

EDUCATION

Univ. of Wisconsin-Milwaukee	Ph.D., Atmospheric Science	2022
Univ. of Wisconsin-Milwaukee	M.S., Mathematical Science	2016
Univ. of Oklahoma	B.S., Meteorology (minor: mathematics)	2013
Univ. of Reading (UK)	Year Abroad	2012

SCIENTIFIC INTERESTS

Coupled natural-human modeling, agent-based modeling, societal impacts of forecasts, model development and verification, wind gust forecasting, air pollution modeling, co-design and convergent science, teaching, warning decision-making.

PROFESSIONAL EXPERIENCE

Advanced Study Program (ASP) Postdoctoral Fellow , NSF NCAR <i>Exploring the impact of forecast errors on evacuation outcomes using ABMs</i>	2023 – 2025
Postdoctoral Research Associate , Wisconsin-Milwaukee <i>NSF award No. 5042100801</i>	2022 – 2023
Research Associate , Wisconsin-Milwaukee <i>NSF award No. 5042100801</i>	2018 – 2022
Instructor , Warning Decision Training Division <i>Train NWS forecasters issuing severe, tornado, and flood warnings</i>	2016 – 2018
Associate Director of Operations , Innovative Weather <i>Co-led a 10-person team providing 24/7 decision support services</i>	2014 – 2016
Instructor and TA , Wisconsin-Milwaukee, Oklahoma University <i>13 semesters of Quantitative Meteorology, Synoptic I/II, Intro to Weather/Climate</i>	2012 – 2020

PEER REVIEWED PUBLICATIONS

8. Kahl, JD., Zaprzalka, KJ., Lang, VA., Selbig, BR., and **Harris, AR**. 2023: Investigating the potential of using mixdown altitudes to forecast peak wind gusts. *Wea. and Fcst.*
7. **Harris, AR.**, Morss, RE., and Roebber, PJ. 2023: What improves evacuations? Exploring the hurricane-forecast-evacuation system using an agent-based framework. *Nat. Haz. Rev.*
6. **Harris, AR.**, Roebber, PJ., and Morss, RE. 2023: A new verification approach? Using coupled-natural human models to explore the forecast-evacuation system. *Bull. Am. Meteorol. Soc.*
5. Lang, VA., Turner, TJ., Selbig, BR., **Harris, AR.**, and Kahl, JD. 2022: Predicting peak wind gusts during specific weather types with the meteorologically stratified gust factor model. *Wea. and Fcst.*
4. **Harris, AR.**, Roebber, PJ., and Morss, RE. 2021: An agent-based modeling framework for examining the dynamics of the hurricane-forecast-evacuation system. *Int. J. Disaster Risk Reduct.*
3. Kahl, JD., Selbig, BR., and **Harris, AR**. 2021: Meteorologically stratified gust factors for forecasting peak wind gusts across the United States. *Bull. Am. Meteorol. Soc.*
2. **Harris, AR.** and Roebber, PJ. 2019: NBA team home advantage: identifying key factors using an artificial neural network. *PLOS One*.
1. **Harris, AR.** and Kahl, J. 2017: Gust factors: meteorologically stratified climatology, data artifacts, and utility in forecasting peak gusts. *J. Appl. Meteor. Climatol.*, 56, 3151–3166.

*Reviewed manuscripts for the following journals: International Journal of Disaster Risk Reduction, AGU's Atmospheres, Natural Hazards Review, Nature Communications.

AWARDS, HONORS, and SERVICE

AMS Board on Societal Impacts , Vice Chair	2024-2027
20th Societal Applications Symposium for AMS 2025 , Co-Chair	2024-2025
19th Societal Applications Symposium for AMS 2024 , Co-Chair	2023-2024
18th Societal Applications Symposium for AMS 2023 , Co-Chair	2022-2023

