Glasgow, Scotland

<u>Personal</u>

Born:

Cıtıze Email	nship: :	British (Permanent Resident in U.S.) <u>djkeellings@ufl.edu</u>	
<u>Educ</u>	<u>cation</u>		
Ph.D.		ninor in Epidemiology), University of Florida Investigating Heat Waves in Europe and Florida using Extren Peter Waylen	2015 ne Value Analysis.
M.S.	M.S. Geography (minor in Geology), University of Florida2010Thesis: The Stochastic Properties of High Daily Maximum Temperatures – Application of Peak Over Threshold Extreme Value Analysis to historic temperature series in the State of Florida. Supervisor: Peter Waylen		
B.Sc.	(Hon) Enviror	nmental Studies, University of Central Florida	2007
Appo	<u>ointments</u>		
Assist	ant Professor Department of	of Geography, University of Florida	2021-Present
Assist	ant Professor Department of	of Geography, University of Alabama	2016-2021
	Department o	ate r. Greg Glass, Department of Geography & Emerging Pathoge	2015-2016
Postd	Department o octoral Associ Supervisor D University of uning Assistant	ate r. Greg Glass, Department of Geography & Emerging Pathoge	2015-2016

Research Interests

Climatology, Climate Change, Artificial Intelligence, Applied Machine Learning, Extreme Events, Hazards

Publications

h-index: 12; Citations: 504 (Google Scholar August 2021)

Lubinda, J., Moore, A.J., Bi, Y., Haque, U., **Keellings, D**., Shad, M.Y., Hamaiza, B., (2021) Climate change and the dynamics of age-related malaria incidence in Southern Africa: A focus on Zambia. *Environmental Research*, 111017. Doi: https://doi.org/10.1016/j.envres.2021.111017

Deb, P., Moradkhani, H., Abbaszadeh, P., Kiem, A.S., Engström, J., **Keellings, D**. and Sharma, A. (2020) Causes of the widespread 2019–2020 Australian bushfire season. *Earth's Future*, 8, e2020EF001671. Doi: 10.1029/2020EF001671

Logan A., Goode J., **Keellings D.**, Hart J. (2020). Microsite Influence on Woody Plant Regeneration in a Pinus palustris Woodland Following Catastrophic Disturbance. *Forests*. 11, 588. doi:10.3390/f11050588

Keellings D., Moradkhani H. (2020). Spatiotemporal Evolution of Heat Wave Severity and Coverage Across the United States. *Geophysical Research Letters*. 47, e2020GL087097. Doi: 10.1029/2020GL087097

Skeeter, W.J., Reed, J.R., Cissell, J., Islam, R., **Keellings**, **D**. (2019). 'What can we do?': Exploratory study on undergraduate student climate change perceptions. *Geographical Bulletin*. 60(2), 149-161.

Haque, U.; da Silva, PF.; Devoli, G.; Pilz, J.; Zhao, B.; Khaloua, A.; Wilopo, W.; Andersen, P.; Ping, L.; Lee, J.; Yamamoto, T.; **Keellings, D.**; Wu, J.; Glass, GE. (2019). The human cost of global warming: Deadly landslides and their triggers (1995-2014). *Science of the Total Environment*. 682, 673-684. doi: 10.1016/j.scitotenv.2019.03.415

Keellings D., Hernández Ayala J. (2019). Extreme rainfall associated with Hurricane Maria over Puerto Rico and its connections to climate variability and change. *Geophysical Research Letters*. 46(5), 2964-2973. doi: 10.1029/2019GL082077

Keellings, D, Engström, J. (2019). The Future of Drought in the Southeastern U.S.: Projections from Downscaled CMIP5 Models. *Water*. 11(2), 259. doi: 10.3390/w11020259

Skeeter, W.J., Senkbeil, J.C., **Keellings, D**. (2019). Spatial and Temporal Changes in the Frequency and Magnitude of Intense Precipitation Events in the Southeastern United States. *International Journal of Climatology*. 39: 768-782. doi: 10.1002/joc.5841

