family Graduate Science and Engineering Fellowship 2011  
 Intel Science Talent Search Scholarship 2007  
 Micron Science and Technology Scholarship 2007  
 USA Today All-USA High School Academic Scholarship 2007  
 National Merit Scholarship 2007  
 Intel Foundation Young Scientist Scholarship 2006  
 Office of Naval Research Scholarship 2005

### Grants

NASA Precursor Science, PI (\$669,795) 2023  
 NRAO Student Observing Support, PI (\$30,756) 2022  
 HST Guest Observer Support, PI (\$117,181) 2022  
 Swift Guest Observer Support, PI (\$34,890) 2022  
 Undergraduate Research Opportunities Program (UROP, academic, \$3,000) 2022  
 Undergraduate Research Opportunities Program (UROP, summer, \$3,000) 2022  
 NASA APRA (\$1.7 million total, unfunded science Co-I) 2022  
 Heising-Simons Foundation, PI (\$55,000) 2021  
 TESS Cycle 4 Guest Investigator (\$50,000, Science PI: Ward Howard) 2021  
 Undergraduate Research Opportunities Program (UROP, summer, \$3,000) 2021  
 NASA ICAR, Institutional PI (\$5 million, Lead PI: Natalia Batalha, UCSC) 2020  
 NRAO Student Observing Support, PI (\$33,363) 2020  
 HST Guest Observer Support, Co-I (\$52,231) 2020  
 Swift Guest Observer Support, PI (\$31,100) 2019  
 HST Guest Observer Support, PI (\$308,196) 2018  
 NRAO Student Observing Support, Science PI (\$8,937) 2018  
 NSF Special Programs in Astronomy AST-1844677, Collaborator (\$22,911) 2018  
 ALMA Postdoctoral Ambassador (\$10,000) 2018  
 NSF Astronomy and Astrophysics Postdoctoral Fellowship (\$300,000) 2017

### Teaching Awards – Harvard University

UROP Outstanding Mentor Honorable Mention 2021  
 Certificate of Distinction in Teaching (Astronomy 201b) 2015  
 Bok Center Teaching Certificate 2014  
 Certificate of Distinction in Teaching (Astronomy 17) 2012  
 Certificate of Distinction in Teaching (Astronomy 16) 2012

### Student Awards – Harvard University

Goldberg Award for Outstanding Senior Thesis 2011  
 Goldberg Award for Outstanding Junior Thesis 2010

MISSION DEVELOPMENT	<b>Early Star and Planet eXplorer (ESPEX)</b>	2022 – present
	Role: PI NASA SMEX Mission (\$150 million)	
	<b>Far-Infrared Spectroscopy Space Telescope (FIRSST)</b>	2022 – present
	Role: Deputy PI NASA Probe Mission (\$1 billion)	
	<b>Planetary Origins and Evolution Multispectral Monochrometer (POEMM)</b>	2022 – present
	Role: Co-I NASA Probe Mission (\$17 million)	
	<b>Zodiacal Dust Intensity for Astrophysics Cubesat (ZODIAC)</b>	2021 – present
	Role: Co-I NASA PIONEERS Mission (\$17 million)	

OBSERVING  
EXPERIENCE  
AND PROPOSALS

To date, I have been PI of 10 accepted ALMA proposals, 1 TESS proposal, 1 Swift proposal (and 2 additional ToO), 2 HST proposals, 1 Chandra proposal, 7 SMA proposals (and 5 additional filler programs), 3 VLA proposals, 1 ATCA, and 1 NOAO proposal totaling over 600 hours of time. I have also been co-I on 19 other successful ALMA proposals (including the ARKS large program), 1 LCOGT key project, 1 HST proposal, 1 Swift proposal, 1 Chandra proposal, 10 SMA proposals, 1 VLA proposal, and 2 GBT proposals. A list of accepted PI proposals follows:

27. *Evidence for Planetary Sculpting in the HD 53143 Debris Disk* 07/2022  
8.6 hours; ALMA Cycle 9 C-Priority; ID: 2022.1.00653.S
26. *The Origin and Impact of Flares in M Dwarf Systems - The Optical and Millimeter Perspective* 06/2022  
23 stars at 20-sec cadence; TESS Cycle 5; ID: 5070
25. *The Origin and Impact of Flares in M Dwarf Systems* 04/2022  
9 orbits; HST Cycle 29 DDT; ID: GO16933
24. *The Origin and Impact of Flares in M Dwarf Systems* 08/2021  
72 hours; ALMA Cycle 8 B-Priority; ID: 2021.1.01209.S
23. *A Search for Circumstellar and Interstellar Gas in The HD 15115 System* 01/2020  
10 hours; NOAO CHIRON; ID: 2020A-0272
22. *Constraining Collisional Models of Planetesimals in Debris Disks* 01/2020  
48 hours; VLA B-Ranked; ID: 20A-219
21. *The Origin and Impact of Flares in M Dwarf Systems* 11/2019  
66.9 hours; ALMA Cycle 7 Supplemental Call; ID: 2019.2.00141.S
20. *The Origin and Impact of Flares in M Dwarf Systems* 05/2019  
4 tracks; SMA A-Ranked; ID: 2019A-S019
19. *The Origin and Impact of Flares in the Proxima Centauri Planetary System* 03/2019  
25.2 ks; Chandra DDT; Proposal Number: 20208674
18. *The Origin and Impact of Flares in the Proxima Centauri Planetary System* 02/2019  
90 ks; Swift Cycle 15; ID: 1518177
17. *The Origin and Impact of Flares in the Closest Planetary System* 11/2018  
44 orbits; HST Cycle 26; ID: GO15651
16. *The Origin and Impact of Flares in M Dwarf Systems* 11/2018  
8 tracks; SMA B-Ranked; ID: 2018B-S045
15. *Millimeter Monitoring of the Closest Planetary System - Stellar and Dust Emission from Proxima Centauri* 07/2018  
62.9 hours; ALMA Cycle 6 A-Priority; ID: 2018.1.00470.S
14. *Probing Planet-Disk Interactions in the Fomalhaut System* 07/2018  
6.4 hours; ALMA Cycle 6 B-Priority; ID: 2018.1.00582.S

13. *Probing Planet-Disk Interactions in the Fomalhaut System* 07/2017  
6.4 hours; ALMA Cycle 5 B-Priority; ID: 2017.1.01043.S
12. *Debris Disk Structure Around Nearby Sun-like Stars with the ACA* 07/2017  
14.5 hours; ALMA Cycle 5 C-Priority; ID: 2017.1.01054.S
11. *Debris Disk Structure Around Nearby Sun-like Stars with the ACA* 05/2017  
14.5 hours; ALMA Cycle 4 Filler; ID: 2016.2.00015.S
10. *Debris Disks Around Tau Ceti and Epsilon Eridani* 08/2016  
17.7 hours; ALMA Cycle 4 C-Priority; ID: 2016.1.00803.S
9. *Structure of the 56 Aur Debris Disk* 10/2015  
4 tracks; SMA B-Ranked; ID: 2015B-S014
8. *Structure of the HD 32297 Debris Disk* 10/2014  
2 tracks; SMA A-Ranked; ID: 2014B-S001
7. *Deciphering Debris Disk Structure and Eccentricity* 05/2014  
2 tracks; SMA B-Ranked; ID: 2014A-S051
6. *Structure in the Eps Eridani Debris Disk* 04/2014  
48 hours; ATCA A-Ranked; ID: C2931
5. *Constraining Collisional Models of Planetesimals in Debris Disks* 11/2013  
28 hours; VLA A- and B-Ranked; ID: 14A-225
4. *Constraining the Structure and Eccentricity of Debris Disks* 11/2013  
3 tracks; SMA B-Ranked; ID: 2013B-S049
3. *Structure of the HD 15115 Debris Disk* 05/2013  
2 tracks; SMA A-Ranked; ID: 2013A-S024
2. *Testing Collisional Models of Planetesimals in the AU Mic Debris Disk* 11/2012  
2.5 hours; VLA A-Ranked; ID: 13A-301
1. *Resolving Millimeter Emission from the q1 Eri Debris Disk* 11/2012  
2.6 hours; ALMA Cycle 1 B-Priority; ID: 2012.1.00112.S

