

# Cameron C. Lee, Ph.D.

Kent State University  
Department of Geography  
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## RESEARCH INTERESTS

Climate change & variability, applied climatology, synoptic climatology  
With applications to: coastal environments, human health, extreme events, teleconnections

## EDUCATION

Ph.D., Geography (Climate Science), Kent State University	2014
M.A., Geography (Climate Science), Kent State University	2010
B.S., Radio and Television, Kent State University	2003

## CURRENT POSITIONS

Assistant Professor, Kent State University, Department of Geography	
Tenure-Track	2021 –
Non-Tenure Track – Research-Track	2016 – 2020
Managing Editor, International Journal of Biometeorology	2015 –
Research Consultant, Applied Climatologists, Inc.	2012 –

## PREVIOUS EXPERIENCE

Research Faculty, Kent State University, Department of Geography	2014 – 2016
Adjunct Faculty, Kent State University, Department of Geography	2015 – 2016
Doctoral Graduate Research Assistant, Kent State Geography	2010 – 2014
Doctoral Graduate Teaching Assistant, Kent State Geography	2011 – 2013
Master's Graduate Research Assistant, Kent State Geography	2009 – 2010
National Science Foundation Fellowship, Kent State Geography	2009

## FUNDED RESEARCH (11 funded projects, totaling \$1,856,573)

Excess Heat and Excess Cold Factors: Establishing a unified duration-intensity metric for monitoring hazardous temperature conditions in North America

**Principal Investigator;** \$387,057; 2022-2025

**National Oceanic and Atmospheric Administration, Climate Program Office**

NOAA Award Number NA22OAR4310142

NOAA - NASA RISE Project - Using NARX Models, satellite ocean observations and climatology to support monthly to seasonal predictions of anomalous sea levels

Research Consultant; \$50,000; 2022-2025

**National Oceanic and Atmospheric Administration;** Contract #

Towards a Universal Mortality-Adjusted Temperature

**Principal Investigator;** \$10,000; Summer 2021

**Kent State University; Research & Sponsored Programs** (Summer Research and Creative Activity Appointment)

Using a synoptic climatological framework to assess predictability of anomalous coastal sea levels in NOAA high priority areas

Co-Investigator; \$286,932; 2017-2022 (PI: Scott Sheridan, Kent State University)

**National Oceanic and Atmospheric Administration, Climate Program Office**

Developing extreme event climate change indicators related to human thermal comfort

**Principal Investigator**; \$269,456; 2017-2021.

**National Oceanic and Atmospheric Administration, Climate Program Office**

NOAA Award Number NA17OAR4310159

The Development of a Water Clarity Index for the Great Lakes as a Climate Indicator

Co-Investigator; \$565,024; 2016-2021 (PI: Scott Sheridan, Kent State University)

**National Aeronautics and Space Administration**

Enhancing climate preparedness through geodesign of urban green space

Co-Principal Investigator (PIs: S. Sheridan and V. Kelly Turner); \$12,000; 2018-2019

**Kent State University; Research & Sponsored Programs** (Environmental Science and Design Research Initiative; 2018 Seed Grant Program)

Enhancing the Teaching and Learning of Biometeorology in Higher Education

Co-Investigator; \$15,000; 2016 (PI: Jennifer Vanos, Texas Tech University)

**Tromp Foundation, International Society of Biometeorology**

Detecting and forecasting Climate Effects on Spatial Patterns of Biodiversity and Productivity in West Coast Sanctuaries: A Collaboration with the Marine Biodiversity Observational Network (MBON)

Research Consultant; \$40,000; 2015-2016

**National Oceanic and Atmospheric Administration**; Contract EA-133C-15-SE-1454

A synoptic climatological assessment of atmospheric impacts on short-term sea-level variability and its impacts along the mid-Atlantic coast

Research Consultant; \$25,000; 2014-2015

**National Oceanic and Atmospheric Administration**; Contract EA-133C-14-SE-3728

Development of a Water Quality Index for the Southeastern U.S. as a Climate Indicator

Named Research Assistant; \$196,104; 2013-2014 (PI: S. Sheridan, Kent State University)

