

# Curriculum Vitae for Mark D. Risser

## Postdoctoral Fellow

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### EDUCATION

*Doctor of Philosophy, Statistics*  
The Ohio State University, Columbus, OH, August 2015  
Advisor: Catherine A. Calder, Ph.D.

*Master of Science, Statistics*  
The Ohio State University, Columbus, OH, June 2012

*Bachelor of Science, Mathematics*  
Eastern Mennonite University, Harrisonburg, VA, April 2007  
Minor: Psychology

### RESEARCH INTERESTS

Spatial and environmental statistics, Bayesian modeling, spatio-temporal statistics, extreme value statistics, computational methods, stochastic differential equations, data visualization, teaching statistics, hybrid educational methods, meta analysis

### PROFESSIONAL EXPERIENCE

*CASCADE Statistics Postdoctoral Fellow (LBNL-ESD)* August, 2015–Present  
Lawrence Berkeley National Laboratory, Berkeley, California

- Development and application of statistical methods for detection and attribution of changes in extreme climate events
- Quantification of uncertainty in model simulations due to sampling uncertainty, model formulation, and boundary conditions
- Comparison of statistical analyses of observed extreme weather to climate simulations of the past and future to evaluate the fidelity of models

*Visiting Scholar* August, 2015–Present  
University of California, Berkeley  
Department of Statistics

*Junior Statistician* August, 2014–May, 2015  
Statistical Consulting Service, The Ohio State University

*Statistical consultant* May, 2014–June, 2015  
Peabody Research Institute, Vanderbilt University

*Graduate Research Associate for Dr. Radu Herbei* June 2013–May 2014  
Department of Statistics, The Ohio State University

*Publishing Consultant* March 2013–September 2014  
McGraw-Hill Publishing in Mathematics and Statistics, New York, NY

*Solution Author* January–July 2012  
W.H. Freeman Publishing, New York, NY

Graduate Research Associate for Dr. Jackie Miller      September 2011–June 2013  
Department of Statistics, The Ohio State University

Assistant Director of Admissions      June 2007–June 2010  
Office of Admissions, Eastern Mennonite University

**PUBLICATIONS** *Nonstationary Spatial Process Modeling Via Treed Covariate Segmentation, with Application to Soil Organic Carbon Stock Assessment*  
**Mark D. Risser**, Catherine A. Calder, Veronica J. Berrocal, Candace Berrett  
Under review.      submitted August 2016

*Quantifying the Effect of Interannual Ocean Variability on the Attribution of Extreme Climate Events to Human Influence*  
**Mark D. Risser**, Dáithí A. Stone, Christopher J. Paciorek, Michael F. Wehner, Oliver Angéil  
*Climate Dynamics*      December 2016

*Moral Distress in Nurses Providing Direct Patient Care at an Academic Medical Center*  
Jan Sirilla, Esther Chipps, **Mark D. Risser**  
*Worldviews on Evidence-Based Nursing*      December 2016

*Observed differences in surface radiative forcing trends from methane*  
D.R. Feldman, W.D. Collins, S.C. Biraud, **M.D. Risser**, D.D. Turner, P.J. Gero, S. Xie, E.J. Mlawer, T.R Shippert, D. Helmig, J. Hueber, M.S. Torn  
Under review.      submitted May 2016

*Ohio Phosphorus Risk Index Sensitivity Analysis Using Crop Management Scenario Simulations*  
Elizabeth Dayton, Christopher Holloman, Sakthi Subburayalu, **Mark D. Risser**  
Under review.      submitted September 2015

*Local Likelihood Estimation for Covariance Functions with Spatially-Varying Parameters: the convoSPAT Package for R*  
**Mark D. Risser** and Catherine A. Calder  
*Journal of Statistical Software*      October, 2016

*A Meta-Analysis of Brief Alcohol Interventions for Adolescents and Young Adults: Variability in Effects across Alcohol Measures*  
Emily E. Tanner-Smith and **Mark D. Risser**  
*The Am J of Drug and Alcohol Abuse*, Vol. 42, No. 2, p. 140-151      March 2016  
DOI: 10.3109/00952990.2015.1136638

