

CONTACT INFORMATION	Wake Forest University 127 Manchester Hall Winston-Salem, NC 27109	☎: (803) 944-7265 ✉: murphye@wfu.edu 🌐: https://evamurphy100.github.io/
CITIZENSHIP	United States	
RESEARCH INTERESTS	Statistical modelling; Spatio-temporal statistics; Deep learning; Data fusion; Environmental and Epidemiology applications.	
EDUCATION	Ph.D. in Mathematical and Statistical Sciences, Clemson University , Clemson, SC <ul style="list-style-type: none"> • Advisor: Dr. Whitney Huang, Assistant Professor, School of Mathematical and Statistical Sciences M.S. in Mathematical Sciences, University of West Florida , Pensacola, FL <ul style="list-style-type: none"> • Advisor: Dr. Josaphat Uvah, Professor, University of West Florida B.S. in Mathematical Sciences, Babes-Bolyai University , Romania	
PUBLICATIONS	<ol style="list-style-type: none"> 1. Murphy E., Kline D. M., McKnight E., Bonny B., Waller, L., Miller, W. C., Hepler S. A. “Integrating data at multiple spatial scales to estimate the local burden of the opioid syndemic” <i>Spatial and Spatio-Temporal Epidemiology</i> (revisions submitted) 2. Murphy E., Huang W. K., Bessac, J., Wang, J., Kotamarthi, R. “Joint modeling of wind speed and wind direction through a conditional approach.” <i>Environmetrics</i>, Volume 36, Issue 3, 2025 (Winner of ASA Section on Statistics and the Environment Student Paper Competition). 3. Murphy E., Kline D. M., Egan, K. L., Lancaster, K. E., Waller, L., Miller, W. C., Hepler S. A. “Exploring the Opioid Syndemic in North Carolina: A Novel Approach to Modeling and Identifying Factors.”, <i>Biostatistics</i>, Volume 26, Issue 1, 2025, https://doi.org/10.1093/biostatistics/kxae052 4. Kline, D. M., White, B. N., Lancaster, K. E., Egan, K. L, Murphy, E., Miller, W. C, Hepler, S. A. “Estimating prevalence of opioid misuse in North Carolina counties from 2016-2021: An integrated abundance model approach” <i>Epidemiology</i> (Accepted, 2024) 	
MANUSCRIPTS IN PREPARATION	<ol style="list-style-type: none"> 1. Murphy E., Kline D. M., Hepler S. A. “The Role of Spatially Varying Loadings in Dynamic Spatial Factor Models for Modeling the Opioid Syndemic.” 	
DISSERTATION SUBMISSION	<ol style="list-style-type: none"> 1. Murphy E. “A Framework for Statistical Modeling of Wind Speed and Wind Direction” (2023) [Dissertation Link] 	
AWARDS	Student Award <ul style="list-style-type: none"> • Outstanding Graduate in Research Award 2023 <i>This award is given by the School of Mathematical and Statistical Sciences, Clemson University.</i> • ASA ENVR Student Paper Award 2023 <i>The award is sponsored by the Section on Statistics and the Environment (ENVR) of the American Statistical Association (ASA). Papers were judged on environmental importance/relevance, statistical modeling/novelty, as well as writing (including organization, clarity, and accessibility).</i> 	

- **Dr. Kenyon Fairey Graduate Fellowship**, Clemson University
September 2022 - May 2023
“The fellowship’s purpose is to provide graduate fellowships for doctoral students whose scholarship and/or applied research focuses on resource management, conservation, outdoor education, or health and wellness. Students are selected through a competitive review process managed by the Graduate School.”
- **Call Me Doctor Dissertation Completion Fellowship**, Clemson University
August 2022 - August 2023
“The Call Me Doctor Fellowship offers a unique opportunity for students from underrepresented and diverse backgrounds to pursue their doctoral studies with financial support, professional development, and mentoring from faculty with interdisciplinary expertise.”

