


Kevin R. Brinson

Department of Geography & Spatial Sciences
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Education

University of Delaware <i>Ph.D. in Climatology</i> Dissertation: <i>Exploring Hydroclimatic Variability in Agriculture and Water Resources Applications for the Delmarva Peninsula</i> Advisor: <i>Dr. Daniel J. Leathers</i>	Newark, DE 2023
University of Delaware <i>M.S. in Geography</i>	Newark, DE 2006
University of North Carolina – Asheville <i>B.S. in Atmospheric Science</i>	Asheville, NC 2002

Appointments

University of Delaware Assistant Research Professor, <i>Department of Geography & Spatial Sciences</i> Director of DEOS, <i>Center for Environmental Monitoring and Analysis</i> Associate State Climatologist, <i>Delaware Climate Office</i> Systems Manager, <i>Delaware Environmental Observing System</i> Research Technician, <i>Delaware Environmental Observing System</i> Graduate Research Assistant, <i>Department of Geography & Spatial Sciences</i>	2023-present 2013-present 2013-present 2009-2013 2007-2009 2003-2006
University of Maryland Visiting Faculty Specialist, <i>Department of Atmospheric & Oceanic Science</i>	2022-2023
NOAA National Climatic Data Center (now NCEI) Junior Meteorological Intern	2000-2002

Grants and Contracts (awarded since 2019)

2023

- Delaware Dept. of Natural Resources and Environmental Control, (PI) “DNREC Real-Time Pond Level Monitoring Year 10,” 12/13/23-12/31/24, \$138,000
- Delaware Dept. of Transportation, (PI) “DELDOT Snow Monitoring Yr. XII FY24,” 10/12/23 – 6/30/24, \$99,158
- Delaware Dept. of Agriculture, (PI) “Improved Usability of the Delaware Irrigation Management System,” 10/1/23 – 6/30/24, \$35,000.
- Delaware Dept. of Transportation, (Co-PI, Monique Head, PI) “Life-Cycle Assessment Sustainability Framework for Transportation Infrastructure in Delaware,” 9/26/23 – 9/25/25, \$10,637
- Delaware Dept. of Transportation, (PI) “Implementation of an Operational Low-cost Flood Sensing System in Delaware,” 3/6/23 – 8/31/24, \$100,526
- Delaware Dept. of Natural Resources and Environmental Control (PI) “DNREC Real-Time Pond Level Monitoring Year 9,” 1/17/23 – 12/31/23, \$143,106

2022

- Delaware Dept. of Transportation, (PI) “DELDOT Snow Monitoring Yr. XI FY23”, 11/1/22 – 6/30/23, \$105,334
- Delaware Emergency Management Agency, (PI) “Delaware Environmental Observing System Operations and Support,” 10/1/22 – 6/30/25, \$75,000
- Delaware DelDOT, “Predictive Flood Risk Assessment for Delaware Coastal Communities,” 8/22/22 – 8/21/24, \$161,288
- Delaware Emergency Management Agency, (PI) “DEMA/FEMA DEOS ARPA FY22 Funding,” 2/9/22 – 6/30/23, \$149,000
- Delaware Dept. of Transportation, (PI) “Flood Analysis for Woodland Beach Road,” 2/1/22 – 10/31/22, \$29,049
- Delaware Dept. of Natural Resources and Environmental Control, (PI) “DNREC Real-Time Pond Level Monitoring Year 8”, 1/5/22 – 12/31/22, \$144,413

2021

- Delaware Emergency Management Agency, (PI) “Delaware Environmental Observing System Operations and Support”, 10/1/21 – 6/30/24, \$81,200
- Delaware Dept. of Transportation (PI) “DELDOT SNOW MONITORING YR X FY22,” 9/15/21 – 6/30/22, \$90,810

