# Paul W. Miller

Department of Oceanography and Coastal Sciences
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## EDUCATION

| | |
|---|---|
| 2017 | Ph.D., Geography, University of Georgia |
| 2014 | M.S., Geography, Virginia Tech |
| 2012 | B.S., Meteorology, Virginia Tech |
| 2012 | B.A., Geography, Virginia Tech |

## ACADEMIC APPOINTMENTS

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|---|---|
| 2021–present | Associate Director, LSU Earth Scan Lab |
| 2019–present | Assistant Professor, Department of Oceanography and Coastal Science, Louisiana State University |
| 2018 | Postdoctoral Research Associate, Department of Geography, University of Georgia |
| 2014–2017 | Presidential Fellow, Graduate School, University of Georgia |
| 2016–2017 | Graduate Research Assistant, Department of Geography, University of Georgia |
| 2012–2014 | Graduate Teaching Assistant, Department of Geography, Virginia Tech |

## RESEARCH AND TEACHING INTERESTS

Coastal meteorology; Applied meteorology and climatology; Mesoscale climate science; Disorganized convection; Land-atmosphere interactions; Severe weather impacts

## JOURNAL PUBLICATIONS (30 Total) (advisees; +undergraduate)

### Published or forthcoming

2022 Bilskie, M. V., T. G. Asher, **P. W. Miller**, J. G. Fleming, S. C. Hagen, and R. A. Luettich: Real-time simulated storm surge predictions during Hurricane Michael (2018). *Weather and Forecasting*, **37**, 1085–1102

2022 Forney, R., N. Debbage, **P. W. Miller**, and J. Uzquiano: Urban effects on weakly forced thunderstorms observed in the Southeast United States. *Urban Climate*.

2022 Villarini, G., W. Zhang, **P. W. Miller,** L. Grimley, and H. Roberts: Development of an ensemble generator of rainfall associated with tropical cyclones affecting Louisiana. *International Journal of Climatology*, **42**, 1789–1802.

2021 Ramseyer, C.A., and **P. W. Miller**: Historical Variability in the Trade Wind Inversion in the tropical North Atlantic Ocean and Caribbean. *International Journal of Climatology,* **41**, 5752–5765.

2021 **Miller, P. W.**, and J. Trepanier: Predicting the Gulf of Mexico Hurricane Season with 500-hPa Temperature. *Geophysical Research Letters*, **48**, e2021GL094741.

2021 **Miller, P. W.**, C. Reesman, M. Grossman, S. Nelson, V. Liu+, and P. Wang: Marginal warming associated with a COVID-19 quarantine and its implications for disease transmission. *Science of the Total Environment*, **780**, 146579.

2021 Reesman, C., **P. W. Miller**, R. D'Antonio[+], K. Gilmore, B. Schott, and C. Bannan: Areal Probability of Precipitation in Moist Tropical Air Masses for the United States. *Atmosphere*, **12**, 255.

2021 **Miller, P. W.**, M. Williams, and T. L. Mote: Modeled Atmospheric Optical and Thermodynamic Responses to an Exceptional Trans-Atlantic Dust Outbreak. *Journal of Geophysical Research: Atmospheres*, **126**, e2020JD032909.

2020 Vega, T., **P. W. Miller**, R. Rohli, J. Heavilin: Synoptic Climatology of Nuisance Flooding along the Atlantic and Gulf of Mexico Coasts, USA. *Natural Hazards*, **105**, 1281–1297.

2020 **Miller, P. W.**, and C. A. Ramseyer: Did the Climate Forecast System anticipate the 2015 Caribbean drought? *Journal of Hydrometeorology*, **21**, 1245–1258.

2019 **Miller, P. W.**, T. L. Mote, A. Kumar, and D. R. Mishra: Systematic precipitation redistribution following a strong hurricane landfall. *Theoretical and Applied Climatology*, **139**, 861–872.

