

Robert Foster

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INFORMATION	Los Alamos National Laboratory	<i>E-mail:</i> rcfoster@lanl.gov

RESEARCH INTERESTS Applications of statistical methods, Bayesian and empirical Bayesian methods, bootstrap and other Monte Carlo methodologies, statistical programming, uncertainty quantification, and statistical methods as applied to the sciences.

EDUCATION **Ph.D. in Statistics**

Iowa State University, Ames, IA, October 2016

- Thesis title: Topics in Empirical Bayesian Analysis
- Adviser: Mark S. Kaiser
- 3.65 GPA
- The primary focus of my dissertation was on comparing and contrasting the ways that the uncertainty introduced from double use of the data (once for estimation of the hyperparameters, once in the resulting Bayesian analysis) has been accounted for, and incorporating many of these methods into a consistent framework. A new method was proposed for deriving empirical Bayesian intervals for means of natural exponential families with quadratic variance functions based on a modified version of intervals previously described by Carl Morris.

M.S. in Statistics

Iowa State University, Ames, IA, December 2010

- Adviser: Alyson Wilson
- 3.65 GPA

B.S. in Mathematics and Statistics

Oklahoma State University, Stillwater, OK, May 2007

- Summa cum laude
- Minor in Computer Science
- 3.948 GPA

RESEARCH EXPERIENCE **Los Alamos National Laboratory**, Los Alamos, NM

Postdoctoral Researcher, Oct. 2016 - Present

- Research topics include Beyond Moores Law sources of uncertainty and the statistical properties of resulting errors from propagation of BML sources of uncertainty, and simulation of microstructures from samples of additively manufactured materials.

CCS-6, Statistical Sciences group

- Department of Statistics

Iowa State University, Ames, IA

Research Assistant, 2007-2010

- Department of Statistics
- Worked with various departments and groups at Iowa State University, including animal science and consulting with the agriculture experiment station (AES).

TEACHING EXPERIENCE

Iowa State University, Ames, IA USA

Instructor

August 2010 to May 2016

- Instructor for Principles of Statistics, Fall 2010, Spring 2011, Summer 2011, Fall 2011, Spring 2012, Summer 2012
- Instructor for Probability and Statistics for Computer Science, Fall 2012, Spring 2013, Fall 2013, Spring 2014
- Instructor for Engineering Statistics, Fall 2014
- Instructor for Probability and Statistical Inference for Engineers, Spring 2015, Spring 2016

TECHNICAL REPORTS

Abendroth, Lori; Marlay, Stephanie; Myers, Anthony J.W.; Elmore, Roger W.; and **Foster, Robert C.**, "*Regional Corn Planting Date Recommendations for Iowa*" (2010). Iowa State Research Farm Progress Reports. 410.

INVITED TALKS

Towards Recreation of Microstructure in Additively Manufactured Materials, International Conference on Plasticity, Jan. 2018; Albuquerque ASA spring meeting, Apr. 2018

PROFESSIONAL MEMBERSHIP

- American Statistical Association

COMPUTER EXPERTISE

Statistical Software: R, JMP, SAS
Programming Languages: C, Java
Applications: \TeX , \LaTeX , \BibTeX , Microsoft Office
Operating Systems: Microsoft Windows, macOS