**National Aeronautics and Space Administration**

## **PENDING GRANT PROPOSALS** (0)

## **PEER-REVIEWED PUBLICATIONS** (39 total; 16 first-authored)

Google Scholar: citations: 820; h-index: 17; i10-index: 24

- Obarein, O.A., **Lee, C.C.** (2022): Differential Signal of Change Among Multiple Components of West African Rainfall. *Theoretical and Applied Climatology*. (Accepted, in press). DOI: 10.1007/s00704-022-04052-1
- Ilias, P., Kassomenos, P., **Lee, C.C.** (2022): Trends in airmass frequencies across Europe. *Theoretical and Applied Climatology* **148**, 105-122. DOI: 10.1007/s00704-022-03921-z.
- Lee, C.C.** (2021): Weather Whiplash: Trends in rapid temperature changes in a warming climate. *International Journal of Climatology* (Accepted, in press). DOI: DOI:10.1002/joc.7458.
- Pirhalla, D.E., **Lee, C.C.**, Sheridan, S.C. Ransibrahmanakul, V. (2021): Atlantic coastal sea level variability and synoptic-scale meteorological forcing. *Journal of Applied Meteorology and Climatology* **61(3)**, 205-222. DOI: 10.1175/JAMC-D-21-0046.1.
- Smith E.T., Obarein, O., Sheridan, S.C., **Lee, C.C.** (2021): Assessing trends in atmospheric circulation patterns across North America. *International Journal of Climatology* **41(4)**, 2679-2692. DOI: 10.1002/joc.6983.
- Lee, C.C.**, Obarein, O., Sheridan, S.C., Smith, E.T., Adams, R.E. (2021): Examining trends in multiple parameters of seasonally-relative extreme temperature and dew point events across North America. *International Journal of Climatology* **41(S1)**, E2360-E2378. DOI:10.1002/joc.6852.
- Adams, R.E., **Lee, C.C.**, Smith, E.T., Sheridan, S.C. (2021): The relationship between atmospheric circulation patterns and extreme temperature events in North America. *International Journal of Climatology* **41(1)**, 92-103. DOI: 10.1002/joc.6610.
- Lee, C.C.**, Barnes, B.B., Sheridan, S.C., Smith, E.T., Hu, C., Pirhalla, D.E., Ransibrahmanakul, V., Adams, R.E. (2020): Using Machine Learning to Model Water Clarity in the Great Lakes. *Journal of Great Lakes Research* **46(6)**, 1501-1510. DOI: 10.1016/j.jglr.2020.07.022.
- Sheridan S.C., **Lee, C.C.**, Smith E.T. (2020): A comparison between station observations and reanalysis data in the identification of extreme temperature events. *Geophysical Research Letters* **47(15)**, e2020GL088120. DOI: 10.1029/2020GL088120.
- Lee, C.C.** (2020): Trends and variability in air mass frequencies: indicators of a changing climate. *Journal of Climate* **33(19)**, 8603-8617. DOI: 10.1175/JCLI-D-20-0094.1.
- Smith, E.T., **Lee, C.C.**, Barnes, B.B., Adams, R.E., Pirhalla, D.E., Ransibrahmanakul, V., Hu, C., Sheridan, S.C. (2020): A synoptic climatological analysis of the atmospheric drivers of water clarity variability in the Great Lakes. *Journal of Applied Meteorology and Climatology* **59(5)**, 915-935. DOI: 10.1175/JAMC-D-19-0156.1.