Presentation Competition

- **Best Talk Award**, SC-ASA Palmetto Symposium April 2022

Travel Awards

- Provost’s Fund for Faculty Travel, Wake Forest University October 2024
- Faculty Development Fund for Visiting Professors, Wake Forest University June and October 2024
- Joint Statistical Meeting - Student Paper Award Presentation, ENVR August 2023
- Machine Learning for Climate and Weather Applications, Institute for Mathematical and Statistical Innovations (IMSI) November 2022
- Detection and Attribution of Climate Change, IMSI October 2022
- ENVR 2022 Workshop, Provo, UT October 2022
- Climate Model Evaluation and Uncertainty, IMSI September 2022
- Graduate Student Travel, Clemson University August 2022

PRESENTATIONS

Invited Talks

Spatio-temporal modeling of wind speed data

- AISC 2024 Conference October, 2024
- ICSA Applied Statistics Symposium June, 2023

Modeling Directional Extreme Wind Speed Using an Extreme Value Regression Approach

- Statistical Sciences Colloquium, Wake Forest University September, 2023
- Statmospheric Sciences Seminar, Berkeley National Laboratory, October 11, 2023

Joint modeling of wind speed and wind direction through a conditional approach

- Joint Statistical Meeting August, 2023
- 5th International Conference on Econometrics and Statistics, (virtual) June 2022
- Math For All Satellite Conference at Clemson University, SC Feb. 2022

Contributed Talks

Spatio-temporal modeling of wind speed data

- SC-ASA Palmetto Symposium, Columbia, SC April 2023

Joint modeling of wind speed and wind direction through a conditional approach

- Joint Statistical Meeting, Washington, DC August 2022
- Climate Informatics (virtual) May 2022
- SC-ASA Palmetto Symposium - Best Talk Award, Columbia, SC April 2022

Statistical framework for studying the spatio-temporal variation of wind speed and wind direction

- The Graduate Student Network Conference, NISS, (virtual) June 2021

Contributed Posters

Spatio-temporal modeling of wind speed data

- ENVR 2024 Workshop, Boulder, CO October, 2024

Understanding the Opioid Syndemic in North Carolina: A Novel Approach to Modeling and Identifying Factors

- SRCOS 2024 Summer Research Conference, Clemson, SC June, 2024

Joint modeling of wind speed and wind direction through a conditional approach

- Climate Model Evaluation and Uncertainty, Chicago, IL September 2022
- ENVR Workshop, Provo, UT October, 2022

Modeling of Wind Speed and Wind Direction

- The Graduate Student Network Conference, NISS, (virtual) May 2022

General Audience

On the road of modeling wind speed and wind direction

- Math Club, Clemson University March 2023

Modeling wind speed and wind direction

- Clemson Calculus Challenge, Clemson University April, 2023

SERVICE

Session Chair

- The Statistical Analyzes for Environmental Monitoring, Contributed Papers Session, Section on Statistics and the Environment, Joint Statistical Meeting, August 2022

Paper Reviewer for:

- *International Journal of Drug Policy*
- *Journal of Urban Health*
- *Journal of Agricultural, Biological and Environmental Statistics*
- *Advances in Statistical Climatology, Meteorology and Oceanography*
- *International Journal of Drug Policy*
- *Data Science in Science*
- 11th *International Conference on Climate Informatics* - extended abstract review

Mentor:

- STRIVE for MORE conference, (virtual) September 2020 and 2021

TEACHING EXPERIENCE	Teacher-Scholar Postdoctoral Fellow , Wake Forest University	
	<ul style="list-style-type: none"> • Courses taught: Elementary Probability and Statistics. 	
	Graduate Teacher of Record , School of Mathematical and Statistical Sciences, Clemson University	
	<ul style="list-style-type: none"> • Courses taught: Business Calculus I, Business Calculus II, Pre-Calculus and Introductory Differential Calculus, Calculus of Single Variable. 	
	Teacher of Mathematics , Mid-Carolina High School, Newberry, SC	
	<ul style="list-style-type: none"> • Subjects taught: Algebra 1, Algebra 2, Geometry, Pre-Calculus, AP Calculus AB. 	
	Adjunct Instructor of Mathematics , Piedmont Technical College, Newberry, SC and Midlands Technical College, Columbia, SC	
	<ul style="list-style-type: none"> • Courses taught: Probability and Statistics, Beginning Algebra, Intermediate Algebra, Algebra, Geometry and Trigonometry. 	
HARD SKILLS	R, MATLAB, Python, L ^A T _E X, Unix/Linux Shell Scripting, High Performance Computing (HPC)	
PROFESSIONAL MEMBERSHIP	American Statistical Association (ASA)	Since August. 2018
	ENVR Section. ASA	Since August 2018
	Institute of Mathematical Statistics (IMS)	Since October 2022