

Jen Henderson  
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## EDUCATION

Ph.D. Science and Technology Studies, Virginia Tech, 2016  
Interdisciplinary Graduate Education Program in Remote Sensing

Dissertation Title: “To Err on the Side of Caution:” Ethical Dimensions of the National Weather Service Warning Process. Advisors: Dr. Gary Downey and Dr. Saul Halfon  
Certificates: The Future Professoriate, Remote Sensing

## PROFESSIONAL APPOINTMENTS

2021-Present Assistant Professor, Geosciences, Texas Tech University, Lubbock, Texas  
2018-2020 Research Scientist, Cooperative Institute for Research in Environmental Sciences, University of Colorado, Boulder  
2017-2018 Postdoctoral Fellow, Cooperative Institute for Research in Environmental Sciences, University of Colorado, Boulder  
2011-2016 Interdisciplinary Graduate Education Program Fellow, Virginia Tech

## PUBLICATIONS

### Refereed Articles

- Henderson, J., Nielsen, E. R., Herman, G. R., & Schumacher, R. S. (2020). A Hazard Multiple: Overlapping Tornado and Flash Flood Warnings in a National Weather Service Forecast Office in the Southeastern United States. *Weather and Forecasting*, 35(4), 1459-1481.
- Lazrus, H., Wilhelmi, O., Morss, R., Henderson, J., & Dietrich, A. (2020). Information as Intervention: How Hurricane Risk Communication Interacted with Vulnerability and Capacities in Superstorm Sandy. *International Journal of Mass Emergencies & Disasters*, 38(1).
- Dilling, L., Berggren, J., Henderson, J., & Kenney, D. (2019). Savior of rural landscapes or Solomon’s choice? Colorado’s experiment with alternative transfer methods for water (ATMs). *Water Security*, 6, 100027.
- Henderson, J. & Liboiron, M. (2019). Compromise and Action: Tactics for Doing Ethical Research in Disaster Zones. In *Disaster Research and the Second Environmental Crisis* (pp. 295-309). Springer, Cham.
- Henderson, J. (2018). Weather-Ready Nation or Ready-Weather Agency? Emphatic Accuracy and Sociotechnical Resilience in the National Weather Service. In *The Sociotechnical Constitution of Resilience* (pp. 93-116). Palgrave Macmillan, Singapore.
- Demuth, J. L., Morss, R. E., Palen, L., Anderson, K. M., Anderson, J., Kogan, M., Stowe, M., Bica, H., Lazrus, O. V., Wilhelmi, Henderson, J. (2018). “Sometimes da# beachlife ain't always da wave”: Understanding People’s Evolving Hurricane Risk Communication, Risk Assessments, and Responses Using Twitter Narratives. *Weather, Climate, and Society*, 10(3), 537-560.
- Morss, R. E., Demuth, J. L., Lazrus, H., Palen, L., Barton, C. M., Davis, C. A., C. Snyder, O. V., Wilhelmi, K. M., Anderson, D. A., Ahijevych, J., Anderson, M., Bica, K. R., Fossell, J., Henderson, M., Kogan, K., Stowe, J., Watts. (2017). Hazardous weather prediction and

- communication in the modern information environment. *Bulletin of the American Meteorological Society*, 98(12), 2653-2674.
- Schroeder, A. J., Gourley, J. J., Hardy, J., Henderson, J. J., Parhi, P., Rahmani, V., A. Reed, R. S. Schumacher, B.K. Smith, Taraldsen, M. J. (2016). The development of a flash flood severity index. *Journal of Hydrology*, 541, 523-532.
- A. Goldner, O. Shieh, and J. Henderson (2013). Science Policy: Using Your Voice to Inform and Inspire.” *Eos, Transactions American Geophysical Union*, 94, 80-81.

#### Manuscripts in Submission

- Bica, M., Henderson, J., Spinney, J., Palen, L., Weinberg, J., and Nielsen, E. The Liminality of Uncertainty: What Happens When Social Media is Employed by Those in Highly Constrained Disaster Situations. *Human-Computer Interaction*.