- Sheridan, S.C. **Lee, C.C.**, Adams, R., Smith, E.T., Pirhalla, D.E., Ransibrahmanakul, V. (2019): Temporal modeling of anomalous coastal sea-level values using synoptic climatological patterns. *Journal of Geophysical Research – Oceans* **124(9)**, 6531-6544. DOI: 10.1029/2019JC015421.
- Lee, C.C.** (2019): The Gridded Weather Typing Classification version 2: a Global Scale Expansion. *International Journal of Climatology* (**40**), 1178-1196. DOI: 10.1002/JOC.6263.
- Sheridan, S.C., **Lee, C.C.**, Allen, M.J. (2019): The mortality response to absolute and relative temperature extremes. *International Journal of Environmental Research and Public Health* **16**, 1493. DOI: 10.3390/ijerph16091493.
- Lee, C.C.**, Sheridan, S.C. (2018): Trends in weather type frequencies across North America. *npj Climate and Atmospheric Science* **1(41)**. DOI: 10.1038/s41612-018-0051-7.
- Sheridan, S.C., **Lee, C.C.** (2018): Temporal trends in absolute and relative extreme temperature events across North America. *Journal of Geophysical Research: Atmospheres* **123(21)**, 11889-11898. DOI: 10.1029/2018JD029150.
- Ballinger, T.J., **Lee, C.C.**, Sheridan, S.C., Crawford, A.D., Overland, J.E., Wang, M. (2018): Subseasonal atmospheric regimes and ocean background forcing of Pacific Arctic sea ice melt onset. *Climate Dynamics* **52(9-10)**, 5657-5672. DOI: 10.1007/s00382-018-4467-x.
- Lee, C.C.**, Sheridan, S.C. (2018): A new approach to modeling temperature-related mortality: Non-linear autoregressive models with exogenous input. *Environmental Research* **164**, 53-64. DOI: 10.1016/j.envres.2018.02.020.
- Islam, R.M., Sheridan, S.C., **Lee, C.C.** (2018): Using self-organizing maps to identify the South Asian seasonal cycle. *Theoretical and Applied Climatology* **137(1-2)**, 1385-1401. DOI: 10.1007/s00704-018-2681-4.
- Sheridan, S.C., Pirhalla, D.E., **Lee, C.C.**, Ransibrahmanakul, V. (2017): Atmospheric drivers of sea-level fluctuations and nuisance floods along the mid-Atlantic coast of the USA. *Regional Environmental Change*. **17(6)**, 1853-1861. DOI: 10.1007/s10113-017-1156-y
- Lee, C.C.** (2016) Reanalyzing the impacts of atmospheric teleconnections on cold-season weather using multivariate surface weather types and self-organizing maps. *International Journal of Climatology* **37(9)**, 3714-3730. DOI: 10.1002/joc.4950.
- Pirhalla, D.E., Sheridan, S.C., **Lee, C.C.**, Barnes, B.B., Ransibrahmanakul, V., Hu, C. (2016): Water clarity patterns in South Florida coastal waters and their linkages to synoptic-scale wind forcing. *Satellite Oceanography and Meteorology* **2(1)**, 26-40. DOI: 10.18063/SOM.2016.02.003.

- Lee, C.C.**, Sheridan, S.C., Barnes, B.B., Hu, C., Pirhalla, D.E., Ransibrahmanakul, V., Shein, K. (2016): The development of a non-linear auto-regressive model with exogenous input (NARX) to model climate-water clarity relationships: reconstructing an historical water clarity index for the coastal waters of the southeastern US. *Theoretical and Applied Climatology* **130(1-2)**, pp.557-569. DOI: 10.1007/s00704-016-1906-7.
- Lee, C.C.** (2015): A systematic evaluation of the lagged effects of spatiotemporally-relative surface weather types on wintertime cardiovascular-related mortality across 19 US cities. *International Journal of Biometeorology* **59(11)**, 1633-1645. DOI: 10.1007/s00484-015-0970-5.
- Lee, C.C.**, Sheridan, S.C. (2015): Synoptic Climatology: An Overview. *Reference Module in Earth Systems and Environmental Sciences*. Elsevier. DOI: 10.1016/B978-0-12-409548-9.09421-5. **INVITED CONTRIBUTION.**
- Pirhalla, D.E., Sheridan, S.C., Ransibrahmanakul, V., **Lee, C.C.** (2014): Assessing Cold-Snap and Mortality Events in South Florida Coastal Ecosystems: Development of a Biological Cold Stress Index Using Satellite SST and Weather Pattern Forcing. *Estuaries and Coasts* **38(6)**, 2310-2322. DOI: 10.1007/s12237-014-9918-y.
- Lee, C.C.** (2014): The Development of a Gridded Weather Typing Classification Scheme. *International Journal of Climatology* **35**, 641-659. DOI: 10.1002/joc.4010.
- Sheridan, S.C., **Lee, C.C.** (2014): "Synoptic Climatology." In *Oxford Bibliographies in Geography*. Oxford University Press. Ed. Barney Warf. New York City, USA. DOI: 10.1093/OBO/9780199874002-0088. **INVITED CONTRIBUTION.**
- Allen, M.J., **Lee, C.C.** (2014): Investigating High Mortality during the Cold Season: Mapping Patterns of Temperature and Pressure. *Theoretical and Applied Climatology* **118(3)**, 419-428. DOI: 10.1007/s00704-013-1075-x.
- Sheridan, S.C., Pirhalla, D.E., **Lee, C.C.**, Ransibrahmanakul, V. (2013): Evaluating Linkages of Weather Patterns and Water Quality Responses in South Florida Using a Synoptic Climatological Approach. *Journal of Applied Meteorology and Climatology* **52(2)**, 425-438. DOI: 10.1175/JAMC-D-12-0126.1.
- Lee, C.C.**, Sheridan, S.C., Lin, S. (2012): Relating Weather Types to Asthma-Related Hospital Admissions in New York State. *EcoHealth* **9(4)**, 427-439. DOI: 10.1007/s10393-012-0803-5.
- Lee, C.C.**, Ballinger, T.J., Domino, N.A. (2012): Utilizing map pattern classification and surface weather typing to relate climate to the Air Quality Index in Cleveland, Ohio. *Atmospheric Environment* **63**, 50-59. DOI: 10.1016/j.atmosenv.2012.09.024.
- Sheridan, S.C., **Lee, C.C.** (2012): Synoptic Climatology and the Analysis of Atmospheric Teleconnections. *Progress in Physical Geography* **36(4)** 548-557. DOI: 10.1177/0309133312447935.