2019 **Miller**, **P. W.**, A. Kumar, F. D. S. Moraes, T. L. Mote, and D. R. Mishra: Persistent hydrological consequences of Hurricane Maria in Puerto Rico. *Geophysical Research Letters*, **46**, 1413–1422.

2019 **Miller, P. W.**, T. L. Mote, and C. A. Ramseyer: An empirical study of the relationship between seasonal precipitation and thermodynamic environment in Puerto Rico. *Weather and Forecasting*, **34**, 277–288.

2019 Ramseyer, C. A., **P. W. Miller**, and T. L. Mote: Future precipitation variability during the early rainfall season in El Yunque National Forest. *Science of the Total Environment*, **661,** 326–336.

2018 **Miller, P. W.**, T. L. Mote, C. A. Ramseyer, A. E. Van Buesekom, M. Scholl, and G. Gonzalez: A 42-yr Assessment of Cloud Base Height in the Luquillo Mountains of Eastern Puerto Rico. *Climate Research*, **76**, 87–94.

2018 **Miller, P. W.**, and T. L. Mote: The algorithmic detection of pulse thunderstorms within a large, mostly nonsevere sample. *Meteorological Applications*, **24**, 629–641.

2018 **Miller, P. W.**, and T. L. Mote: Characterizing severe weather potential in synoptically weakly forced thunderstorm environments. *Natural Hazards and Earth System Sciences*, **18**, 1261–1277.

2017 Mote, T. L., C. A. Ramseyer, and **P. W. Miller**: The Saharan Air Layer as an early rainfall season suppressant in the eastern Caribbean: The 2015 Puerto Rico drought event. *Journal of Geophysical Research*, **122**, 10966–10982.

2017 **Miller, P. W.**, and T. L. Mote: A climatology of weakly forced and pulse thunderstorms in the Southeast United States. *Journal of Applied Meteorology and Climatology*, **56**, 3017–3033.

2017 **Miller, P. W.**, and T. L. Mote: Standardizing the definition of a "pulse" thunderstorm. *Bulletin of the American Meteorological Society*, **98**, 905–913.

2017 Mattingly, K. S., P. L. Seymour, and **P. W. Miller**: Estimates of extreme rainfall frequency in urban areas derived from spatially dense rain gauge observations. *Annals of the American Association of Geographers*, **107**, 1499–1518.

2017 Debbage, N., **P. W. Miller**, S. E. Poore, K. Morano, T. L. Mote, and J. M. Shepherd: A climatology of atmospheric river interactions with the Southeastern United States coastline. *International Journal of Climatology*, **37**, 4077–4091.

2017 Williams, C. A., **P. W. Miller**, A. W. Black, and J. A. Knox: Throwing caution to the wind: National Weather Service wind products as perceived by a weather-salient sample. *Journal of Operational Meteorology*, **5**, 103–120.

2017 Grundstein, A. J., J. M. Shepherd, **P. W. Miller**, and S. E. Sarnat: The role of mesoscale-convective processes in explaining the 21 November 2016 epidemic thunderstorm asthma in Melbourne, Australia. *Journal of Applied Meteorology and Climatology*, **56**, 1337–1343.

2016 **Miller, P. W.**, A. W. Black, C. A. Williams, and J. A. Knox: Quantitative assessment of human wind speed overestimation. *Journal of Applied Meteorology and Climatology*, **55**, 1009–1020.

2016 Ellis, A. W., and **P. W. Miller**: The emergence of lightning in severe thunderstorm prediction and the possible contributions from spatial science. *Geography Compass*, **10**, 192–206.

2016 **Miller, P. W.**, A. W. Black, C. A. Williams, and J. A. Knox: Maximum wind gusts associated with human-reported nonconvective wind events and a comparison to current warning issuance criteria. *Weather and Forecasting*, **31**, 451–465.

2015 **Miller, P. W.**, A. W. Ellis, and S. Keighton: Spatial distribution of lightning associated with low-shear thunderstorm environments in the central Appalachians region. *Physical Geography*, **36**, 127–141.