Engström, J., & **Keellings**, **D**. (2018). Drought in the Southeastern USA: an assessment of downscaled CMIP5 models. *Climate Research*. 74(3), 251-262. doi:10.3354/cr01502

Keellings, D., Bunting, E., & Engström, J. (2018). Spatiotemporal changes in the size and shape of heat waves over North America. *Climatic Change*. 147(1-2), pp.165-178. doi:10.1007/s10584-018-2140-3

Hernández Ayala J.J., **Keellings D**., Waylen P., Matyas C. (2017). Extreme Floods and their Relationship with Tropical Cyclones in Puerto Rico. *Hydrological Sciences*. doi: 10.1080/02626667.2017.1368521

Haque U., Blum P., da Silva P.F., Andersen P., Pilz J., Chalov S.R., Malet J.P., Auflič M.J., Andres N., Poyiadji E., Lamas P.C., Zhang W., Pesevski I., Pétursson H.G., Kurt T., Dobrev N., Davalillo J.C.G., Halkia M., Ferri S., Gaprindashvili G., Engström J., **Keellings D.** (2016). Fatal Landslides in Europe. *Landslides*:1–10. doi:10.1007/s10346-016-0689-3

Keellings D. (2016). Evaluation of Downscaled CMIP5 Model Skill in Simulating Daily Maximum Temperature Over the Southeastern United States. *International Journal of Climatology*. 36: 4172–4180. doi: 10.1002/joc.4612

Keellings D., Engström J., Waylen P. (2015). The Sunshine State: Investigating External Drivers of Sky Conditions. *Physical Geography*. 36(2), 113-126. doi: 10.1080/02723646.2015.1004995

Keellings D., Waylen P. (2014). Investigating Teleconnection Drivers of Bivariate Heat Waves in Florida using Extreme Value Analysis. *Climate Dynamics*, 44, 3383-3391. doi: 10.1007/s00382-014-2345-8

Keellings D., Waylen P. (2014). Increased Risk of Heat Waves in Florida: Characterizing Changes in Bivariate Heat Wave Risk using Extreme Value Analysis. *Applied Geography*, 46, 90-97. doi:10.1016/j.apgeog.2013.11.008

Photiadou, C., Jones, M. R., **Keellings, D.**, Dewes, C. F. (2014). Modelling European Hot Spells Using Extreme Value Analysis. *Climate Research*, 58, 193-207, doi:10.3354/cr01191

Waylen P.R., **Keellings D.**, Qiu Y. (2012). Climate and Health in Florida: Changes in Risks of Annual Maximum Temperatures in the Second Half of the Twentieth Century. *Applied Geography*, 33, 73-81. doi:10.1016/j.apgeog.2011.06.007

Keellings D, Waylen P. (2012). The Stochastic Properties of High Daily Maximum Temperatures: Applying Crossing Theory to Modeling High-Temperature Event Variables. *Theor Appl Climatol*, 108(3), 579-590. doi: 10.1007/s00704-011-0553-2

Knickerbocker, C.M., Leitholf, S., Stephens, E.L., **Keellings, D.J.**, Laird, H., Anderson, C.J.R., Fauth, J.E., & Quintana-Ascencio, P.F. (2009). Tree Encroachment of A Sawgrass (*Cladium jamaicense*) Marsh within an Increasingly Urbanized Ecosystem. *Natural Areas Journal*, 29(1), 15-26.

Keellings, D.J. (2007). Physiochemical Effects of the Wekiva River on the St. Johns River, Central Florida. *The Florida Geographer*, 38, 110-121.

Publications Under Review/ In Prep

Engström J., Abbaszadeh P., **Keellings D**., Moradkhani H. (under review). Global Wildfires: Exploring anthropogenic versus climate factors using machine learning. *Scientific Reports*.

Moragoda N., Jones C., Liu Y., Stanley L., **Keellings D**. (in prep). Assessing climate change impacts on Gulf of Mexico's water quality and fisheries: A Review. *Water Security*.