INVITED TALKS,  
SEMINARS, AND  
COLLOQUIA

- |                                                                             |      |
|-----------------------------------------------------------------------------|------|
| University of California Santa Cruz Colloquium, Santa Cruz, CA              | 2024 |
| Center for Computational Astrophysics Colloquium, New York, NY              | 2023 |
| Princeton University, Institute for Astronomy, Princeton, NJ                | 2023 |
| Space Telescope Science Institute, Baltimore, MD                            | 2023 |
| Center for Astrophysics   Harvard & Smithsonian, Cambridge, MA              | 2023 |
| Johns Hopkins University, Baltimore, MD                                     | 2023 |
| Northwestern CIERA Colloquium, Evanston, IL                                 | 2023 |
| University of Maryland Colloquium, College Park, MD                         | 2023 |
| Caltech Colloquium, Pasadena, CA                                            | 2022 |
| Collegiate Peaks Forum, Salida, CO                                          | 2022 |
| CU Boulder Family Weekend at Fiske Planetarium, Boulder, CO                 | 2022 |
| University of Colorado Boulder Colloquium, Boulder, CO                      | 2022 |
| CMS-S4 Collaboration Meeting (hybrid)                                       | 2022 |
| AAS Summer Meeting Press Conference, Pasadena, CA                           | 2022 |
| Mid- and Far-IR Observations AAS Splinter Meeting, Pasadena, CA             | 2022 |
| NASA Goddard ASD Colloquium Series (remote)                                 | 2022 |
| Tacoma Astronomical Society (remote)                                        | 2022 |
| Boulder Rotary Club, Boulder, CO                                            | 2022 |
| 50 Years of the Skumanich Relations, Boulder, CO                            | 2022 |
| Featured Science Talk on JWST at Fiske Planetarium, Boulder, CO             | 2021 |
| American Philosophical Society Fall Meeting (remote)                        | 2021 |
| University of New Mexico Colloquium, Albuquerque, NM                        | 2021 |
| California State University Northridge Colloquium, Los Angeles, CA (remote) | 2021 |
| CMB-S4 Collaboration Meeting (remote)                                       | 2021 |

Maria Mitchell Science Speaker Series, Nantucket, MA (remote)	2021
NASA Goddard Exoplanet Seminar, Greenbelt, MD (remote)	2021
Division on Dynamical Astronomy Meeting (remote)	2021