2015 **Miller, P. W.**, A. W. Ellis, and S. Keighton: The utility of total lightning trends in diagnosing single-cell thunderstorm severity: Examples from the central Appalachians region. *Journal of Operational Meteorology*, **3**, 82–98.

2015 **Miller, P. W.**, A. W. Ellis, and S. Keighton: A preliminary assessment of using spatiotemporal lightning patterns for a binary classification of thunderstorm mode. *Weather and Forecasting*, **30**, 38–56.

**Under review or in preparation**

In review Reesman, C. and **P. W. Miller**: Elevated Heat Indices Resulting from Hurricane-Related Defoliation: A Case Study. *International Journal of Biometeorology*.

In review Nelson, S. A., and **P. W. Miller**: Meteorological changes resulting from severe defoliation during a strong hurricane landfall. *Earth Interactions*.

In review Midway, S. and **P.W. Miller**: Too hot to fish? Effects of weather, hurricanes, and COVID-19 on angling effort. *PLOS One*.

In review Bushra, N., R. Rohli, C. Li, and **P. W. Miller**: Changing features of the Northern Hemisphere 500-hPa circumpolar vortex. *Frontiers in Big Data*.

In preparation **Miller, P. W.**, C. Li, K. Xu, S. Caparotta, and R. Rohli: The evolution of the 2021 *Seacor Power* tragedy. *Weather and Forecasting*.

## EXTERNALLY FUNDED RESEARCH

Under review Ates, S. B., Miller, P. (Co-PI), J. White, and Maiti, K. *Human exposure forecasts to future cyanobacteria toxicity: Predicting species shifts, potency, and modality along the freshwater-to-marine continuum in a changing climate.* National Institutes of Health ($1,560,542).

Under review Miller, P. (PI), S. Midway, J. White, M. Dance, and M. Baustian. *A fresh set of tools: New information for managing fisheries during changes in river discharge.*

United States Geological Survey ($298,781).

Under review Miller, P. (PI). *CAREER: From Dust to Drought: Understanding the Multi-Scale Relationship between the Saharan Air Layer and Caribbean Water Stress.* National Science Foundation ($496,244).

Under review Miller, P. (PI). *Forecasting from the past: A modern meteorological reconstruction of the devastating Mississippi River Flood of 1927.* Coypu Foundation ($44,316).

Under review Wang, W.-H., Y.-H. Kim, and P. Miller (Co-PI). *Microphysical Behavior and Transport of Hygroscopic Radiological Debris.* Nuclear Regulatory Commission ($460,178).

2021–2023 Willson, C., B. Mitchell, and P. Miller (Co-PI). *State of Louisiana Emergency Operations Center Realtime Flood Forecasting.* The Water Institute of the Gulf ($124,409).

2021–2023 Miller, P. (PI). *Gulf Research Program Early Career Research Fellowship.* National Academies of Science, Engineering, and Medicine ($76,000).

2021–2022 Miller, P. (subcontract on large multi-institution, multi-investigator project). *Delta-X*. National Aeronautics & Space Administration ($9,420).

2020–2023 Mote, T., P. Miller (Co-PI), C. Ramseyer, and G. Gonzalez. *Understanding the Mechanisms Leading to Early Warning of Meteorological and Hydrological Drought in the U.S. Caribbean.* National Oceanic and Atmospheric Administration (Total: $507,198; LSU: $151,539).

2020–2023 Shepherd, M., D. Niyogi, M. Jin, L. Ott, Z. Tao, T. Mote, C. Mitra, J. Santanello, P. Miller (Co-I), N. Debbage, and B. Johnson. *Towards Conceptualization and Predictability: A Multi-scalar Analysis of Urban-Influenced Hydrometeorological Processes*. National Aeronautics & Space Administration (Total: $1,753,632; LSU: $199,539).

2020–2021 Miller, P (PI). *RAPID: Coronavirus-driven aerosol reductions in East Asia and the effect on atmospheric dynamics*. National Science Foundation ($128,339).