Haque U., **Keellings D**., et al. (in prep). The climate influence on the spread of COVID-19 across the United States. *The Lancet Planetary Health*.

Keellings D., Rainey A., O'Flanagan A., Senkbeil J. (in prep). Heat Waves across the United States and their connections to climate variability and change, 1900-2019. *Nature Communications*.

Invited Lectures

Center for Complex Hydrosystems Research, University of Alabama201Gave seminar titled "Spatial and Temporal Evolution of Heat Waves over the U.S."201)19	
National Center for Atmospheric Research 2019 Gave seminar titled "Spatial and Temporal Evolution of Heat Waves over the U.S." to Mesoscale and Microscale Meteorology Laboratory and Capacity Center for Climate and Weather Extremes.		
Take a Journey in Science seminar series, University of Alabama201Gave seminar titled "Climate Change and Extreme Weather")19	
Water Group Seminar Series, University of Alabama 201 Gave seminar titled "The Future of Drought in the Southeastern U.S.: Projections from downscal CMIP5 models")18 aled	
Department of Geography and Geosciences, University of Louisville201Gave seminar titled "Hot Topics: Changes in the Size and Shape of Heat Waves over NorthAmerica, Attributing Hurricane Maria's Rainfall to Climate Change, and Misconceptions about t Paris Climate Agreement"		
Department of Geography, University of North Alabama201Gave seminar titled "Hot Topics: Changes in the Size and Shape of Heat Waves over North America and Misconceptions about the Paris Climate Agreement"201)18	
Environmental Council Meeting, University of Alabama201Gave lecture on the physical science of climate change and discussed misconceptions about the Paris Climate Agreement.201		
WRF Regional Climate Tutorial, NCAR 201 Gave lecture on application of Extreme Value Theory statistics to Weather Research & Forecasti model output. National Center for Atmospheric Research. 201		
Physical Geography (GEO 2200), University of Florida2010, 2011, 201Lectured on a variety of topics within the atmosphere, hydrosphere, lithosphere, and biosphere.)12	
Geography of Europe (GEA 3500), University of Florida 2012, 2013, 2012 Lectured on heat waves in Europe. Including their expected conditions, drivers, future prediction and health impacts.		

Teaching Experience

Atmospheric Processes and Patterns (GY 101)

An introduction to meteorology and climatology. Responsible for all aspects of course (development of lecture materials, exams, grading, Blackboard class website). University of Alabama. Teaching Evaluation Mean Score: 4.1/5.0

Climate Change and Health (GY 414/514)

An introduction to the effect of global climate change on health. Responsible for all aspects of course (development of lecture materials, exams, grading, Blackboard class website). University of Alabama. Teaching Evaluation Mean Score: 4.82/5.0

Introduction to Geostatistics Using R (GY 416/516)

An introduction to geostatistical data analysis using R programming. Responsible for all aspects of course (development of lecture materials, labs, grading, Blackboard class website). University of Alabama. Teaching Evaluation Mean Score: 4.86/5.0

The Science of Climate Change

Gave four week online class on the science of climate change to adults over the age of 50 as a volunteer lecturer for the Osher Lifelong Learning Institute.

Hands-on R Workshop

Led workshop on basic data analysis and visualization using R programming as part of the University of Alabama Libraries Data Services Workshop Series.

Spatial Risk Analysis Workshop

Presented series of lectures and tutorials on spatial analysis and identification of hotspots of Tularemia in the Ukraine using R. Organized as part of the Ukraine Cooperative Biological Engagement Program funded by the Defense Threat Reduction Agency in collaboration with Metabiota.

Extreme Weather (GEO 2242)

An introduction to meteorology and climatology with a focus on extreme events and climate variability. Responsible for all aspects of course (development of lecture materials, exams, grading, Sakai/Canvas class website), University of Florida, Average enrollment 140. Teaching Evaluation Mean Score: 4.61/5.0 College Mean Score: 4.19/5.0

Physical Geography Online (GEO 2200)

Instructor of online course covering all aspects of physical geography. Responsible for all aspects of course (online exams, quizzes, assignments, grading, Sakai class website), University of Florida.