*Regression-Based Covariance Functions for Nonstationary Spatial Modeling*  
**Mark D. Risser** and Catherine A. Calder  
*Environmetrics*, Vol. 26, No. 4, p. 284-297.      June 2015  
DOI: 10.1002/env.2336

*Student Choice, Instructor Flexibility: Moving Beyond the Blended Instructional Model*  
Jackie B. Miller, **Mark D. Risser**, and Robert P. Griffiths  
*Issues and Trends in Educational Technology*, Vol. 1, No 1.      May 2013

**TALKS GIVEN** *Assessing uncertainty in attribution analyses of extreme climate events*  
Oral Presentation December 2016  
C20C+ Hack-a-thon, Berkeley National Lab, CA

*Boundary condition uncertainty in detection and attribution of extremes*  
Invited Presentation December 2016  
DOE Regional and Global Climate Modeling PI Meeting, Rockville, MD

*Bayesian modeling and decision-theoretic multiple testing for quantifying human influence on extreme weather using global climate models*  
Invited Presentation November 2016  
Seminars in Applied Mathematics and Statistics, UC Santa Cruz, CA

*Bayesian modeling and decision-theoretic multiple testing for quantifying human influence on extreme weather using global climate models*  
Invited Presentation October 2016  
IMAGE Brown Bag Seminar, National Center for Atmospheric Research, Boulder, CO

*Regression-Based Covariance Functions for Nonstationary Spatial Modeling*  
Contributed Oral Presentation August 2016  
Joint Statistical Meetings, Chicago, IL

*Quantifying the effect of ocean variability on the attribution of extreme climate events to human influence*  
Oral e-Presentation July 2016  
Climate Extremes/CASCADE/WACCEM teleconference

*Regression-Based Covariance Functions for Nonstationary Spatial Modeling*  
Oral Presentation June 2016  
International Society for Bayesian Analysis 2016 World Meeting, Cagliari, Italy

*Statistical methods for quantifying the effect of ocean variability on the attribution of extreme climate events to human influence*  
Poster Presentation April 2016  
ENVR/EnviBayes Biannual Workshop, Columbus, OH

*Quantifying the effect of ocean variability on the attribution of extreme climate events to human influence*  
Poster Presentation February 2016  
International Detection and Attribution Group Workshop, Boulder, CO

*Local Likelihood Estimation for Covariance Functions with Spatially-Varying Parameters*  
Invited e-Poster Presentation August 2015  
Joint Statistical Meetings, Seattle, WA

*Regression-Based Covariance Functions for Nonstationary Spatial Modeling*  
Invited Session August 2015  
Joint Statistical Meetings, Seattle, WA

*Regression-Based Covariance Functions for Nonstationary Spatial Modeling*  
Invited Poster Presentation September 2014  
2014 STATMOS Annual Meeting, University of Chicago, Chicago, IL

*Nonstationary Spatial Modeling Via Covariance Regression*  
Invited e-Poster Presentation August 2014  
Joint Statistical Meetings, Boston, MA

*A Nonstationary Spatial Covariance Regression Model*  
Poster Presentation September 2013  
Statistics and Biostatistics Student Poster Session  
The Ohio State University, Columbus, OH

*A Nonstationary Spatial Covariance Regression Model*  
Poster Presentation August 2013  
Joint Statistical Meetings, Montreal, QC, Canada

*Student Choice, Instructor Flexibility: HyFlex learning for large courses*  
Poster Presentation July 2013  
Campus Technology Annual Conference  
Hynes Convention Center, Boston, MA

*Polling, Streaming, and HyFlex: Blended Learning for Large Courses*  
Lilly Conference on College Teaching November 2012  
Miami University, Oxford, OH

*The HyFlex Model: Blended Learning for Large On-Campus Courses*  
Innovate Conference (Invited) April 2012  
Office of the Chief Information Officer  
The Ohio State University, Columbus, OH