Community Scientist , AGU's Thriving Earth Exchange	2023-2024
Seminar Series – MMM Happy Hour , Co-organizer	2023-2024
NCAR/ASP Fellows Networking Committee , Chair	2023-2024
Seminar Series – The Triple Point: Where Weather, Climate, and Society Meet , Co-organizer	2023-2024
AMS Board on Societal Impacts , Member	2022-2024
AMS Early Career Leadership Academy , Funded Participant	2023
Rising Voices , Notetaker	2023
Letters to a Pre-scientist , Pen-pal	2022-2023
NSF Humans Disasters and the Built Environment – No. 5042100801 , Grant Writer	2021
Freshwater Science DEI Committee , Founding Member	2021-2022
Racial Justice and Equity Training , Reviewer	2021-2022
ASP Graduate Student Visitor at NCAR , Recipient	2021-2022
Teaching Fellow at Wisconsin-Milwaukee , Recipient	2021-2022
AMS Summer Policy Colloquium , Funded Participant	2021
AMS 101st Annual Meeting , 1st place Oral Presentation/Student Paper Award	2021
Distinguished Dissertation Fellowship at Wisconsin-Milwaukee , Recipient	2020-2021
Ernst Schwandt Memorial Scholarship and Teaching Assistant Award , Recipient	2020
NCAR ASP Colloquia , Funded Participant	2019
NCAR Mind the Gap Workshop , Funded Participant	2019
Northwestern Mutual Data Science Institute Scholarship , Recipient	2019
Three Minute Thesis at Wisconsin-Milwaukee , Finalist	2019
Hazardous Weather Testbed Spring Forecast Experiment , Participant	2018
Storm Prediction Center , Research Intern with Jaret Rodgers	2012

KEY DEI WORK

Community Scientist , Thriving Earth Exchange	2023 – 2024
Collaborate with Travis County Office of Resilience and Clean Air Force of Central Texas – and use air quality models (AERMOD) – to determine the ideal placement of PM sensors to monitor health impacts of concrete batch plants in Austin, TX.	
UWM Atmo Peer Mentoring Program , Founder	2021 – 2022
Involved gathering faculty support, identifying mentors, creating the website, writing the handbook, and advertising the program. By fall 2022, the program matched 6 mentors with 28 mentees and it was integrated into the undergraduate curriculum.	
Unlearning Racism in the Geosciences , Study Group Leader	2021
<u>URGE</u> is a journal-reading and policy-design curriculum to improve DEI in geoscience. I led a “pod” of 14 scientists at a variety of institutions including NASA. We met bi-weekly to discuss <u>curriculum</u> materials and discuss policies to implement at our respective institutions.	

INVITED PRESENTATIONS

1. Discussing career pathways and NSF-NCAR	<i>METR 1003 at OU (4/4/2024)</i>
2. Modeling hurricane evacuation	<i>Public Science Talks at Bambei Brewing (2/20/2024)</i>
3. Modeling hurricane evacuations	<i>RAL Early Warning Systems (11/8/2023)</i>
4. Interdisciplinary Graduate School Exploration	<i>AMS Triple Point Webinar Series (10/30/23)</i>
5. An agent-based model for exploring the evacuation dynamics	<i>MMM Seminar Series (10/12/23)</i>
6. Modeling hurricane evacuations	<i>MMM All Lab Meet with Tony B (9/27/23)</i>
7. Life as a meteorologist	<i>Oklahoma Virtual Charter Academy (3/7/23)</i>
8. Evidence-based strategies for teaching success	<i>2021 UWM New TA Orientation (8/21/21)</i>
9. NBA team home advantage	<i>Osher Lifelong Learning Institute (7/1/21)</i>

MEDIA and INTERVIEWS

1. NBA research	<i>University of Pennsylvania Student Radio Show (3/21/23)</i>
2. NBA research	<i>Milwaukee Journal Sentinel newspaper (7/11/21)</i>
3. NBA research	<i>FOX6 Milwaukee (7/1/21)</i>
4. Gust factor research	<i>UWM's In Focus magazine (3/2/21)</i>
5. NBA research	<i>UWM's research magazine (2/24/20)</i>
6. NBA research	<i>Inside Science magazine (10/22/19)</i>
7. Weather Forecasting for Summerfest	<i>UWM Letters (7/26/15)</i>
8. Daily live interviews	<i>WUWM - NPR (2014-2016)</i>

MODERATING PANELS

1. Session Chair *Novel Approaches to Building a WRN at AMS 2024 (1/30/24)*
2. Interdisciplinary Graduate School Exploration *AMS Triple Point Webinar Series (10/30/23)*