Academic Tutoring for University of Florida Athletic Association

Tutored athletes in Physical Geography, Extreme Weather, Weather Forecasting, and several other Geography and Geology courses.

Junior Achievement of Central Florida

Taught 4th Grade class weekly modules on the topic of regions and resources.

2018-Present

2016-Present

2018-Present

2016

2020

2019

2004

2010-2015

2014

2012-2015

Competitive Grants Awarded

National Science Foundation, GSS Research Grant (\$340,528) Principal Investigator: "Spatiotemporal Dynamics of Heat Waves Across the United Sta Erin Bunting (co-PI, Michigan State University). Award # BCS-1853775	2019-2023 attes"; with
Sonoma State University Research, Scholarship and Creative Activity Mini-Grant (\$6,94) Visitor funding to collaborate with Dr. Hernández Ayala on project titled "Extreme rainfall associated with the passage of Hurricane Maria over Puerto Rico."	2) 2018
University of Florida College of Liberal Arts and Sciences Dissertation Fellowship (\$7,000 Semester of funding and tuition to complete dissertation.)) 2015
University of Florida Graduate School Dissertation Fellowship (\$11,000) Semester of funding and tuition to complete dissertation.	2015
NCAR Visiting Scientist Funding (\$3000) Six week collaboration within Mesoscale & Microscale Meteorology Division, Nationa Atmospheric Research Earth System Laboratory, Boulder Colorado. Working on asses WRF regional climate model output for North, Central, and South America.	
NCAR Early Career Scientist Assembly (ECSA) Visitor Funding (\$2,500) One week collaboration within Mesoscale & Microscale Meteorology Division, Nationa Atmospheric Research Earth System Laboratory, Boulder Colorado. Working on mode European heat waves.	
Advanced Study Program on the Statistical Assessment of Extreme Weather Phenomena Climate Change (\$4,000) Hosted by the National Center for Atmospheric Research, Boulder, Colorado.	under 2011
Summer Colloquium/Workshop on Climate and Health (\$1,500) Hosted by the National Center for Atmospheric Research, Boulder, Colorado.	2009
University of Florida Office of Research travel grant (\$300) Conference travel grant.	2015
University of Florida Graduate Student Council travel grants (\$1750) Conference travel grants.	2010-2015
University of Florida College of Liberal Arts and Sciences travel grants (\$1200) Conference travel grants.	2011-2014
Graduate School Fellowship (\$70,000 & Tuition) Teaching and Research Fellow four year appointment, University of Florida.	2008
Grinter Fellowship (\$4,500) Recruitment award from the University of Florida Graduate School.	2008

<u>Awards</u>

Nominated for U. of Alabama College of Arts and Sciences Dinstinguished Teaching Fellow 2021 Nominated to become member of Teaching Fellows Committee, fellows mentor other faculty, provide advice on assessment of teaching, and work with the College to support its teaching mission.		
Best Graduate Presentation, Florida Society of Geographers Annual Meeting, Jacksonville Award given to best graduate student paper presentation. (\$300)	2015	
Ryan Poehling Fellowship, Geography Department, University of Florida Award for excellence in graduate teaching, research, and departmental service (\$1500)	2013	
Nominated for Graduate School Teaching Assistant Award, University of Florida Nominated by Geography Department for prestigious university-wide teaching award	2012	
Excellence in Graduate Teaching Award, Geography Department, University of Florida 2010, 2011 Award for graduate teaching assistants with evaluation scores in excess of 0.25 standard deviations above the entire College of Liberal Arts and Sciences mean score. (\$200)		
Best Paper Presentation, Florida Society of Geographers Annual Meeting, Miami Award given to best graduate student paper presentation. (\$250)	2008	
Summa Cum Laude Graduation Honors, University of Central Florida		
Phi Kappa Phi National Honor Society, University of Central Florida Chapter	2006	
Golden Key International Honor Society, University of Central Florida Chapter	2006	
National Society of Collegiate Scholars, University of Central Florida Chapter		
U.S. President's Volunteer Service Award	2004	

Conference Presentations

Keellings D. (2020). Increase in Size and Severity of Heat Waves Across the United States. American Association of Geographers, Denver, CO.