2020–2021 Miller, P. (PI). *Empirical Probability of Precipitation in Weakly Forced Environments.* University Corporation for Atmospheric Research ($14,987).

2019–2020 Hagen, S. and P. Miller (Co-PI). *Coastal Flood Transition Zone Advisement.* The Water Institute of the Gulf ($36,222).

2018 Miller, P. (PI), T. Mote, and D. Mishra. *Persistent hydrological consequences of hurricane interactions with the Georgia coastline*. Georgia Sea Grant ($10,000).

## OPERATIONAL ACTIVITIES

2020–2022 *ADCIRC Surge Guidance System.* Provide daily meteorological briefings during active tropical cyclone systems in the North Atlantic basin to inform the initialization of ocean hydrodynamic models that predict coastal storm surge inundation.

2021 *Delta-X*, Jet Propulsion Laboratory, National Aeronautics & Space Administration. Led daily weather briefings for Delta-X field teams and aerial assets during three-week field campaign in coastal Louisiana. Advised next-day and near-term cloud cover, visibility, surface wind conditions, and precipitation probability.

**CONFERENCE ACTIVITIES** (advisees; [+]undergraduate)

2022 Ramseyer, C., **P.W. Miller**, C. Johnson, T. Mote, F. D. S. Moraes, and T. Gingrich: Preferred Pathways of the Saharan Air Layer and Impacts on Caribbean Precipitation and Drought. *AGU Frontiers in Hydrology*. June 19–24, 2022, San Juan, PR.

2022 Villarini, G., W. Zhang, **P. W. Miller**, D. Johnson, L. Grimley, and H. Roberts: Probabilistic rainfall generator for tropical cyclones affecting Louisiana. *AGU Frontiers in Hydrology*. June 19–24, 2022, San Juan, PR.

2022 **Miller, P.W.**, C. Ramseyer, and C. Johnson: Preferred Saharan air layer pathways across the tropical North Atlantic. *Annual Meeting of the American Meteorological Society.* January 23–28, 2022, Houston, TX.

2022 **Miller, P. W.**, C. Li, K. Xu, S. Caparotta, and R. Rohli: The Evolution of the 2021 *SEACOR Power* Tragedy. *Annual Meeting of the American Meteorological Society*. January 23–28, 2022, Houston, TX.

2022 Forney, R., **P. W. Miller**, N. Debbage, and J. Uzquiano: Urban effects on weakly forced thunderstorms observed among Southeast United States cities. *Annual Meeting of the American Meteorological Society.* January 23–28, 2022, Houston, TX.

2022 Reesman, C., and **P. W. Miller**: Changes in Heat Metrics Following Major Hurricanes and Implications on Heat Stress. *Annual Meeting of the American Meteorological Society*. January 23–28, 2022, Houston, TX.

2021 **Miller, P.W.**, C. Ramseyer, and C. Johnson: Preferred Saharan air layer pathways across the tropical North Atlantic. *Annual Meeting of the American Geophysical Union*. December 13–17, 2021, New Orleans, LA.

2021 Reesman, C., and **P. W. Miller**: Hydrometeorological changes associated with a COVID-19 quarantine in China. *Annual Meeting of the American Geophysical Union*. December 13–17, 2021, New Orleans, LA.

2021 Forney, R., **P. W. Miller**, N. Debbage, and J. Uzquiano: Urban effects on weakly forced thunderstorms observed among Southeast United States cities. *Annual Meeting of the American Geophysical Union*. December 13–17, 2021, New Orleans, LA.

2021 Reesman, C., and **P. W. Miller**: Changes in heat metrics following major hurricanes and implications on heat stress. *76th Annual Meeting of the Southeastern Division of the American Association of Geographers*. November 22–23, 2021, Florence, AL.

2021 **Miller, P.W.**, M. Grossman, S. A. Nelson, C. Reesman, and V. Liu[+]: China's COVID-19 Quarantine Marginally Exacerbated a Warm February 2020. *101st Annual Meeting of the American Meteorological Society*. January 9–15, 2021. Virtual meeting.