Golden Webinar panelist, Pontifica Universidad Catolica, Chile (remote)	2021
Stars and Planets in the Ultraviolet, Tempe, AZ (delayed from 2020)	2021
Herzberg Astronomy & Astrophysics Colloquium, Victoria, BC, Canada (remote)	2021
Washington State University Colloquium, Pullman, WA (remote)	2020
Maria Mitchell Science Speaker Series, Nantucket, MA (remote)	2020
Spirit of Lyot Conference, Tokyo, Japan	2019
Kavli Futures of Exoplanets, TESS Science Conference, Boston, MA	2019
Understanding the Nearby Star-forming Universe with JWST, Courmayeur, Italy	2019
Barry Blumberg Astrobiology Workshop, Green Bank Observatory, WV	2019
CosmoMeet, University of Maryland, College Park, MD	2019
Liz Myhill Memorial Seminar, Marymount University, Arlington, MD	2019
DTM Lunch & Learn, Carnegie DTM, Washington, DC	2019
NASA Goddard ASD Colloquium Series, Greenbelt, MD	2019
Society for Science and the Public Alumni Panel, Washington, DC	2019
SOFIA Colloquium, NASA Ames, Mountain View, CA	2019
University of Wisconsin Colloquium, Madison, WI	2019
University of Colorado APS Colloquium, Boulder, CO	2019
Penn State Center for Exoplanets and Habitable Worlds, State College, PA	2019
Exploring our Cosmic Origins: New Results from ALMA, AAS 233, Seattle, WA	2019
ExoPAG 19, AAS 233, Seattle, WA	2019
University of Delaware Astronomy & Space Physics Seminar, Newark, DE	2018
11th Meeting on Cosmic Dust, Sagamihara, Japan	2018
Carnegie DTM Colloquium, Washington, D.C.	2018
University of Maryland Astronomy Colloquium, College Park, MD	2018
AMNH Astrophysics Seminar, New York, NY	2018
University of Chicago Special Seminar, Chicago, IL	2018
STScI Exoplanet, Star and Planet Formation Seminar, Baltimore, MD	2018
SPHEREx Synergies Workshop, Cambridge, MA	2018
SMA Special Session, AAS 231, Washington, D.C.	2018
Caltech Astronomy Colloquium, Pasadena, CA	2017
Berkeley CIPS Seminar, Berkeley, CA	2016
NASA Goddard Exoplanet Seminar, Greenbelt, MD	2016
Carnegie DTM Friday Seminar, Washington, D.C.	2016
NOAO Friday Lunch Talk, Tucson, AZ	2016
NRAO TUNA Lunch Talk, Charlottesville, VA	2016
MIT Planetary Lunch Colloquium, Cambridge, MA	2016
CfA Stars & Planets Seminar, Cambridge, MA	2016
Boston University Lunch Talk, Boston, MA	2016
NASA Far-IR SIG Meeting, 227th AAS Meeting, Kissimmee, FL	2016
SMA Science Meeting, Cambridge, MA	2015
Banneker Institute CASA Seminar, Cambridge, MA	2015
SMA Lunch Talk, Hilo, Hawaii	2015
NRAO Lunch Talk, Socorro, NM	2014
Swinburne University Colloquium, Melbourne, Australia	2014