**Lee, C.C.** (2012): Utilizing Synoptic Climatological Methods to Assess the Impacts of Climate Change on Future Tornado-Favorable Environments. *Natural Hazards* **62(2)**, 325-343. DOI: 10.1007/s11069-011-9998-y.

Sheridan, S.C., Allen, M.J., **Lee, C.C.**, Kalkstein, L.S. (2012): Future heat vulnerability in California, Part II: Projecting future heat-related mortality. *Climatic Change* **115(2)**, 311-326. DOI: 10.1007/s10584-012-0437-1.

Sheridan, S.C., **Lee, C.C.**, Allen, M.J., Kalkstein, L.S. (2012): Future heat vulnerability in California, Part I: Projecting future weather types and heat events. *Climatic Change* **115(2)**, 291-309. DOI: 10.1007/s10584-012-0436-2.

**Lee, C.C.**, Sheridan, S.C. (2011): A Six-Step Approach to Developing Future Synoptic Classifications Based on GCM Output. *International Journal of Climatology* **32**, 1792-1802. DOI: 10.1002/joc.2394.

Sheridan, S.C., **Lee, C.C.** (2011): The Self-Organizing Map in Synoptic Climatological Research. *Progress in Physical Geography* **35(1)**, 109-119. DOI: 10.1177/0309133310397582.

Sheridan, S.C., **Lee, C.C.** (2010): Synoptic Climatology and the General Circulation Model. *Progress in Physical Geography* **34(1)**, 101-109. DOI: 10.1177/0309133309357012.

## **OTHER PUBLICATIONS & PUBLISHED DATASETS** (10 total; 7 first-authored)

**Lee, C.C.**, Obarein O.O, Sheridan, S.C., Smith, E.T.; Adams, R.E. (2020): "Extreme Temperature and Dew Point Events in North America", Mendeley Data, v1. DOI: [10.17632/j7hp5tmcr7.1](https://doi.org/10.17632/j7hp5tmcr7.1).

**Lee, C.C.** (2020): GWTC2 Dataset - A global-scale classification of air masses, Mendeley Data, v2. DOI: [10.17632/gbwwksnd6j.2](https://doi.org/10.17632/gbwwksnd6j.2).

**Lee, C.C.** (2020): Global Air Mass Climate Indicators - Warm/Cool Index and Global Extremes Index, Mendeley Data, v2. DOI: [10.17632/fvtznwrgsv.2](https://doi.org/10.17632/fvtznwrgsv.2).