2021 Forney, R., **P. W. Miller**, and N. Debbage: Ranking the Urban Rainfall Effects of Southeastern US Cities. *101st Annual Meeting of the American Meteorological Society*. January 9–15, 2021. Virtual meeting.

2021 Reesman, C., **P. W. Miller**, R. D'Antonio[+], K. Gilmore, B. Schott, and C. Bannan: Empirical Probability of Precipitation (PoP) in Weakly Forced Environments. *101st Annual Meeting of the American Meteorological Society*. January 9–15, 2021. Virtual meeting.

2021 Nelson, S. A., and **P. W. Miller**: Responses to Changed Land Surface Conditions following Hurricane Landfall. *101st Annual Meeting of the American Meteorological Society*. January 9–15, 2021. Virtual meeting.

2021 **Miller, P.W.**, and C. Ramseyer: Anticipating the 2015 Caribbean drought using the Climate Forecast System. *101st Annual Meeting of the American Meteorological Society*. January 9–15, 2021. Virtual meeting.

2021 Bushra, N., R. Rohli, C. Li, and **P. W. Miller**: A Pilot Study of Contrasting Areal Changes of the Northern and Southern Hemisphere Circumpolar Vortices. *101st Annual Meeting of the American Meteorological Society*. January 9–15, 2021. Virtual meeting.

2020 **Miller, P.W.**, C. Reesman, M. Grossman, S. Nelson, and V. Liu: China's COVID-19 Quarantine Marginally Exacerbated a Warm February 2020. *Annual Meeting of the American Geophysical Union*. December 1–17, 2020. Virtual meeting.

2019 **Miller, P.W.**, A. Kumar, T. Mote, F. D. S. Moraes, and D. Mishra: Systematic precipitation redistribution following a strong hurricane landfall. *115th Annual Meeting of the American Association of Geographers*. April 3–7, 2019, Washington, D.C.

2019 Garmong, R., **P. W. Miller**, J. Knox: A WRF sensitivity study on optimizing precipitation forecasting in an operational context. *99th Annual Meeting of the American Meteorological Society*. January 6–10, 2019, Phoenix, AZ.

2019 Van Buesekom, A., G. Gonzalez, F. D. S. Moraes, J. Bucher, A. Walz, **P. W. Miller**, T. Mote, M. Scholl: Changes seen in land-atmosphere interaction after a large hurricane. *99th Annual Meeting of the American Meteorological Society*. January 6–10, 2019, Phoenix, AZ.

2018 **Miller, P. W.** and T. L. Mote: Characterizing severe weather potential in synoptically weakly forced thunderstorm environments. *114th Annual Meeting of the American Association of Geographers*. April 5–9, 2018, New Orleans, LA.

2018 **Miller, P. W.**, T. L. Mote, C. A. Ramseyer, A. E. Van Buesekom, and G. Gonzalez: A 42-yr Assessment of Cloud Base Height Trends in the Luquillo Mountains of Eastern Puerto Using Radiosonde Observations from San Juan. *98th Annual Meeting of the American Meteorological Society*. January 7–11, 2018, Austin, TX.

2017 **Miller, P. W.** and T. L. Mote: A climatology of weakly forced and pulse thunderstorms in the Southeast United States. *113th Annual Meeting of the American Association of Geographers*. April 5–9, 2017, Boston, MA.

2017 **Miller, P. W.** and T. L. Mote: A climatology of weakly forced and pulse thunderstorms in the Southeast United States. *97th Annual Meeting of the American Meteorological Society*. January 22–26, 2017, Seattle, WA.

2016 **Miller, P. W.** and T. L. Mote: A climatology of weakly forced thunderstorms in the Southeastern U.S. *71st Annual Meeting of the Southeastern Division of the Association of American Geographers*. November 20–22, 2016, Columbia, SC.

