

SABER E. BRASHER

Assistant Professor, Department of Geography

Oklahoma State University

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EDUCATION

2022	PhD	Climatology Department of Geography and Spatial Sciences University of Delaware, Newark, DE Dissertation: Climatology and Spatial Distribution of Northern Hemisphere Cryo-Cover Chair: Dr. Daniel J. Leathers
2017	MS	Geography Department of Geography Texas State University, San Marcos, TX Thesis: Trends and Characteristics of North Atlantic Tropical Cyclones Chair: Dr. Richard W. Dixon
2015	BS	Physical Geography Department of Geography Texas State University, San Marcos, TX Honors: Magna Cum Laude

PROFESSIONAL APPOINTMENTS

2022 -	Assistant Professor, Oklahoma State University Tenure-track appointment in the Department of Geography at OSU's main campus in Stillwater, OK.
2022	Postdoctoral Researcher, University of Delaware Funded by the Center for Environmental Monitoring and Analysis (CEMA) to analyze CMIP6 climate model output and other downscaled data products for appropriateness in creating a new Climate Change Impact Assessment for the state of Delaware.
2021 - 22	Doctoral Fellow, University of Delaware Competitive fellowship from the Graduate College to support the completion of PhD research.

- 2019 - 21 **Research Assistant, University of Delaware**
- NSF funded grant (Grant Number: 1757353) with EPSCOR to evaluate environmental big data, with a focus on water quantity and availability for the state of Delaware and development of online decision support systems using insight from those datasets.
- 2018 **Research Assistant, University of Delaware**
- Funded by the Delaware Environmental Observing System (DEOS) to investigate changes in extreme precipitation and to compile snowfall statistics for Delaware.
- 2015 - 17 **Research Assistant, Texas State University**
- Funded by the Geography Department to compile and analyze climate and environmental datasets using R and to investigate sea ice extent.

PUBLISHED MANUSCRIPTS

4. **Brasher SE**, Leathers DJ. Using Self-Organizing Maps to Detect Northern Hemisphere Cryo-Cover Transformation. (2022). *Climate Dynamics*, 1-17. <https://doi.org/10.1007/s00382-022-06394-y>
3. **Brasher SE**, Leathers DJ. Climatology of Northern Hemisphere Cryo-Cover. (2021). *International Journal of Climatology*, 1–13. <https://doi.org/10.1002/joc.7224>
2. Ballinger TJ, Hanna E, Hall RJ, Carr RJ, **Brasher SE**, Osterberg EC, Cappelen J, Tedesco M, Ding Q, Mernild SH. (2020). The role of blocking circulation and emerging open water feedbacks on Greenland cold-season air temperature variability over the last century. *International Journal of Climatology*, 1–23. <https://doi.org/10.1002/joc.6879>
1. Leathers DJ, **Brasher SE**, Brinson KR, Hughes C, Weiskopf S. (2019). A comparison of extreme precipitation event frequency and magnitude using a high-resolution rain gage network and NOAA Atlas 14 across Delaware. *International Journal of Climatology*, 3748–3756. <https://doi.org/10.1002/joc.6425>

MANUSCRIPTS IN REVIEW AND PREPARATION

3. Brinson, KR, Leathers DJ, **Brasher SE**. Influence of Synoptic Weather Conditions on Atmometers on the Delmarva Peninsula, USA. (2022). *Agricultural and Forest Meteorology*, In Review.
2. Leathers DJ, **Brasher SE**, Giesa K, Callahan T. An Analysis of the National Water Model for a Suburban Watershed. (Planned submission: October 2022). *Journal of the American Water Resources Association*, In Preparation.
1. **Brasher SE**, Leathers DJ. Cryo-Cover Transition Zones and Relationships with the Larger Atmospheric Circulation. (Planned submission: October 2022). *Climate Dynamics*, In Preparation.

TEACHING EXPERIENCE

Oklahoma State University

- 2022 Instructor of Record, Climatology
2022 Instructor of Record, Climate Change and Humanity

University of Delaware

- 2020 - 21 Instructor of Record, Climate and Life
2017 - 18 Teaching Assistant, Environmental Science Proseminar
2018 Lab Instructor, Physical Climatology
2018 Teaching Assistant, Environmental Science

Texas State University

- 2016 - 17 Lab Instructor, Physical Geography
2015 - 16 Teaching Assistant, Meteorology

GRANTS AND FELLOWSHIPS

- 2021 - 22 Mather Fellowship (\$1,300), Department of Geography and Spatial Sciences, University of Delaware (by faculty nomination)
2021 - 22 Competitive Dissertation Fellowship (\$28,000), Graduate College, University of Delaware (by faculty nomination)
2016 George D. Battle Memorial Scholarship (\$500) Supporting Research in Climatology, Geography Department, Texas State University
2015 - 16 Graduate Merit Fellowship (\$3,000), Graduate College, Texas State University (by faculty nomination)