Keellings D. (2019). Spatiotemporal Dynamics of Heat Waves Across the United States. American Geophysical Union. San Francisco, California.

Engström, J. & D. Keellings, (2019). Future Outlooks of Drought in Southeastern U.S. Alabama Water Institute Symposium. Tuscaloosa, AL.

Keellings D. (2019). Spatiotemporal Evolution of Heat Waves Across the United States. American Association of Geographers. Washington, D.C.

Keellings D. (2018). Spatiotemporal Evolution of Heat Waves Across the United States. American Geophysical Union. Washington, D.C.

Keellings D. (2018). Extreme Rainfall Associated with Hurricane Maria over Puerto Rico and its Connections to Climate Variability and Change. Southeastern Division of the American Association of Geographers. Johnson City, Tennessee.

Keellings D., Engström J. (2018). The Future of Drought in the Southeastern U.S.: Projections from downscaled CMIP5 models. American Association of Geographers. New Orleans, Louisiana.

Payne E., Keellings D. (2018). Drought in Alabama: A historical assessment of downscaled models. Undergraduate Research and Creative Activities Conference. University of Alabama, Alabama.

Keellings D., Engström J. (2017). The Future of Drought in the Southeastern U.S.: Projections from downscaled CMIP5 models. American Geophysical Union. New Orleans, Louisiana.

Keellings D. (2017) Misconceptions about the Paris Climate Change Agreement. Southeastern Division of the American Association of Geographers. Starkville, Mississippi.

Keellings D., Bunting E. (2017). Spatiotemporal Trends in Heat Waves Over North America. American Association of Geographers. Boston, Massachusetts.

Keellings D., Bunting E. (2016). Spatiotemporal Trends in Heat Waves Over North America. American Geophysical Union. San Francisco, California.

Keellings D., Bunting E. (2016). Spatiotemporal Trends in Heat Waves Over North America. Southeastern Division of the American Association of Geographers. Columbia, South Carolina.

Keellings D., Bunting E. (2016). Changes in the Spatial Nature of Heat Waves Over North America. Association of American Geographers. San Francisco, California.

Keellings D. (2015). Evaluation of Downscaled CMIP5 Model Skill in Simulating Daily Maximum Temperature Over the Southeastern United States. American Geophysical Union. San Francisco, California.

Keellings D. (2015). Evaluation of Downscaled CMIP5 Model Skill in Simulating Daily Maximum Temperature Over the Southeastern United States. Southeastern Division of the Association of American Geographers. Pensacola, Florida.

Keellings D., Bruyère C., Tye M., Jaye A., & Tewari M. (2015). Evaluating Extreme Events in a High-Resolution Regional Climate Ensemble. Association of American Geographers. Chicago, Illinois.

Keellings D. & Waylen P.R. (2015). Investigating Teleconnection Drivers of Bivariate Heat Waves in Florida using Extreme Value Analysis. Florida Society of Geographers. Jacksonville, Florida.

Keellings D. & Waylen P.R. (2015). Investigating Teleconnection Drivers of Bivariate Heat Waves in Florida using Extreme Value Analysis. American Meteorological Association. Phoenix, Arizona.

Keellings D. & Waylen P.R. (2014). Investigating Teleconnection Drivers of Bivariate Heat Waves in Florida using Extreme Value Analysis. Southeastern Division of the Association of American Geographers. Athens, Georgia.

Keellings D. & Waylen P.R. (2014). Investigating Teleconnection Drivers of Bivariate Heat Waves in Florida using Extreme Value Analysis. Association of American Geographers. Tampa, Florida.

Keellings D. & Waylen P.R. (2014). Increased Risk of Heat Waves in Florida: Characterizing Changes in Bivariate Heat Wave Risk using Extreme Value Analysis. American Meteorological Society. Atlanta, Georgia.