2016 **Miller, P. W.** and T. L. Mote: The utility of the term "pulse" within the thunderstorm mode nomenclature. *112th Annual Meeting of the American Association of Geographers*. March 28–April 2, 2016, San Francisco, CA.

2016 **Miller, P. W.** and T. L. Mote: Applications of the term "pulse" as a thunderstorm mode descriptor. *96th Annual Meeting of the American Meteorological Society*. January 10–14, 2016, New Orleans, LA.

2016 **Miller, P. W.**, A. W. Black, C. A. Williams, and J. A., Knox: Estimating in "vane": A quantitative description of wind speed overestimation by human observers versus instrument measurements. *96th Annual Meeting of the American Meteorological Society*. January 10–14, 2016, New Orleans, LA.

2014 **Miller, P. W.**, and T. L. Mote: Usage of the term "pulse" as a thunderstorm mode descriptor in Storm Prediction Center convective outlooks. *69th Annual Meeting of the Southeastern Division of the Association of American Geographers*. November 23–25, 2014, Athens, GA.

2013 **Miller, P. W.**, and A. W. Ellis: A meteorological application of cluster analysis: The identification of low-shear, high-instability environments using total lightning data. *68th Annual Meeting of the Southeastern Division of the Association of American Geographers*. November 24–26, 2013, Roanoke, VA.

## MEDIA ENGAGEMENTS

### Research or Instructional Spotlights

2022 *Not your average thunderstorms*. Louisiana: The State We're In. Louisiana Public Broadcasting, 24 June 2022. https://www.youtube.com/watch?v=0pnrFaxr-0k

2022 *New Orleans leads South in producing extra thunderstorms from urban heat, smog*. The New Orleans Times-Picayune, 17 June 2022. https://www.nola.com/news/environment/article_74c65502-ee59-11ec-9d1a-5795d5c6df23.html

2021 *New Model Could Help Predict Gulf of Mexico Hurricanes*. AGU Press Release, 16 September 2021. https://news.agu.org/press-release/new-model-could-help-predict-gulf-of-mexico-hurricanes/.
*Versions of this press release were featured in newspapers nationwide, including, the Houston Chronicle, Miami Herald, Charlotte Observer, and Fort Worth Star-Telegram.

2020 *Did clean air during COVID-19 lockdowns impact the weather?* AccuWeather, 20 May 2020. https://www.accuweather.com/en/videos/did-clean-air-during-covid-19-lockdowns-impact-the-weather/OtDlaXbi.

2019 *Movie 'Frozen' inspires atmospheric modeling classwork*. Associated Press, 23 November 2019. https://apnews.com/7225221683ee4f43b01e44a03839dafc.
*This AP story was featured in at least 35 news outlets nationwide, including U.S. News and World Report, The San Francisco Chronicle, Washington Times, Houston Chronicle, Miami Herald, Charlotte Observer, and Kansas City Star.

2019 *A professor used the movie "Frozen" as a climate lesson - It worked*. Forbes, 21 November 2019. https://www.forbes.com/sites/marshallshepherd/2019/11/21/a-professor-used-the-movie-frozen-as-a-climate-lessonit-worked/#794bac037429.

2016 *Humans Misread Wind Speeds, Skewing a Major Hazards Database*. Eos, 6 June 2016. https://eos.org/articles/humans-misread-wind-speeds-skewing-a-major-hazards-database.

### Comments, Quotes, or References

2022 *Hurricane Ian*. Louisiana: The State We're In. Louisiana Public Broadcasting, 7 October 2022. https://www.youtube.com/watch?v=OJWaKNkICsU

2022 *Why are Tampa's Hurricane Ian flood risks similar to New Orleans' own hurricane woes? Geography.* New Orleans Times-Picayune, 28 September 2022. https://www.nola.com/news/hurricane/article_d803c066-3eac-11ed-8539-2705f1d3d714.html.

2022 *Hurricane Ian's rapid intensification is a sign of the world to come.* Vox, 28 September 2022. https://www.vox.com/science-and-health/2022/9/28/23376761/hurricane-ian-rapid-intensification-climate-change.