#### Conference Proceedings

- J. Anderson, M. Kogan, M. Bica, L. Palen, K. Anderson, R. Morss, J. Demuth, H. Lazrus, O. Wilhelmi, J. Henderson (2016). Social Media Studies. Far Far Away in Far Rockaway: Responses to Risks and Impacts during Hurricane Sandy through First-Person Social Media Narratives. Preprint: *International Conference on Information Systems for Crisis Management*.
- K. Droegemeier, L. P. Rothfusz, A. J. Kniedler, J. T. Ferree, J. Henderson, K. L. Nemunaitis-Monroe, D. Nagele, and K. E. Klockow (2016). Living with Extreme Weather Workshop: Summary and Path Forward. Preprint: *American Meteorological Society 96<sup>th</sup> Annual Conference*, New Orleans.

#### White Papers and Reports

- National Weather Service. [The Historic Derecho of June 29, 2012](#) (2013). National Oceanic and Atmospheric Administration. Social Science Consultant.
- National Weather Service. [May 2013 Oklahoma Tornadoes and Flash Flooding](#) (2014). National Oceanic and Atmospheric Administration. Social Science Consultant.

#### **GRANTS AND FELLOWSHIPS**

- 2018-2020 National Oceanic and Atmospheric Administration, VORTEX Southeast grant, “Improving Forecaster and Partner Interpretation of Uncertainty and Confidence in Risk Information: Cool and Warm Season Tornado Threats in the Southeastern U.S. Co-PIs Julie Demuth, National Center for Atmospheric Research, and Jennifer Spinney, University of Western Ontario. [\$203,278]
- 2018-2020 National Oceanic and Atmospheric Administration, VORTEX Southeast grant, “Multi-disciplinary investigation of concurrent tornado and flash flood threats in landfalling tropical cyclones.” Co-PIs Jennifer Spinney, University of Western Ontario and Russ Schumacher and Erik Nielsen, Colorado State University. [\$142,382]
- 2018-2020 National Oceanic and Atmospheric Administration, Joint Technical Transfer Initiative grant, “Improving Convection-Permitting Ensemble Based Uncertainty Communication for Decision Support using the Weather Archive and Visualization Environment (WAVE). Co-PIs Julie Demuth, National Center for Atmospheric Research and Matt Wandashin, Cooperative Institute for Research in Environmental Sciences. [\$220,826]

- 2018-2020 National Oceanic and Atmospheric Administration, IRAP grant, “Integrating Seasonal and Sub-Seasonal Climate Information into Public Health Contexts: Co-Producing Decision Support Applications in Puerto Rico and Dominica.” Co-PIs, Benét Duncan, Western Water Assessment, Zack Guido, University of Arizona, and Maureen Tulane University. [\$133,434]
- 2016-18 National Oceanic and Atmospheric Administration, VORTEX Southeast grant, Improving Risk Communication and Reducing Vulnerabilities for Dynamic Tornado Threats in the Southeastern US.” Co-PI with Julie Demuth, PI, National Center for Atmospheric Research. [\$149,813]
- 2015-16 National Oceanic and Atmospheric Administration, VORTEX Southeast grant, “Multi-disciplinary investigation of concurrent tornadoes and flash floods in the Southeastern US.” Co-PI with Russ Schumacher, PI, Colorado State University. [\$143,000]

### **AWARDS AND HONORS**

- 2018 Early Career Leadership Academy, American Meteorological Society (competitively selected)
- 2015 College of Liberal Arts and Human Sciences Outstanding Doctoral Student, Virginia Tech, Blacksburg
- 2015 Warner Internship for Scientific Enrichment. Research Applications Lab, National Center for Atmospheric Research
- 2014 Center for Advanced Public Safety Fellow, University of Alabama.
- 2014 Inaugural Future Professoriate Teaching Academy, Virginia Tech
- 2014 Advanced Study Program Graduate Student Visitor. Mesoscale & Microscale Meteorology, National Center for Atmospheric Research
- 2014 Summer Workshop on Environmental Sociology, Vanderbilt University with David Hess (competitively selected)
- 2013 International Higher Education Study Abroad, Virginia Tech (competitively selected)
- 2013 Interdisciplinary Flood Research Group (SPREAD), Colorado State University with Russ Schumacher (competitively selected)
- 2012 Summer Policy Colloquium, American Meteorological Society Policy Program, Washington, D.C. (competitively selected)