Keellings D. & Waylen P.R. (2013). Increased Risk of Heat Waves in Florida: Characterizing Changes in Bivariate Heat Wave Risk using Extreme Value Analysis. Southeastern Division of the Association of American Geographers. Roanoke, Virginia.

Keellings D. & Waylen P.R. (2013). Characterizing Climatological Heat Wave Risk in Florida using Extreme Value Analysis. Association of American Geographers. Los Angeles, California.

Keellings D. & Waylen P.R. (2013). Characterizing Climatological Heat Wave Risk in Florida using Extreme Value Analysis. The Emerging Pathogens Institute at the University of Florida. Gainesville, Florida. (Poster)

Keellings D., Photiadou, C., Jones, M. R., & Dewes, C. F. (2012). Modeling European Hot Spells Using Extreme Value Analysis. Southeastern Division of the Association of American Geographers. Asheville, North Carolina.

Keellings D. & Waylen P.R. (2012). Investigating Drivers of Maximum Daily Temperatures in Florida using Extreme Value Analysis. Association of American Geographers. New York, New York.

Keellings D. & Waylen P.R. (2012). Investigating Drivers of European Hot Spells using Extreme Value Analysis. The Emerging Pathogens Institute at the University of Florida. Gainesville, Florida. (Poster)

Keellings D., Photiadou, C., Jones, M. R., & Dewes, C. F. (2012). Investigating Drivers of European Hot Spells using Extreme Value Analysis. American Meteorological Society. New Orleans, Louisiana.

Keellings D. & Waylen P.R. (2011). Investigating Drivers of Maximum Daily Temperatures in Florida using Extreme Value Analysis. Southeastern Division of the Association of American Geographers. Savannah, Georgia.

Keellings D. & Waylen P.R. (2011). Investigating Drivers of Maximum Daily Temperatures in Florida using Extreme Value Analysis. State University System of Florida Climate Change Workshop. Gainesville, Florida. (Poster)

Keellings D. & Waylen P.R. (2011). The Stochastic Properties of High Daily Maximum Temperatures. Chaired session on Climate and Human Health and presented to the Association of American Geographers. Seattle, Washington.

Keellings D. (2011). Climatic similarity and the dispersal of *Ochlerotatus japonicus* through the global shipping network: 1980-2050. Florida Society of Geographers. Gainesville, Florida.

Keellings D. & Waylen P.R. (2011). Climate and Health in Florida: Changes in the risks of annual maximum temperatures in the latter half of the twentieth century. The Emerging Pathogens Institute at the University of Florida. Gainesville, Florida. (Poster)

Keellings D. & Waylen P.R. (2011). Climate and Health in Florida: Changes in the risks of annual maximum temperatures in the latter half of the twentieth century. University of Florida Graduate Student Council Interdisciplinary Research Conference. Gainesville, Florida.

Keellings D. & Waylen P.R. (2010). A Method of Predicting the Risks of Annual Maximum Daily Temperatures. Southeastern Division of the Association of American Geographers. Birmingham, Alabama.

Hancock P., Keellings D., Hancock G. (2010). Psychogeography: The Example of the Spatial Distribution of the Perception of Time in Life. International Conference on Human Performance. Orlando, Florida.

Keellings D. & Waylen P.R. (2010). The Stochastic Properties of High Daily Maximum Temperatures. The Emerging Pathogens Institute at the University of Florida. Gainesville, Florida. (Poster)

Keellings D. & Hancock G. (2010). Perception of Time in Life. Florida Society of Geographers. Tampa, Florida.

Keellings D. & Waylen P.R. (2009). The Stochastic Properties of High Daily Maximum Temperatures. Chaired session and presented to Southeastern Division of the Association of American Geographers. Knoxville, Tennessee.

Keellings D. & Waylen P.R. (2009). The Stochastic Properties of High Daily Maximum Temperatures. Florida Environmental Health Association. Daytona Beach, Florida.