2022 *How a Category 1 hurricane did so much damage in Puerto Rico.* Vox, 19 September 2022. https://www.vox.com/energy-and-environment/2022/9/19/23360769/puerto-rico-hurricane-fiona-flooding.

2022 *Heat Wave Fuels Hurricane Concerns*. Louisiana: The State We're In. Louisiana Public Broadcasting, 22 July 2022. https://www.youtube.com/watch?v=66XjU7DdUAQ

2022 *Hurricane season 2022*. Louisiana: The State We're In. Louisiana Public Broadcasting, 3 June 2022. https://www.youtube.com/watch?v=d5YPo36pOBo

2022 *Gulf of Mexico 2022 Hurricane Season Outlook.* Fox Weather, 2 June 2022.

2022 *LSU model predicts above-average storm count for 2022 hurricane season.* Louisiana Radio Network, 31 May 2022. https://louisianaradionetwork.com/2022/05/31/lsu-model-predicts-above-average-storm-count-for-2022-hurricane-season/.

2021 *Eye of the storm*. BBC Science Focus magazine. October 2021. https://issuu.com/trifenmirino/docs/bbc_science_focus_no._369_october_2021_

2021 *With a Month Left, the Pacific Hurricane Season Reaches 16 Storms.* New York Times, 13 October 2021. https://www.nytimes.com/2021/10/13/climate/pacific-storms-risk.html.

2021 *Hurricane predictions*. Louisiana: The State We're In. Louisiana Public Broadcasting, 24 September 2021. https://www.youtube.com/watch?v=Ec2MkywtC6g&t=1035s

2021 *Gulf of Mexico Hurricane Forecasts.* Fox Weather, 21 September 2021.

2021 *LSU researchers find way to better predict hurricane activity in the Gulf*. BR Proud/Fox 44/NBC 33. 17 September 2021. https://www.brproud.com/news/local-news/lsu-researchers-find-way-to-better-predict-hurricane-activity-in-the-gulf/.

2021 *Climate change is making hurricanes stronger, slower and wetter. Ida checked all the boxes.* CNN, 30 August 2021. https://www.cnn.com/2021/08/30/weather/hurricane-ida-climate-change-factors/index.html.

2021 *BBC World News Nightly Broadcast.* BBC World News, 28 August 2021. Live Zoom interview about imminent landfall of Hurricane Ida for UK audience.

2020 *Storms complicate fight against coronavirus pandemic.* The Washington Times, 2 August 2020. https://www.washingtontimes.com/news/2020/aug/2/storms-complicate-fight-against-coronavirus-pandem/.

2020 *New Orleans air pollution plummeted during coronavirus shutdown, but how long will it last?* The New Orleans Times-Picayune, 21 May 2020.

https://www.nola.com/news/coronavirus/article_a07399fa-9ad5-11ea-b6ec-27c951b355e5.html.

2019 *Using facial recognition technology for... hailstorms?* The Washington Post, 22 August 2019. https://www.washingtonpost.com/weather/2019/08/22/using-facial-recognition-technology-hailstorms/.

## INVITED PRESENTATIONS

2022 *Keynote Presentation.* Annual meeting of the South-Central Climate Adaptation Science Center. Baton Rouge, LA. 8 November 2022.

2022 *Flash drought dynamics and early warning systems in the Caribbean.* Annual meeting of the Caribbean Drought Learning Network. San Juan, PR. 9 September 2022.

2022 *Living with Floods and Hurricanes.* LSU Science Café. Baton Rouge, LA. 30 August 2022.

2021 *Geoscience MBA: Managing your weaknesses in graduate school.* 20th Annual Student Conference at the 101st Annual Meeting of the American Meteorological Society. Virtual Meeting. 9 January 2021.

2014 *The utility of total lightning in diagnosing pulse-type thunderstorm severity in the Central Appalachian Mountains region*, National Weather Service (NWS) Eastern Region Scientific Services Division nation-wide webinar, 7 May 2014.