CONFERENCE  
CONTRIBUTIONS

30. *A New ALMA View of the HD 53143 Debris Disk* (talk, press conference)  
240th American Astronomical Society Meeting, 2022, Pasadena, CA
29. *A New Window on Planet Formation with Far-Infrared Spectroscopy* (talk)  
IR Astrophysics in the Next Decade, 2022, Boulder, CO
28. *Discovery of an Extremely Short Duration ‘Building Block’ Flare from Proxima Centauri Using Millimeter through FUV Observations* (poster)

- Cool Stars 20.5, remote, 2021
27. *Discovery of an Extremely Short Duration ‘Building Block’ Flare from Proxima Centauri Using Millimeter through FUV Observations* (talk)  
Habitable Worlds, remote, 2021
  26. *Discovery of an Extremely Short Duration ‘Building Block’ Flare from Proxima Centauri Using Millimeter through FUV Observations* (remote talk)  
237th American Astronomical Society Meeting, 2020
  25. *Invited Panelist, Disk Evolution and Demographics* (remote discussion)  
Five Years After HL Tau: A New Era in Planet Formation, 2020
  24. *Connecting Structure in Edge-On Debris Disks to Planetary Systems* (poster)  
Gordon Research Conference: Origins of Solar Systems, 2019, South Hadley, MA
  23. *Connecting Structure in Edge-On Debris Disks to Planetary Systems* (talk)  
New Horizons in Planetary Systems, 2019, Victoria, BC, Canada
  22. *Probing Planet Formation and Habitability with ALMA* (talk)  
NSF AAPF Symposium at 233rd AAS Meeting, 2019, Seattle, WA
  21. *A Gap in the HD 15115 Debris Disk Detected with ALMA* (talk)  
233rd American Astronomical Society Meeting, 2019, Seattle, WA
  20. *Extended Millimeter Halos in the HD 32297 and HD 61005 Debris Disks* (talk)  
7th National Capital Area Disks Meeting, 2019, Baltimore, MD
  19. *Detection of a Millimeter Flare from Proxima Centauri* (plenary talk)  
Cool Stars 20, 2018, Boston, MA
  18. *Detection of a Millimeter Flare from Proxima Centauri* (talk)  
ChExo Meeting, 2018, Washington, D.C.
  17. *Debris Disk Grain Size Distributions from Millimeter Observations* (talk)  
Berkeley CIPS Workshop, 2018, Berkeley, CA
  16. *New ALMA Images of the HD 32297 and HD 61005 Debris Disks* (poster)  
Star and Planet Formation in the Southwest 2, 2018, Tucson, AZ
  15. *Debris Disk as Probes of Planetary System Formation* (talk)  
NSF AAPF Symposium at 231st AAS Meeting, 2018, Washington, DC
  14. *New ALMA Images of the HD 32297 and HD 61005 Debris Disks* (talk)  
231st American Astronomical Society Meeting, 2018, Washington, DC
  13. *A Complete ALMA Map of the Fomalhaut Debris Disk* (talk)  
Gordon Research Seminar: Origins of Solar Systems, 2017, South Hadley, MA
  12. *A Complete ALMA Map of the Fomalhaut Debris Disk* (poster)  
Gordon Research Conference: Origins of Solar Systems, 2017, South Hadley, MA
  11. *Millimeter Studies of Nearby Debris Disks* (dissertation talk)  
229th American Astronomical Society Meeting, 2017, Grapevine, TX
  10. *ALMA Observations of the GQ Lup System* (talk)  
‘Resolving planet formation in the era of ALMA’, 2016, Santiago, Chile
  9. *Constraining Collisional Models of Planetesimals in Debris Disks* (talk)  
227th American Astronomical Society Meeting, 2016, Kissimmee, FL
  8. *Constraining Collisional Models of Planetesimals in Debris Disks* (poster)  
Gordon Conference: Origins of Solar Systems, 2015, South Hadley, MA
  7. *A New Millimeter Look at the HD 15115 Debris Disk* (poster)  
224th American Astronomical Society Meeting, 2014, Boston, MA
  6. *A New Millimeter Look at the HD 15115 Debris Disk* (poster)  
SMA: First Decade of Discovery, 2014, Cambridge, MA
  5. *A Resolved Millimeter Emission Belt in the AU Mic Debris Disk* (talk)  
Formation and Evolution of Planetary Systems, 2013, Victoria, BC, Canada
  4. *Millimeter Emission Structure in the AU Mic Debris Disk* (talk)  
ALMA Rocks! Transformational Science with ALMA, 2013, Kona, Hawaii

3. *Measuring CMB Temperature with an Inexpensive, Student Lab Experiment* (talk)  
USNC-URSI National Radio Science Meeting, 2012, Boulder, CO
2. *Densitometry and Thermometry of Starburst Galaxies* (poster)  
217th American Astronomical Society Meeting, 2011, Seattle, WA
1. *Variations of Physical Conditions in the Cores of Molecular Clouds as Probed by  $J_0-J_{-1}$  Methanol Lines at 157 GHz* (poster)  
215th American Astronomical Society Meeting, 2010, Washington, DC