**CONFERENCES & MEETINGS ATTENDED** *2015 American Geophysical Union Fall Meeting* December 2015  
San Francisco, CA

*2014 STATMOS Annual Meeting* September 2014  
University of Chicago, Chicago, IL

*Pan-American Advanced Study Institute on Spatio-Temporal Statistics* June 2014  
Búzios, RJ, Brazil  
Sponsored by STATMOS (Research Network for Statistical Methods for Atmospheric and Oceanic Sciences)

*2013 STATMOS Annual Meeting* August 2013  
Joint Statistical Meetings, Montreal, QC, Canada

*2013 Spatial Statistics Conference* June 2013  
The Ohio State University, Columbus, OH

*2013 Spatial Statistics Workshop* June 2013  
Title: Analyzing spatio-temporal data with R  
The Ohio State University, Columbus, OH

*Ten Lectures on Statistical Climatology* August 2012  
University of Washington, Seattle, WA  
Sponsored by STATMOS

*United States Conference on Teaching Statistics (USCOTS)* May 2011  
North Carolina State University, Raleigh-Durham, NC

USCOTS 2011: The Next Big Thing

**TEACHING  
EXPERIENCE**

*Statistics 3470: Introduction to Probability and Statistics for Engineers*  
The Ohio State University Spring 2014

- Duties include: lecturing, curriculum design, assessment preparation.
- Technology used: TodaysMeet for a student backchannel; Camtasia and YouTube for students to view lecture recordings.

*Statistics 1450: Introduction to the Practice of Statistics*  
The Ohio State University Autumn 2012–Autumn 2013

- Duties include: lecturing, lead teaching assistant for the course team (Autumn 2012, Spring 2013), recitation leader (Autumn 2013), grading exams, curriculum design.
- Technology used: Adobe Connect for live lecture streaming and recording; PollEverywhere, Twitter, Top Hat Monocle, and TodaysMeet for live polling and a student backchannel; Classroom Salon and YouTube for students to view lecture recordings.
- Autumn 2012, Spring 2013: Course structured using a HyFlex (“hybrid, flexible”) model which combined traditional and online components.

**TEACHING  
PROFESSIONAL  
DEVELOPMENT**

*Fellow, Preparing Future Faculty program*  
The Ohio State University Fall 2013–Spring 2014

- Observed and experienced faculty roles and responsibilities at a liberal arts institution.
- Mentored by Dr. Joan Krone, Professor of Computer Science and Benjamin Barney chair at Denison University, Granville, Ohio.

**PROFESSIONAL  
SERVICE**

*Referee*

- 2016: Advances in Statistical Climatology, Meteorology and Oceanography (1); Climate Dynamics (1); Annals of Applied Statistics (1); Spatial Statistics (1)
- 2015: Bayesian Analysis (1); Advances in Statistical Climatology, Meteorology and Oceanography (2); Environmetrics (1)

*To the University*

- 2012 Innovate Conference selection committee, Office of the Chief Information Officer, Ohio State University. February 2012.
- 2012 Impact Grant recommendation committee, Office of the Chief Information Officer, Ohio State University. December 2011.

*To the Department of Statistics*

- Co-President for department graduate students, Ohio State University. June 2013-May 2014.
- Graduate student recruitment and campus visit volunteer, Ohio State University. January 2011-Present.
- Communications Committee, Ohio State University. September 2010-June 2013.

*To Students*

- Undergraduate research assistant coordination, Ohio State University, January 2012-March 2012.

**ADDITIONAL  
HONORS**

Junior Researcher Travel Support recipient, International Society for Bayesian Analysis. 2016.

Craig Cooley Memorial Prize recipient, Department of Statistics. 2015.

Winner, Student Paper Competition, Section on Statistics and the Environment, American Statistical Association. 2015.

The Thomas and Jean Powers Student Teaching Award recipient, Department of Statistics. 2014.

University Fellow, The Ohio State University. 2010-2011.