## HONORS AND AWARDS

2021-Present Fellow, Coastal Studies Institute, Louisiana State University

2019-2021 Fellow, Louisiana Sea Grant LaDIA program

2019 Top Downloaded Paper in *Geophysical Research Letters* ("Persistent hydrological consequences of Hurricane Maria in Puerto Rico" resided in the 90th percentile of total reads during the 12 months following publication.)

2014–2017 Presidential Fellow, Graduate School, University of Georgia

## TEACHING EXPERIENCE

**Louisiana State University**

OCS 1006 || Honors: Introduction to Oceanography (Spring 2020, 2021, 2022)
OCS 2013 || Extreme Coastal Weather (Fall 2021)
OCS 3999 || Undergraduate Research (Spring 2021, 2022)
OCS 7016 || Modeling the Marine Atmosphere (Fall 2019, Fall 2020, Fall 2021)
HNRS 2000 || Honors: Louisiana, Paradise Lost? (Fall 2020)
HNRS 1036 || Extreme Coastal Weather (Fall 2022)

**University of Georgia**

ATSC 3120 || Weather Analysis and Forecasting (Fall 2016, 2018)

**Virginia Tech**

GEOG 3516 || Dynamic Meteorology II (Spring 2014)
GEOG 3515 || Dynamic Meteorology I (Fall 2013)

## STUDENT MENTORSHIP

**Students advised**

Robert Forney, PhD (expected 2025)
Marcus Watkins, MS (expected 2024)
Philip Johnson, MS (expected 2023)
Cade Reesman, MS (2022)
Lexi Nelson, MS (2021)

**Ph.D. committee member**

Suzanne Rice (expected 2025)
Luke Sawyer (expected 2024)
Wenjia Cao (expected 2024)
Nick Culligan (expected 2022)
Madhusudan Kamat (2022)
Dongxiao Yin (2022)
Nazla Bushra (2021)
Daniel Willis (2021)

**M.S. committee member**

Gabby Fiagnar (expected 2022)
Pengfei Wang (2022)
Tyler Gingrich (Virginia Tech; 2022)
Alexandria Leake (2020)

## SERVICE TO PROFESSION AND COMMUNITY

**Professional**

| | |
|---|---|
| 2022 | USGS Climate Adaptation Scientists of Tomorrow career panel organizer |
| 2021 | NASA Precipitation Measurement Mission Science Team panel reviewer |
| 2020-present | NOAA Drought Task Force IV member |
| 2019-present | Editorial Board member, *Atmosphere* |
| 2019-2021 | Honors Director, Climate Specialty Group, American Association of Geographers |
| 2016–present | Reviewer, Proceedings of the *National Academy of the Sciences, Environmental Pollution, Scientific Reports, Journal of Climate, Atmospheric Chemistry and Physics, Weather and Forecasting, Journal of Hydrometeorology, Journal of Applied Meteorology and Climatology, Journal of Geophysical Research: Atmospheres, Estuarine, Coastal, and Shelf Science; Earth and Space Science, International Journal of Climatology, Physical Geography, Natural Hazards, Atmosphere, Water, Frontiers of Earth Science, Professional Geographer* |

**University**

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|---|---|
| 2020-present | Ogden Honors College Faculty Advisory Board member |
| 2022 | LSU Flagship Strategic Plan Working Group #6: Business and Operations, member |

**Departmental**

| | |
|---|---|
| 2022-present | Chair, DOCS Webpage committee |
| 2020-2022 | DOCS Webpage committee |
| 2019-present | DOCS Academic Affairs committee |

## PROFESSIONAL AFFILIATIONS

2015–present American Association of Geographers (AAG)
2015–present Climate Specialty Group of the AAG
2013–present Southeastern Division of the Association of American Geographers (SEDAAG)
2013–present American Meteorological Society (AMS)
2012–present Phi Beta Kappa