Keellings D., Knickerbocker, C.M., Leitholf, S., Stephens, E.L., Laird, H., Anderson, C.J.R., Fauth, J.E., & Quintana-Ascencio, P.F. (2008). Tree Encroachment of A Sawgrass (*Cladium jamaicense*) Marsh within an Increasingly Urbanized Ecosystem. Southeastern Division of the Association of American Geographers. Greensboro, North Carolina.

Keellings D., Knickerbocker, C.M., Leitholf, S., Stephens, E.L., Laird, H., Anderson, C.J.R., Fauth, J.E., & Quintana-Ascencio, P.F. (2008). Tree Encroachment of Sawgrass (*Cladium jamaicense*) Marshes within an Anthropogenic Dominated Ecosystem. Florida Society of Geographers. Miami, Florida.

Keellings D. (2007). Physiochemical Effects of the Wekiva River on the St. Johns River, Central Florida. Florida Society of Geographers. Jacksonville, Florida.

<u>Service</u>

Graduate Student Supervision:

O'Flanagan, Angela Spatiotemporal Patterns of US Heat Waves Awareness Master of Science Geography, University of Alabama 2022

Graduate Student Committees:

Brey, Haley Estimating Potential Dune Vulnerability to Storm Sequences Master of Science Geography, University of Alabama 2018

Butler, Robert Barchan Morphometrics: Analyses from Earth and Mars Master of Science Geography, University of Alabama 2019

Goode, Davis Effective restoration of shortleaf pine ecosystems to improve biodiversity and promote resiliency PhD of Geography, University of Alabama 2022

Munasinghe, Dinuke Drivers and Trends of Large River Deltas' Morphological Dynamics in the 21st Century PhD of Geography, University of Alabama 2022

Raney, Austin Improving bank-full condition estimation for better representation in hydrological models Master of Science Geography, University of Alabama 2020

Reed, Jacob PoP Problem: Developing New Ways to Communicate Precipitation Forecasts to Maximize Perceived Forecast Accuracy Master of Science Geography, University of Alabama 2019

Skeeter, Walker Synoptic Characteristics of Intense Precipitation Events in the Southeastern United States Master of Science Geography, University of Alabama 2018

Stanley, Lydia Urban Heat Island Dynamics and Assessment of Mitigation Techniques Master of Science Geography, University of Alabama 2021

Reviewer for:

Advances in Statistical Climatology Meteorology and Oceanography Annals of the American Association of Geographers Applied Geography Applied Meteorology and Climatology *Atmosphere* Atmospheric Research Climate Dynamics *Climate Research* Climatic Change Earth's Future Environment International Geophysical Research Letters International Journal of Biometeorology International Journal of Climatology Journal of the Royal Statistical Society Natural Hazards Papers in Applied Geography *Physical Geography* Scientific Reports Sustainability Sustainable Cities and Society Theoretical and Applied Climatology Water

Book Reviews:

Halverson J.B. & Rabenhorst T.J. (2010). Severe Storms and Their Environmental Impacts: Causes and Responses. Oxford University Press. New york, New York.

Gervais B. (2018). Living Physical Geography, 2nd Edition. WH Freeman.

College Service

Participated in "Q&A with A&S" live facebook faculty-public question and answer session (2019) University of Alabama College of Arts and Sciences Technology Faculty Advisory Committee (2017present).

Faculty advisor for UA Environmental Council student organization (2018-present)

Department Service

Geography Department Faculty Technology Representative (2017-present).
Co-Chair search committee for UA 2017 full professor in climate modeling
Awards Committee for faculty nominations
Search Committee for UA 2016 water-energy-food and political ecology positions.
Faculty advisor for UA Club Geography student organization (2016-present)
Organization of transportation to national conferences 2011-present.
Promotion of department at national conferences through manning department display 2011-present.
Sitting on graduate student advisory panel as part of undergraduate senior seminar class 2008-present.
Promoting geography and department course offerings through development of a lecture aimed at introducing the discipline, current research, and available courses to non-major undergraduates.

Assisting with arrangements for luncheons and visiting faculty 2008-present.