Sheridan, S.C., **Lee, C.C.**, Smith, E.T., (2020), Extreme Temperature Events by Station / Reanalysis Data Set, Mendeley Data, V1, DOI: [10.17632/3b6nnp55w6.1](https://doi.org/10.17632/3b6nnp55w6.1).

Perkins IV, D.R., Vanos, J., Fuhrmann, C., Allen, M., Knight, D., **Lee, C.C.**, Lees, A., Leung, A., Lucas, R., Mehdipoor, H. and Tavares Nascimento, S. (2017). Enhancing the Teaching and Learning of Biometeorology in Higher Education. Technical Report. *Bulletin of the American Meteorological Society* **98(9)**, ES239-ES242. DOI: 10.1175/BAMS-D-16-0343.1

**Lee, C.C.** (2014): The Development of a Gridded Weather Typing Classification Scheme. Doctoral Dissertation. Kent State University, Kent, Ohio, USA, 254 pp.

**Lee, C.C., Sheridan, S.C., Allen, M.J., Kalkstein, L.S. (2012):** O-194: Projecting Future Heat-Related Mortality in California Using Synoptic Methods. *ISEE Conference Abstracts in Epidemiology* 23(5S).

**Lee, C.C., Sheridan, S.C., Lin, S. (2011):** Seasonal and Lagged Effects of Synoptic Weather Types on Asthma-Related Hospital Admissions in New York State. *Proceedings of the 19th International Congress on Biometeorology*.

Sheridan, S.C., **Lee, C.C.**, Allen, M.J., Kalkstein, L.S. (2011): A spatial synoptic classification approach to projected heat vulnerability in California under future climate change scenarios. Final report to the California Air Resources Board, Agreement number 07-304, 153 pp.

**Lee, C.C. (2010):** The Relationship of Large-Scale Atmospheric Circulation Patterns to Tornadoes and the Impacts of Climate Change. Master's Thesis. Kent State University, Kent, Ohio, USA, 263 pp.

## **RESEARCH PRESENTATIONS** (37 total)

NOTES: only listed if presenting author for oral presentation (unless otherwise noted)

Climate change is more than average: contrasting trends in means versus trends in extremes in a warming climate

118th Annual Meeting of the American Association of Geographers  
New York City, New York; February 2022 (REMOTE – COVID)

Greater than averages: how metrics of extreme weather are trending differently than averages would suggest

103rd Fall Meeting of the American Geophysical Union  
New Orleans, Louisiana; December 2021

The development and application of a new global-scale air mass classification

117th Annual Meeting of the American Association of Geographers  
Seattle, Washington; April 2021 (REMOTE – COVID)

Global Trends in Air Mass Frequencies: Multivariate Indicators of Climate Change

102nd Fall Meeting of the American Geophysical Union  
San Francisco, California; December 2020 (REMOTE – COVID)

Development and applications of a new global-scale weather type classification

116th Annual Meeting of the American Association of Geographers  
Denver, Colorado; April 2020 (CANCELLED (COVID))

Leveraging Machine Learning and Synoptic Climatology to Model and Forecast Water Clarity in the Great Lakes

101st Fall Meeting of the American Geophysical Union  
San Francisco, California; December 2019 (Poster)

A global-scale gridded classification of multivariate surface weather types: the GWTC-2  
European Meteorological Society Annual Meeting  
Copenhagen, Denmark; September 2019

Multi-decadal changes to the frequency of North American Weather Types  
115th Annual Meeting of the American Association of Geographers  
Washington, D.C.; April 2019

The Changing Frequency of Spatiotemporally-Relative Weather Types across North America  
6th Annual Kent State Environmental Science & Design Research Symposium  
Kent, Ohio; March 2019 (Poster)

Changing Frequencies of Spatiotemporally-Relative Surface Weather Types in North America  
100th Fall Meeting of the American Geophysical Union  
Washington, D.C.; December 2018 (Poster)

Long-term trends in the frequency of North American weather types  
41st Applied Geography Conference  
Kent, OH; October 2018

Modeling Temperature-Related Mortality using Nonlinear Autoregressive Models with  
Exogenous Input  
Joint Annual Meeting of the International Society of Exposure Science and the  
International Society for Environmental Epidemiology  
Ottawa, Ontario, Canada; August 2018