### **SELECTED CONFERENCE PRESENTATIONS**

- 2020 J. Henderson, Nielsen, E., Obermeier, H., Mazurek, A., Spinney, J., and Demuth, J. “Overlapping Tornado and Flash Flood Hazards in Hurricane Harvey: Compound Hazards in a Long Duration Events.” American Meteorological Society, Online.
- 2019 J. Henderson. “Finding Fujita” in author panel “Telling Lives in Meteorology: A Dialogue between Readers and Writers.” American Meteorological Society, Phoenix.
- 2018 J. Henderson. Dynamics of Vulnerability in Drought Contexts. American Meteorological Society, Austin.
- 2017 J. Henderson. “Social Sciences and National Weather Service Forecasters.” National Academy of Sciences. (Invited presentation)
- 2017 J. Henderson. “Tornado and Flash Flood Communication Challenges in the National Weather Service.” American Meteorological Society, Severe and Local Storms Symposium, Seattle. (Invited presentation)
- 2016 J. Henderson. “Infrastructures of Time and Space in the Weather Warning Process.” Society for the History of Technology (SHOT), Singapore.
- 2016 N. Doesken, J. Henderson, P. Higgins, and P. A. Newman. “Beyond the Weather: Getting

- the Word Out: Science Policy and Communication.” Panelist, Student Conference. American Meteorological Society Annual Conference, New Orleans. (Invited panelist)
- 2015 J. Henderson. “To Err on the Side of Caution: Ethics in the Weather Warning Process.” Interdisciplinary Hazards Researcher Meeting. Natural Hazards Center, Boulder.

### SELECTED TEACHING EXPERIENCE

- 2021 Geog 4320: *Environmental Hazards and Disasters*: Designed and taught face-to-face class on human-environmental interactions of weather disasters
- 2015 Geog 4984: *Constructing the Weather*: Designed and taught face-to-face class on human-environmental interactions of weather disasters, including sociopolitical & cultural issues in weather forecasting careers (e.g. National Weather Service and broadcasting meteorologists)
- 2011, 2013 Mtrg 4964: *Meteorology Field Studies Course*: Co-facilitated summer “Storm Chase” course for meteorology students on the Great Plains, creating mini lectures about the cultural and social geographic and historical issues related to weather disasters.
- 2013-2014 Grad 5014: *Ethics and Academic Integrity*: Designed and taught online class for international students related to issues of integrity and ethics in graduate school. Part of a grant from the Council on Graduate Schools to develop an ethics mandate for the university
- 2007-2011 Interdisciplinary Studies 4114: *Senior Research Seminar*: Designed online and face-to-face classes on research methods in the social sciences for interdisciplinary students and supervised research proposal project development

### SELECTED SERVICE

- 2020-Present Chair, Board on Societal Impacts, American Meteorological Society
- 2018-2021 Scientific Planning Committee, Verification of the Origins of Rotation in Tornadoes EXperiment-Southeast (VORTEX) Southeast
- 2020-2021 Planning Committee, American Meteorological Society Annual Meeting
- 2018-2021 Co-Chair, Societal Applications Symposium, American Meteorological Society
- 2018-2020 Councilor, American Meteorological Society
- 2018-2019 Task Force on Diversity and Inclusion, American Meteorological Society
- 2018-2019 Task Force on Early Career Participation in the Society, American Meteorological Society
- 2018-2019 Drought Social Sciences Synthesis Team, USGS and Colorado State University
- 2015-2018 Chair, Social Impacts Committee, National Weather Association
- 2015-2017 Writing Team, [The Alliance for Integrative Approaches to Extreme Environmental Events](#)
- 2014 Organizing Committee, Virginia Tech Academy of Teaching Excellence
- 2013-2015 Organizing Committee Member, [Living with Extreme Weather Workshop](#)
- 2013 Social Scientist Consultant on [NWS OKC Tornado Service Assessment](#)
- 2012-2017 Integrated Warning Team Facilitator for the National Weather Service in NC, NY, AL, and SD
- 2012 Social Scientist Consultant on [NWS Mid-Atlantic Derecho Service Assessment](#)