ADVISING  
AND EXAM  
COMMITTEES

**University of Colorado Boulder**

*Postdoctoral Researchers – Research Advisor*

Ward Howard 2021 – present

*Graduate Students – Research Advisor*

Brandon Hilliard 2021 – present

Kiana Burton 2021 – present

Jay Chittidi 2021 – present

Isaiah Tristan (partial advisor) 2020 – present

*Undergraduate Students – Research Advisor*

• Christian Repress (Sloan/SMART program) 2023 – present

Aislyn Bell 2023 – present

Adalyn Gibson 2022 – present

Samuel Lippincott 2022

Olivia Blevins (UROP grant) 2022 – present

Coda Lucas (UROP grant) 2021 – present

Meggan Amos (UROP grant) 2021 – present

Alejandro Ross (through Maria Mitchell REU) 2021

Spencer Hurt (Goldwater and Astronaut Scholarship winner) 2020 – 2022

Kiana Burton (through Maria Mitchell REU, Chambliss award winner) 2020 – 2021

Anna Estes (UROP grant, APS scholarship, Chambliss award winner) 2020 – 2021

*Thesis Committee*

Joshua Hibbard (chair) 2023 – present

Marcel Corchado (chair) 2023 – present

Hayley Roberts 2023

Jenny Paine 2023

Andrew Wilcoski 2022

Isaiah Tristan 2022 – present

Whitney Powers 2022 – present

Imogene Cresswell (chair) 2022 – present

Momchil Molnar 2022

Juniper Pollock (physics) 2022

Connor Frederick (physics) 2021

Elizabeth Butler 2021 – 2022

Samantha Walker 2021 – 2023

Alexander Zderic 2021

Girish Duvvuri (chair) 2020 – 2023

William Waalkes 2020 – 2023

Nicole Arulanantham 2020

*Comprehensive Exam Committee*

Michelle Athay 2022

Marcel Corchado (non-advocate chair) 2022

Megan Kenny (non-advocate chair) 2022

Jay Chittidi (advisor) 2022

	Whitney Powers (non-advocate chair)	2021
	Isaiah Tristian	2021
	Imogene Cresswell (non-advocate chair)	2021
	Parker Hinton (non-advocate chair)	2021
	Tatsuya Akiba	2021
	Johnathan Stauffer	2020
	Angi Harke-Hosemann	2020
	<i>Teaching Mentor</i>	
	Ward Howard	Summer 2022
	Angela Collier	Summer 2020
	<b>External Examiner</b>	
	Arcelia Hermosillo Ruiz (PhD, UC Santa Cruz)	2022 – present
	Matthew Fields (PhD, University of North Carolina)	2021 – present
	Katie Crofts (Masters Defense, University of British Columbia)	2020
	<b>Carnegie DTM</b>	
	Jackson Fuson (undergrad, University of California Irvine)	2019
	Bella Marku (undergrad, Virginia Tech)	2019
	Lara Stroud (high school student)	2019
	Samantha O’Sullivan (undergrad, Harvard University)	2018
	<b>Harvard University – Banneker Institute</b>	
	Elizabeth Gutierrez (undergrad, University of Texas at Austin)	2017
	Rachel Gilchrist (undergrad, Harvard University)	2016
TEACHING	<b>University of Colorado Boulder – Lead Instructor</b>	
	ASTR 6000 – Seminar on Radio Astronomy	Spring 2023
	ASTR/GEO 2040 – The Search for Life in the Universe	Spring 2023
	ASTR 5820 – Origin of Planetary Systems	Fall 2022
	ASTR 3710 – Formation & Dynamics of Planetary Systems	Fall 2021
	ASTR/GEO 2040 – The Search for Life in the Universe	Spring 2021
	ASTR 5820 – Origin of Planetary Systems	Fall 2020
	ASTR/GEO 2040 – The Search for Life in the Universe	Spring 2020
	<b>Harvard University – Teaching Fellow</b>	
	Astro. 201b - The Physics and Chemistry of the Interstellar Medium	Spring 2015
	Astro. 17 - Galactic and Extragalactic Astronomy	Fall 2012
	Astro. 16 - Stellar and Planetary Astronomy	Spring 2012
PROFESSIONAL SERVICE	<b>University of Colorado Boulder</b>	
	CU Boulder FDAP Hiring Committee	2023
	CU Boulder LASP Hiring Committee	2022 – 2023
	CU Boulder APS Instructor Hiring Committee	2021 – 2022
	Chair of CU Boulder APS Quality Teaching Initiative Committee	2021 – present
	CASA Associate Director	2021 – 2022
	CTL Anti-Racist Pedagogy Learning Community	2021
	CU Boulder Undergraduate Professional Development Lead	2020 – present
	CU Boulder Colloquium Committee	2020 – 2021
	CU Boulder Undergraduate Curriculum and Concerns Committee	2020 – present
	CASA Executive Committee	2020 – 2022
	CU Boulder APS Fall 2020 Planning Committee	2020
	CU Boulder Grad Orientation Planning Committee	2020