Using nonlinear autoregressive models with exogenous input to analyze temperature-related  
human mortality  
9th Conference on Environment and Health, as part of the 98th American Meteorological  
Society Annual Meeting  
Austin, TX; January 2018

Modeling weather impacts on human mortality using non-linear autoregressive models with  
exogenous input (NARX models) - presented by Scott Sheridan  
20th International Congress of Biometeorology  
Durham, United Kingdom; September 2017

Synergistic impacts of multiple teleconnections on North American surface weather types  
113th Annual Meeting of the American Association of Geographers  
Boston, MA; April 2017

Analyzing teleconnective impacts on surface weather types using self-organizing maps  
39th Applied Geography Conference  
Louisville, KY; October 2016



Enhancing Undergraduate Biometeorology Education

23rd Annual University Teaching Council Celebration of College Teaching Conference  
Kent, OH; October 2016 (Poster)

Using circulation patterns and weather types to model water clarity in the Gulf of Mexico

112th Annual Meeting of the American Association of Geographers  
San Francisco, CA; March 2016

A synoptic climatological approach to modeling daily water clarity using neural network-based time-series models.

3rd Annual Water Research Symposium at Kent State University  
Kent, OH; October 2015 (Poster)

Linking synoptic weather and ocean light attenuation variability in the Gulf of Mexico: constructing a 65-year Kd-Index

95th American Meteorological Society Annual Meeting  
Phoenix, AZ; January 2015

Wintertime associations between spatiotemporally-relative synoptic weather types and lagged cardiovascular mortality across various US climate regions

20th International Congress of Biometeorology  
Cleveland, OH; October 2014

Utilizing a New Gridded Weather Typing Classification Scheme to Evaluate the Relationship between Meteorological Conditions and Cardiovascular-Related Mortality

110th Annual Meeting of the American Association of Geographers  
Tampa, FL; April 2014

Cardiovascular-Related Mortality and Links to Multivariate Surface Weather Types

29th Annual Kent State University Graduate Student Symposium  
Kent, OH; April 2014 (Poster)

Assessing the Link between Weather Patterns and Water Quality using a Synoptic Climatological Approach

The 1st Annual Water Research Symposium at Kent State University  
Kent, OH; November 2013 (Poster)

The Development of an Automated and Gridded Synoptic Classification for Surface Weather Types

13th European Meteorological Society Annual Meeting and 11<sup>th</sup> European Conference on Applications of Meteorology  
Reading, United Kingdom; September 2013

Linking Synoptic Weather Types and Asthma-Related Hospital Admissions in New York State

13th European Meteorological Society Annual Meeting and 11th European Conference on Applications of Meteorology  
Reading, United Kingdom; September 2013

Circulation Pattern and Weather Type Associations with the Air Quality Index in Cleveland, Ohio

28th Annual Kent State University Graduate Student Symposium  
Kent, OH; April 2013

Relating Climate to the Air Quality Index in Cleveland, Ohio Using a Combined Synoptic Climatological Methodology

109th Annual Meeting of the American Association of Geographers  
Los Angeles, CA, April, 2013

Projecting Future Heat-Related Mortality in California Using Synoptic Methods

24th Annual Conference of the International Society of Environmental Epidemiology  
Columbia, SC; August 2012

The Impacts of Short-Term Weather Variability on Chlorophyll Levels near the Florida Gulf Coast

27th Annual Kent State University Graduate Student Symposium  
Kent, OH; April 2012

Relating Chlorophyll Levels near the Florida Gulf Coast to Regional Synoptic Sea Level Pressure Patterns

108th Annual Meeting of the American Association of Geographers  
New York, NY; February 2012

Seasonal and Lagged Effects of Synoptic Weather Types on Asthma-Related Hospital Admissions in New York State

19th International Congress of Biometeorology  
Auckland, New Zealand, December 2011

Associating Asthma Admissions to Synoptic Weather Types in New York State

26th Annual Kent State University Graduate Student Symposium  
Kent, OH; April 2011

Relating Weather Types to Asthma-Related Hospital Admissions in New York State

107th Annual Meeting of the American Association of Geographers  
Seattle, WA; April 2011

The Relationship of Large-Scale Atmospheric Circulation Patterns to Tornadoes and the Impacts of Climate Change

