

# M. KATHLEEN BRENNAN

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## EDUCATION

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- PhD - Atmospheric Sciences expected 2021  
University of Washington, Seattle, WA  
Dissertation Title: *Reconstructing Arctic Sea Ice Using Data Assimilation*  
Comittee: Gregory J. Hakim (chair), Cecilia M. Bitz, Edward Blanchard-Wrigglesworth,  
Eric Steig, and Luanne Thompson (GSR)
- MS - Atmospheric Sciences 2019  
University of Washington, Seattle, WA
- BA - Physics and Mathematics, Magna cum laude 2013  
Lewis and Clark College, Portland, OR  
*magna cum laude*

## PUBLICATIONS

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**Brennan, M. K.**, Hakim, G. J., Blanchard-Wrigglesworth, E. (2020). Arctic sea-ice variability during the instrumental era. *Geophysical Research Letters*, 47, e2019GL086843. <https://doi.org/10.1029/2019GL086843>

Hormel, Tristan T., Sarah Q. Kurihara, **M. Kathleen Brennan**, Matthew C. Wozniak, Raghuvveer Parthasarathy. (2014) Measuring Lipid Membrane Viscosity Using Rotational and Translational Probe Diffusion. *Phys. Rev. Lett.*, 122, 188101.

### *Submitted Manuscripts:*

Parsons, L. A., **M. K. Brennan**, R. C. J. Wills and C. Proistosescu (2020). Magnitudes and spatial patterns of interdecadal temperature variability in CMIP6. *Geophysical Research Letters*.

## HONORS AND AWARDS

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- National Science Foundation Graduate Research Fellowship 2018 - present  
UW College of the Environment Student Travel Funding, \$750 2019  
Honorable Mention, Student Oral Presentation Awards, 2019  
International Glaciology Society Sea Ice Symposium  
Hobbs Scholarship, Graduate Entrance Award 2016  
Phi Beta Kappa 2013  
Pi Mu Epsilon 2013

## PROFESSIONAL EXPERIENCE

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- Graduate Research Assistant Sept. 2016 - Dec. 2017, Mar. 2018 - present  
University of Washington  
Investigating the natural variability of Arctic sea ice using a novel paleoclimate data assimilation technique in order to reconstruct climate states over the past two millennia. Advised Dr. Greg Hakim.

<b>Research Engineer</b> Cooper Environmental Services, Beaverton, OR Contributed to various research projects involving the development of scientific instruments and software for the measurement and interpretation of aerosol pollution from industrial sources.	2014 - 2016
<b>Atmospheric Chemistry Lab Technician and Intern</b> Portland State University Measured the isotopic ratios of carbon and deuterium in methane and carbon dioxide in Dr. Andrew Rice's atmospheric physics lab, initially through a National Science Foundation sponsored Research Experience for Undergraduates program.	Summer 2011, Fall 2013
<b>Biophysics Research Intern</b> University of Oregon Characterized the fluid properties of cell membranes by measuring their viscosity in Dr. Raghu Parthasarathy's biophysics lab under an National Science Foundation sponsored Research Experience for Undergraduates program.	Summer 2012

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## CONFERENCE PRESENTATIONS

American Geophysical Union Fall Meeting, San Francisco, CA	oral - 2019
International Glaciology Society Sea Ice Symposium, Winnipeg, MB, Canada	oral - 2019
American Geophysical Union Fall Meeting, Washington D.C.	poster - 2018

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## WORKSHOPS AND SUMMER SCHOOLS ATTENDED:

"Climate Change Impacts on 21st Century Food and Water Security", <i>Program on Climate Change Summer Institute - UW, Friday Harbor, WA</i>	Sept 2019
"CMIP6 Hackathon" - UW, Seattle, WA	Oct 2019
"Women in Mathematics and Public Policy", <i>IPAM - UCLA, Los Angeles, CA</i>	Jan 2019
"Hemispheric Assymetries", <i>Advanced Climate Dynamics Summer School - Finse, Norway</i>	Sept 2018
"Climate Dynamics with the Last Millennium Reanalysis" - NCAR, Boulder, CO	Oct 2017
"Climate Change and Population Health", <i>Program on Climate Change Summer Institute - UW, Friday Harbor, WA</i>	Sept 2017
"Last Millennium Reanalysis Workshop" - Friday Harbor Labs, WA .	Oct 2016

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## TEACHING AND SCIENCE COMMUNICATION

<b>University of Washington</b> Teaching Assistant, <i>ATMS 111: Global Warming: Understanding the Forecast</i> Instructor, <i>ATMS 220: Exploring Atmospheric Sciences</i>	Winter 2018 Spring 2020
<b>Oregon Museum of Science and Industry</b> Physics Education Intern	2013
<b>Lewis and Clark College</b> Physics Department Tutor and Grader Physics and Chemistry Lab Teaching Assistant	2011-2013 2012

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## OUTREACH AND SERVICE

<b>Department Diversity Committee Member, UW Atmospheric Sciences</b> Committee of faculty, students and staff which executes specific actions related to diversity, equity and inclusion in the department. Coordinated department-wide workshops, rewrote the application process	Fall 2017 - present
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for the graduate program with inclusivity in mind, and applied for the AGU Bridge program.

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| <b>Diversity and Inclusion Group Coordinator, UW Atmospheric Sciences</b><br>Organize and coordinate Diversity and Inclusion Group meetings and serve as a point person for diversity and inclusion efforts in the department. | Fall 2018 - present   |
| <b>Outreach Co-Coordinator, UW Atmospheric Sciences</b><br>Coordinate and train volunteers for student visits to the department and science nights in the Seattle area.  | Spring 2018 - present |
| <b>Undergraduate Mentor, UW Atmospheric Sciences</b><br>Serve as an academic, career and personal mentor to an undergraduate student as part of the department mentoring program.  | Fall 2017 - present   |
| <b>Elections Committee Member, UAW4121</b><br>Help coordinate the university-wide elections for the University of Washington academic employee's union.  | Fall 2018 - 2019      |

## SKILLS

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### Computer:

Python, C, MATLAB, R, NCO, LaTeX, Microsoft Office

### Instrumentation:

XRF, TXRF, IR-GCMS, IR Cavity ring-down spectroscopy

### Languages:

English (native), French (conversational)