2020

- Delaware Dept. of Natural Resources and Environmental Control, (PI) “DNREC Real-Time Pond Level Monitoring Year 7,” 12/1/20 – 9/30/21, \$132,356
- Delaware Emergency Management Agency, (PI) “Improvement/Upgrade for the Delaware Environmental Observing System (DEOS),” 10/1/20 – 6/30/23, \$149,000
- Delaware Emergency Management Agency, (PI) “Delaware Environment Observing System Operations and Support,” 10/1/20 – 6/30/23, \$74,820

- Synoptic Data Corp., (Co-PI, Dan Leathers, PI) "NOAA NWS National Mesonet Program," 4/7/2020 – 4/6/2025, \$465,690
- Delaware Dept. of Transportation, (PI) "Determination of Flood Elevations and Hydrology of Delaware Roadways," 3/1/20 – 10/31/20, \$46,748

2019

- Delaware Dept. of Natural Resources and Environmental Control, (PI) "DNREC Real-Time Pond Level Monitoring Year 6," 12/18/19 – 9/30/20, \$115,154
- Delaware Dept. of Transportation, (PI) "A Low-Cost Flood Sensing Pilot Project for Delaware," 11/1/19 – 6/30/21, \$78,304
- Delaware Dept. of Natural Resources and Environmental Control, (Co-PI, John Callahan, PI) "Storm Surge and High Tide Relationships in Development of a Delaware Inland Bays Coastal Flood Warning System," 10/1/19 – 2/28/22, \$79,580
- Delaware Dept. of Transportation, (PI) "DelDOT Snow Monitoring Year XIII FY20," 9/26/19 – 6/30/20, \$90,305
- Delaware Emergency Management Agency, (PI) "Delaware Environment Observing System Operations and Support," 7/1/19 – 6/30/21, \$74,820
- Delaware Center for Inland Bays, (PI) "Enhancement of Volunteer Water Quality Monitoring in Delaware Inland Bays Year 2," 2/1/19 – 4/30/20, \$21,757
- Delaware Dept. of Natural Resources and Environmental Control, (PI) "Optimal Irrigation Model for Irrigated Farmland in Delaware," 7/1/19 – 6/30/20, \$70,583

Publications

Brinson, Kevin R., Tracy L. DeLiberty, Daniel J. Leathers. "Estimating Agricultural Irrigated Water Usage for Delaware, USA." *Journal of Applied and Service Climatology (In Press)*

Brinson, Kevin R., Daniel J. Leathers, and Saber E. Brasher. "Influence of synoptic weather conditions on atmometers on the Delmarva Peninsula, USA." *Agricultural and Forest Meteorology* 336 (2023): 109482. <https://doi.org/10.1016/j.agrformet.2023.109482>

Fiebrich, C, **K. Brinson**, R. Mahmood, S. Foster, M. Schargorodski, N. Edwards, C. Redmond, J. Atkins, J. Andresen, X. Lin (2020) Towards the Standardization of Mesoscale Meteorological Networks. *J. Atmos. Oceanic Technol.*, **37**, 2033–2049, <https://doi.org/10.1175/JTECH-D-20-0078.1>.

Leathers, DJ, Brasher, SE, **Brinson, K**, 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. *Int J Climatol.*; 40: 3748– 3756. <https://doi.org/10.1002/joc.6425>

Mahmood, R., R. Boyles, **K. Brinson**, C. Fiebrich, S. Foster, K. Hubbard, D. Robinson, J. Andresen, D. Leathers (2016) Mesonets: Meso-Scale Weather and Climate Observations for the U.S. *Bull. Amer. Meteor. Soc.*, 98, 1349–1361. <https://doi.org/10.1175/BAMS-D-15-00258.1>.

Klingaman, N.P., Butke, J., Leathers, D.J., **Brinson, K.**, and Nickl, E. (2008) Mesoscale simulations of the land-surface effects of historical logging in a moist continental climate regime. *Journal of Applied Meteorology and Climatology*. Vol. 47, 2166-2182

Conference Presentations (first author)

“Leveraging Mesonets to Develop Diverse Environmental Decision Support Systems”, Paper presented at the 28th Conference on Applied Climatology, Baltimore, MD, January 2024.