Geography Department Colloquium, Kent State University  
Kent, OH; April 2010

The Relationship of Large-Scale Atmospheric Circulation Patterns to Tornadoes and the Impacts of Climate Change

106th Annual Meeting of the American Association of Geographers  
Washington, D.C.; April 2010

A Synoptic Climatology of United States Tornado Days and the Impacts of Climate Change  
25th Annual Graduate Student Senate Colloquium; Kent State University  
Kent, OH; April 2010

## **INVITED PRESENTATIONS**

More than Just Averages: Regional Trends of Various Key Indicators of Extreme Weather  
**Invited Presentation** to NOAA's NIHHS Urban Heat Island Community of Practice  
Webinar Series; Virtual; July 2021

Climate Change: Extremes and Human Health  
**Invited Guest Lecture** to Texas State University Graduate-level Geography course on  
Global Climate Change (via Skype); November 2019

Heat Waves Module  
**Invited Speaker** at the Earth Systems Science Workshops for K-12 Teachers; Kent,  
Ohio; October 2016

Climate and Air Quality in Cleveland, Ohio: A Combined Synoptic Climatological Approach  
**Invited Presentation** at the University of Akron; Geosciences Seminar Series  
Akron, OH; February 2014

A Spatial Synoptic Classification Approach to Projected Heat Vulnerability in California Under  
Future Climate Change Scenarios  
**Invited presentation** to the California Air Resources Board. Co-presenter with Dr.  
Scott Sheridan; Sacramento, CA; February 2011

Projecting Future Tornado Days with Synoptic Methods  
**Invited presentation** to the Northeast Ohio Chapter of the American Meteorological  
Society; Kent, OH; September 2010

## **COURSES TAUGHT** (gray: have not taught in 3+ years)

Applied Climatology (1 time, last in Fall 2016, next in Fall 2022)

Fundamentals of Meteorology (2 times, last in Fall 2021)

Geography of the United States & Canada (3 times, last in Spring 2012)

Glaciers & Glaciation (1 time, Fall 2015)

Global Climate Change (5 times, next in Spring 2022)

Physical Geography (8 times, last in Fall 2021)

Physical Geography Laboratory (6 times, last in Fall 2020)

## **STUDENT ADVISEMENT**

NOTE: Kent State University; Department of Geography, unless otherwise noted

### **Dissertation / Thesis Advisor:**

Michael Crowell  
M.S., anticipated completion in 2022  
Omon Obarein  
Ph.D., anticipated completion in 2023  
M.A., completed 2020

### **Dissertation / Thesis Committee Member:**

Ryan Adams  
Ph.D., anticipated completion: 2022  
M.A., completed 2017  
Andrews Boateng  
Ph.D., anticipated completion: 2022  
Md. Rafiqul Islam  
Ph.D., completed 2020  
Erik Tyler Smith  
Ph.D., completed 2021  
M.A., completed 2017

### **Undergraduate Mentoring:**

Michael Crowell

- 2019 Summer Undergraduate Research Experiences Program; Primary Mentor
- Spring 2020 Individual Investigation in Geography; Primary Mentor

Nichole Ortiz Jimenez

- 2019 Access and Support for Successful Undergraduate Research Experience Program; Co-Faculty Mentor (Primary: Scott Sheridan)

## **SERVICE**

### **Kent State University; Department of Geography:**

Faculty Advisory Committee (Fall 2022 – present)  
Graduate Studies Committee (2019 – present)  
Coordinator, Climate Change Minor (2018 – present)  
Committee on Handbook Revision of Workload Equivalencies (2022)  
Lead the Departmental application to the AGU Bridge Program (2020, 2021)  
Hiring Committee for Tenure-Track Position in Environmental GIS (2018-2019)  
Committee on Beck Research Award (2017)

### **Peer-Reviewer** of Manuscripts for Scholarly Journals:

Atmospheric Environment	Earth Interactions
Climatic Change	Environmental Research
Climate Research	Geographical Bulletin

Geographical Review  
Geophysical Research Letters  
International Journal of  
Biometeorology  
International Journal of  
Climatology  
Journal of Climate  
Journal of Geophysical Research:  
Atmospheres