## **Astronomical Community**

Co-Chair Next Generation Great Observatories SAG	2023 – present
AAS Education Committee member	2022 – present
THESEUS NASA Mission Review	2022
IR Astrophysics in the Next Decade SOC	2022
Kavli Summer Program SOC	2021 – present
Skumanich Conference LOC	2021 – present
Green Bank Observatory Program Operations Review Panel	2021, 2022
Co-Chair of NASA IR STIG Leadership Council	2020 – present
ALMA Development Studies Review Panel	2020 – present
Reviewer for Chilean FONDEYCT Program	2020 – present
SOFIA Science Workshop SOC	2020
NSF AAPF Symposium Organizer	2018 – 2019
7th National Capital Area Disks Meeting SOC	2018
NASA Review Panels (multiple programs)	2017 – present
Origins Space Telescope Disks and Planet Formation Working Group	2017 – 2021
Gordon Research Seminar Origins of Solar Systems Chair	2017 – 2019
Member of NASA IR SIG Leadership Council	2016 – present
Referee for MNRAS, ApJ, ApJL, Nature, Planetary Science Journal	2016 – present
Member of ALMA Time-domain Special Interest Group	2016 – present
Judge for Chambliss student poster award at AAS	2015 – present

## **Carnegie DTM**

Carnegie Institution Postdoctoral Association (CIPA)	2018 – 2020
DTM Astronomy Seminar Organizer	2018 – 2020

## **Harvard University**

Local organizing committee for APS CUWiP at Harvard	2015 – 2017
Astronomy graduate retreat committee	2014 – 2015
Mentor to first-year Harvard graduate students	2014 – 2015
Organizer of Harvard graduate prospective weekend	2013
Mentor to Harvard undergraduate women in science	2011 – 2014

## **OUTREACH**

### **WorldWide Telescope Ambassador** 2013 – present

- Member of virtual community of educators who use WWT in classrooms
- Designed an interactive kiosk for the Harvard Science Center to introduce students and the public to astronomy at Harvard
- Taught new curricula to students Cambridge and Lexington, MA
- Participated in outreach events including the U.S. Science and Engineering Festival

### **First Light - Carnegie Academy for Science Education** 2018 – 2020

- Wrote and led teaching of an astrobiology curriculum during 2018-2019 academic year
- Designed new hands-on activities and instructed local teachers on how to incorporate them into their classrooms
- Led teacher training workshops through KIPP DC to share curricular materials
- Participated in multiple DC area STEM fairs

### **Nonresident tutor in Pforzheimer House** 2014 – 2017

- Organized weekly problem help sessions for Harvard undergraduate students taking physics and astronomy courses

### **Cambridge Science Festival Volunteer** 2012 – 2017

- Presented astronomy to the public at the yearly event in Cambridge, MA

### **The Scientista Foundation Boston Regional Officer** 2011 – 2013

- Organized networking events for women scientists in the Boston area

- Led an after-school science program for K-6 girls at the Amigos School in Cambridge, MA
- Founded a Harvard Chapter of the organization and helped recruit new volunteers

REFEREED  
PUBLICATIONS  
13 First Author  
7 Second Author  
17 Co-Author  
37 Total

\*\*\* indicates top  
five cited papers

### First Author

13. *ALMA Images the Eccentric HD 53143 Debris Disk*  
**M. A. MacGregor**, and 8 co-authors  
Astrophysical Journal Letters, 933, L1, 2022 (arXiv:2206.05856)  
Citations: 5
12. *Discovery of an Extremely Short Duration Flare from Proxima Centauri Using Millimeter through FUV Observations*  
**M. A. MacGregor**, and 19 co-authors  
Astrophysical Journal Letters, 911, L25, 2021 (arXiv:2104.09519)  
Citations: 23
11. *Properties of M Dwarf Flares at Millimeter Wavelengths*  
**M. A. MacGregor**, R. A. Osten, A. M. Hughes  
Astrophysical Journal, 891, 80, 2020 (arXiv:2001.10546)  
Citations: 24
10. *Multiple Rings of Millimeter Dust Emission in the HD 15115 Debris Disk*  
**M. A. MacGregor**, A. J. Weinberger, E. R. Nesvold, A. M. Hughes, D. J. Wilner, T. Currie, J. H. Debes, J. K. Donaldson, S. Redfield, A. Roberge, G. Schneider  
Astrophysical Journal Letters, 877, L32, 2019 (arXiv:1905.08258)  
Citations: 22
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