Service to the Discipline

Student presentation judge at the annual meeting of the American Geophysical Union.

Service to the Community

Invited talk titled "Heat Waves and Climate Change" to Tuscaloosa YMCA Men's Group (2019) Invited talk titled "Heat Waves and Health" to Tuscaloosa Kiwanis International Club (2019) Gave speech at Global Climate Strike event organized on University of Alabama campus (2019)

Media Coverage

- 2019 CBS This Morning, NPR, CNN, Scientific American, The Weather Channel, AGU News, etc. Coverage of my paper linking Hurricane Maria to climate change.
- 2019 University of Alabama news coverage of Tuscaloosa heat wave.
- 2019 WVUA TV. "Ring of Fire" heat wave over the southeast, update and discussion.
- 2019 University of Alabama news coverage of my heat wave research and awarded NSF grant.
- 2019 Tuscaloosa News, NBC, ABC, CBS, Fox news coverage of my heat wave research and awarded NSF grant.
- 2019 Our House Media interview for documentary on extreme weather and climate change.
- 2019 EOS interviewed for "Heat Waves Are Blowing in the Wind"
- 2019 University of Alabama Alumni Magazine interview for featurette on "What Does the Future Hold?" on topic of future weather and climate.
- 2018 WVUA TV. Hurricane Florence update and discussion of potential for intense flooding.

Academic Field Experience

Remote Sensing: Collection of training samples within Paynes Prairie State Preserve Limnological studies in Central Florida.

Ecological Studies (Graduate Level): Study of and Fieldtrips to each ecosystem type throughout Florida. Plant Ecology research (Graduate Level): Lake Wales Ridge State Forest (Plant Demographic Species

Studies), MacKay Tract Orlando (Plant Community Composition and Change), Wekiva State Park (Study of Lichen Distribution).

Psychological data collection.

Professional Experience

Environmental Consultant

Conducted environmental assessments with Storm L. Richards & Associates, Inc.

Independent Environmental Consultancy

2006-present

2008

2003-present

Independent environmental assessments.

Review of Cultural Training Programs in the U.S. Department of Defense

Worked in collaboration with the Behavioral Consultants Group (BCG) in association with Human Resources Technology (HRT) Inc. on behalf of the Culture Research Program at Department of Defense Equal Opportunity Management Institute (DEOMI), at Patrick Air Force Base, Cocoa Beach, Florida.

Professional Field Experience

Wetland Delineation Species Surveying Gopher Tortoise Relocation Hazardous Material Assessments (ASTM: Phase 1) Cultural Resource Assessments

Technical Skills

Proficient in Microsoft Office Suite, SQL Server, NCSS, Systat, ArGIS, ERDAS Imagine. Advanced programming experience in R (including Machine Learning libraries Keras and Tensorflow). Basic programming experience with Visual Basic and Python.

Language Skills

English – native speaker French, German, Spanish, Swedish - basic

Professional Membership

Association of American Geographers (AAG)	2008-present
American Geophysical Union (AGU)	2015-present
Climate Specialty Group of AAG	2010-present
Southeastern Division of AAG	2008-present
American Meteorological Society	2012-present
Elorida Society of Geographers	2007-2015
Florida Society of Geographers	2007-2015

Volunteer Work

Gainesville Rabbit Rescue	2015-2016	
Care for rescued/abandoned rabbits		
Science Fair Judge	2011-2012	
Evaluated $6^{th} - 8^{th}$ grade Science Fair projects for scientific merit, presentation, and	l	
communication of science. Westwood Middle School, Gainesville, Florida.		
HIV Health Services Planning Council, Orlando	2005	
Designed new member orientation materials as part of a service-learning course on technical and		
professional communication.		
Primrose Center for people with developmental disabilities, Orlando	2006	
Designed employee training materials as part of a service-learning course on risk communication.		
Freedom Ride Orlando	2004	
Assisted in therapeutic horseback riding for children and adults with disabilities.		
Habitat for Humanity	2004	
Assisted in construction of home in Winter Park, Florida.		