“Overview of an AASC Mesonet Recognition Program”, Presentation given at the AASC Annual Meeting, Nashville, TN, June 2023

“Estimating Irrigated Water Usage in Delaware”, Presentation given at the 2022 AASC Annual Meeting in Durham, NH, June 2022.

“A Comparison of Extreme Precipitation Event Frequency and Magnitude Using a High-Resolution Rain Gauge Network and NOAA Atlas 14 across Delaware”, Presentation given at the 2019 AASC Annual Meeting, Santa Rosa, CA, June 2019.

“Weather Decision Support in Agriculture in Delaware”, Presentation given at the 24th Annual Mid-Atlantic Crop Management School, Ocean City, MD, November 2018.

“Supporting Ag Weather Decisions in Delaware”, Presentation given at the Northeast Climate Hub Partners Meeting, New Brunswick, NJ, March 2018.

“Real-time Snow Monitoring in Delaware: Lessons Learned”, Presentation given at the 2017 AASC Annual Meeting, Asheville, NC, June 2017.

“Decision Support Tools for Agriculture in Delaware”, Poster presented at the Weather & Climate Decision Tools for Farmers, Ranchers, & Land Managers Conference, Gainesville, FL, December 2016.

“DEOS: A Grassroots Mesonet”, Presentation given at the 2016 AASC Annual Meeting, Santa Fe, NM, June 2016.

“2016 Delaware Climate Office State Report”, Presentation given at the 2016 AASC Annual Meeting, Santa Fe, NM, June 2016.

“An A Priori Approach to Quality Control Tipping Bucket Rain Gauge Data”, Paper presented at the 17th Symposium on Meteorological Observations and Instrumentation, Westminster, CO, June 2014.

“The Delaware Coastal Flood Monitoring System”, Paper presented at the 2013 Delaware Estuary Science and Environmental Summit, Cape May, NJ, January 2013.

“The Delaware Coastal Flood Monitoring System”, Paper presented at the 2012 Delaware Wetlands Conference. Dover, DE, February, 2012.

“The Delaware Snow Monitoring Network”, Paper presented at the 2011 Workshop on Snowfall Observations and Products in the 21st Century: Meeting the Needs of FEMA and the Climate Community. Estes Park, CO, May 2011.

“An examination of the gage-radar relationship with respect to frontal boundaries” Poster presented at the 21st Conference on Weather Analysis and Forecasting, Washington, D.C., August 2005.

“An improved approach to real-time radar calibration”, Paper presented at the Annual Meeting of the American Association of American Geographers, Philadelphia, PA, March 2004.

Service and Committee Positions

Current:

- Chair, American Association of State Climatologists Mesonet Committee (2020-present)
- Associate Editor, Journal of Service and Applied Climatology (2020-present)
- Member, Delaware Environmental Institute Internal Advisory Board (2024-present)
- Member, Delaware Sea Grant Advisory Board (2023-present)
- Member, University of Delaware Climate Hub Advisory Board (2023-present)

Past:

- Session Co-Chair, 28th Conference on Applied Climatology, Baltimore, MD
- Organizing Chair, 2023 American Association of State Climatologists Mesonet Community Meeting in Davenport, IA
- Member, National Mesonet Program Advisory Board (2021-2023)
- Chair, Delaware Environmental Monitoring and Coordination Council (2018-2022)
- Member, American Meteorological Society Measurements Committee (2014 – 2019)

Awards and Honors

Academic:

NASA Space Grant Competitive Fellowship, 2005-2006 & 2006-2007

Award for Outstanding Accomplishment in Research, Department of Geography, University of Delaware, 2005-2006.

University of Delaware Graduate Entrance Fellowship, 2002-2003

Oak Ridge Institute for Science and Education Summer Research Internship, 2000

University of North Carolina at Asheville Undergraduate Research Fellow Scholarship, 1998-2002

Other:

Eagle Scout, Boy Scouts of America, 1994