

Stephen Shield

The Ohio State University
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Education

2016-Present: The Ohio State University
Master of Arts Geography (expected May 2018)
Certification in Practice of Data Analytics (expected May 2018)

Bachelor of Science (2016): University of Nebraska-Lincoln
Major: Meteorology-Climatology
Minors: Mathematics, Geography

Research Interests

- Weather Impacts
- Data Analytics
- Severe Weather

Research Experience

August 2016-Present: The Ohio State University (Department of Geography)
Graduate Research Associate: Utilization of data analytics and machine learning techniques to analyze and predict the impact of weather events on power infrastructure.

August 2015-July 2016: National Drought Mitigation Center
Undergraduate Researcher: Evaluation of drought index performance, drought risk assessment, and evaluating the incorporation of drought mitigation in multi-hazard mitigation plans.

June 2016: University of Nebraska-Lincoln (Department of Earth and Atmospheric Sciences)
Field deployment team member: Collection of atmospheric data through the use of unmanned aircraft and mobile mesonet vehicles.

June 2015-August 2015: Los Alamos National Laboratory (Computational Earth Sciences Group)
Visiting Student: Research and generation of meteorological inputs for subsurface flow and transport modeling.

Grants

- 2017 Quiring S. M., **Shield S.** & Pino J.V. (\$20,000)
Improving Power Outage Prediction and Response through Community Partnerships
- 2017 Quiring S. M., Pino J.V., **Shield S.** & Guikema S.D. (\$20,000)
Improved Power Outage Modeling to Support Risk Management for Electrical Utilities
- 2015 **Shield S.** & Bathke D. (\$2,400)
Analysis of Drought Mitigation in Multi-Hazard Mitigation Planning

Awards/Achievements

University of Nebraska-Lincoln
College of Arts & Sciences Dean's List
(Fall 2014, Spring 2015, Fall 2015, Spring 2016)
James Canfield Scholarship Recipient (2012)

Publications

McRoberts D. B., Quiring S. M., Guikema S.D., **Shield S.**, Alvarado B. (In preparation)
Using NASA SMAP Soil Moisture Data to Improve the Accuracy of Power Outage Models

Training/Skills

Proficient in ArcGIS, R, and Python

Experience in IDL, HTML/CSS, VBA, & FORTRAN.

Completion of the following FEMA Emergency Management Institute Independent Study courses:
Fundamentals of Emergency Management, Emergency Manager: An Orientation to the Position

Conference Presentations and Posters

Shield S., McRoberts D. B. and Quiring S. M. (2017)

Statistical Modeling of Thunderstorm Related Power Outages

Contributed paper presented at the Annual Meeting of the American Association of Geographers, Boston, MA, April 2017.

Fuchs B., Svoboda M., Johs E., Sorensen W., **Shield S.**, and Schirle C. E. (2017)

Updating and Enhancing the National Drought Mitigation Center's Drought Risk Atlas

Contributed paper presented at the Annual Meeting of the American Meteorological Society, Seattle, WA, January 2017.

Quiring S. M., McRoberts D. B., **Shield S.**, Toy B. and Alvarado B. (2016)

Does NASA SMAP Improve the Accuracy of Power Outage Models?

Contributed poster presented at the Fall Meeting of the American Geophysical Union, San Francisco, CA, December 2016.

Service

Graduate Studies Committee Student Representative for Ohio State Geography Graduate Student Organization (August 2017- Present)

Joint Social Events Chair for Ohio State Geography Graduate Student Organization (August 2017- Present)

Mentor for the University of Nebraska-Lincoln Department Earth and Atmospheric Sciences Mentoring Program (August 2014- May 2016)

Officer of the University of Nebraska-Lincoln Chapter of the American Meteorology Society (May 2014- May 2015)

University Involvement

Meteorology Club at The Ohio State University (2016-present)

The Ohio State University Graduate Geography Student Organization (2016-present)

University of Nebraska-Lincoln Student Chapter of the American Meteorology Society (2013-2016)

Volunteer Work

Ohio State Fall Undergraduate Poster Forum: Poster Judge (September 2016 & 2017)

Central Plains Severe Weather Symposium and Family Weatherfest (April 2014 & 2016)

Naturepalooza: Presented by the UNL School of Natural Resources (October 2015)

Red Cross & Crete Fire Department Home Fire Prevention Campaign (November 2014)

Dinosaurs and Disasters event at University of Nebraska State Museum (February 2014 & 2015)

University of Nebraska-Lincoln Math Day (November 2013 & 2014)

The Crossing at Lexington High School Camp (June 2013)

Professional Membership

American Meteorological Society
Member since 2014

American Association of Geographers
Member since 2016

The Risk Institute at The Ohio State University Fisher College of Business
Fellow since 2017