AWARDS

- 2019 Teaching Excellence Award, Department of Geography and Spatial Sciences, University of Delaware (by faculty nomination)
2018 Woman of Promise, Department of Geography and Spatial Sciences, University of Delaware (by faculty nomination)
2017 The Elizabeth Sterry Graduate Award for Teaching, Geography Department, Texas State University (by faculty nomination)
2017 The Graduate Student Award for Outstanding Service, Geography Department, Texas State University (by faculty nomination)

CONFERENCE PRESENTATIONS

- 2019 Ballinger, T.J. (presenting author), E. Hanna, R.J. Hall, M. Tedesco, **S. Brasher**, Q. Ding, R. Carr, S. Mernild, and J. Cappelen. North Atlantic blocking regulates cold season air temperature variability over Greenland coastal and ice sheet ablation areas. *Presentation for the American Geophysical Union Annual Meeting*. San Francisco, California. December 2019.
- 2019 Ballinger, T.J. (presenting author), **Brasher, S.**, Greene, E., Hanna, E., Hall, R.J., and M. Tedesco. Atlantic Arctic Ocean, atmosphere, and sea-ice forcing of Greenland air temperature patterns since 1860. *Presentation for the American Association of Geographers Annual Meeting*. Washington, D.C. April 2019.
- 2018 Weiskopf, S (presenting author), Leathers, D., **Brasher, S.**, Brinson, K., and C. Hughes. 2018. Estimating Extreme Precipitation in Delaware. *Presentation for the Undergraduate Research Symposium*. Newark, Delaware. August 2018.
- 2017 **Brasher, S.** (presenting author) and R. Dixon. 2017. Trends and Characteristics of North Atlantic Tropical Cyclones. *Talk for the American Association of Geographers Annual Meeting*. Boston, Massachusetts. April 2017.
- 2017 Gharehchahi, S. (presenting author), **Brasher, S.**, Villa, J., Goff, P. and D. R. Butler. 2017. Traumatic Rows of Resin Ducts as a Result of Geomorphic Processes in Western North America. *Presentation for the American Association of Geographers Annual Meeting*. Boston, Massachusetts. April 2017.
- 2017 Ghaffari, Z. (presenting author), **Brasher, S.**, Hussein, M. and J. Jensen. Gradual Change in Texas Natural Ecosystem Using MODIS EVI. *Presentation for the Imaging and Geospatial Technology Forum Meeting*. Baltimore, Maryland. March 2017.
- 2016 **Brasher, S.** (presenting author) and R. Dixon. 2016. Trends and Characteristics of North Atlantic Tropical Cyclones. *Talk for the Annual Texas Geography Student Research Symposium*. San Marcos, Texas. March 2016.
- 2015 **Brasher, S.** (presenting author) and R. Dixon. 2015. Trends and Characteristics of North Atlantic Tropical Cyclones. *Presentation for the Southwest Division of the American Association of Geographers*. San Antonio, Texas. November 2015.

INVITED TALKS

- 2017 **Guest Lecturer**, Climatology undergraduate classes at Texas State University
- 2016 **Guest Speaker**, Presented on the “Wonders of Weather” for NASA’s Future Aerospace-engineers and Mathematics Academy explorations workshop to middle-school students in San Marcos, TX
- 2016 **Guest Lecturer**, Meteorology undergraduate classes at Texas State University

SERVICE

- 2022 - Member, Undergraduate Committee, Department of Geography, Oklahoma State University
- 2021 - 22 Lead Mentor, College of Earth, Ocean and Environment EmPOWER Program (Empathetic Peers Offering Wisdom, Encouragement, and Resources – Graduate peer-to-peer mentoring program), Department of Geography and Spatial Sciences, University of Delaware (elected position, 1 year term)
- 2020 - 21 Mentor, College of Earth, Ocean and Environment EmPOWER Program (Empathetic Peers Offering Wisdom, Encouragement, and Resources – Graduate peer-to-peer mentoring program), Department of Geography and Spatial Sciences, University of Delaware
- 2020 - 21 Graduate Student Representative to the Faculty, Department of Geography and Spatial Sciences, University of Delaware (elected position, 1 year term)
- 2019 - 20 Member, Academic Council, College of Earth, Ocean, and Environment, University of Delaware
- 2016 - 17 Masters Co-President of the Graduate Forum, Department of Geography, Texas State University
- 2016 - 17 Texas State Park Ambassador at Lost Maples State Natural Area, Texas State Parks and Wildlife Department

CERTIFICATES

- 2021 Scientific Writing Nature Masterclass Course, University of Delaware
- 2020 SPOT-ON Teaching and Curriculum Development, University of Delaware

AFFILIATIONS AND MEMBERSHIPS

American Geophysical Union

Association of American Geographers (2016 – 2020)