Physical Geography  
Polish Journal of Environmental  
Sciences  
Remote Sensing  
Science of the Total Environment  
Tellus A  
Water  
Water, Air & Soil Pollution  
Weather and Climate

**Reviewer of Grant Proposals** for the National Science Foundation

**Writing Mentor** for Undergraduates in Kent State Geography Senior Seminar (2014)

**Local Organizing Committee;** 20th International Congress of Biometeorology (2014)

**Session Chair:** (Bold indicates Session Organizer)

Climate & Extreme Event Trends at 20th International Congress of Biometeorology (2014)

**Synoptic Climatology sessions at the Annual Meeting of the AAG (2017)**

**Applied & Synoptic Climatology session at the Applied Geography Conference (2018)**

**Volunteer;** 20th International Congress of Biometeorology (2014)

**Guest Discussant;** Research & Presentation of Geographic Data – Graduate-level course (Kent State University; Department of Geography) – Quantitative & Qualitative Methods (2019, 2022)

## **MEDIA ATTENTION**

From backcountry ice skating to road cycling in January, how Tahoe adapts when weather whiplashes between extremes

[SFGate – January 29, 2022](#)

Is Climate Change Increasing Weather Whiplash?

[NOAA – November 30, 2021](#)

This Week in Tech with Jeanne Destro:

[WAKR – April 23, 2021](#) – “Adapting to Climate Change”

[WAKR – November 12, 2021](#) – “Climate Change and Deforestation”

Examining trends in multiple parameters of seasonally-relative extreme temperature and dew point events across North America

[Royal Meteorological Society – November 25, 2020](#)

Hot and Cold: New study compares how well atmospheric reanalysis products identify extreme temperature events across North America

[NOAA – August 26, 2020](#)

Two new indicators help track climate change

[NOAA – August 19, 2020](#)

Professor Says Climate Change Is Not to Blame for Weather Ups and Downs

[WKSU – January 24, 2019](#)

[WXVU – January 25, 2019](#)

Cities Step Up to the Challenges of Climate Change

[WKSU – December 17, 2018](#)

[WOSU – December 19, 2018](#)

More Extremes in a Changing Climate: An Interview with Cameron Lee, Ph.D.

[WKSU – December 1, 2018](#)

Extreme heat increasing in both summer and winter

[Science Daily – November 26, 2018](#)

[Eos \(AGU\) – November 26, 2018](#)



The role of climate change in extreme weather

[Kent Wired – September 17, 2018](#)

Research grants totaling \$550,000 awarded to Kent State geographers

[Kent Wired – November 1, 2017](#)

[Crain's Cleveland Business – October 31, 2017](#)

[EurekAlert – October 30, 2017](#)

## **AWARDS & RECOGNITION**

Dell Seed Unit Program; Recipient of Prototype Workstation Computer  
Fall 2021; Workstation valued at \$22,975

University Fellowship Awardee at Kent State University  
2013-2014 Academic Year

Nominee for the David B. Smith Fellowship at Kent State University  
2012-2013 Academic Year and 2013-2014 Academic Year

AAG Climate Specialty Group 2<sup>nd</sup> Place Finish, Student Paper Competition at Annual Meeting  
April 2013; \$175

Kent State University Department of Geography Beck Research Award winner (\$700 total)  
April 2012 and April 2013

Kent State University Department of Geography Isenogle Graduate Award Winner  
April 2013; \$500

ISEE Scholarship Recipient for Conference Travel  
August 2012

Kent State University Graduate Student Senate International Travel Grant Awardee  
(competitive; \$1500 total)  
Fall 2011 and Fall 2013

Undergraduate Trustee Scholarship  
August 1999 – May 2003; \$4,000

Kent State University Dean's List  
Fall 2000, Fall 2001, Fall 2002

## **PROFESSIONAL AFFILIATIONS**

International Society of Environmental Epidemiology (2018 – Present)

American Association of University Professors (2016-Present)

American Geophysical Union (2016-Present)

International Society of Biometeorology (2010 – Present)  
Student and New Professionals Group Member (2010-2020)

American Meteorological Society (2009 – Present)

American Association of Geographers (2009 – Present)  
Climate Specialty Group Member (2009 – Present)