

## Matthew Simpson

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CONTACT INFORMATION	Department of Statistics University of Missouri Columbia, MO 65202	office: (573) 882 9351 themattsimpson@gmail.com <a href="http://www.themattsimpson.com/">http://www.themattsimpson.com/</a>
CURRENT EMPLOYMENT	<b>Postdoctoral fellow</b> Department of Statistics, University of Missouri Supervisors: Scott H. Holan and Christopher K. Wikle	August 2015 to present
RESEARCH INTERESTS	Bayesian statistics, spatial & spatio-temporal statistics, time series, applications to official statistics, Markov chain Monte Carlo	
EDUCATION	<b>Iowa State University</b> , Ames, IA	
	PhD, Statistics and Economics	July 2015
	<ul style="list-style-type: none"><li>• Thesis Topic: <i>Essays in Bayesian Modeling and Computing</i></li><li>• Advisers: Jarad Niemi and Gray Calhoun</li></ul>	
	MS, Statistics	Dec 2011
	<ul style="list-style-type: none"><li>• Creative Component: <i>A Bayesian Analysis of an Exchange and Specialization Experiment</i></li><li>• Adviser: Alyson Wilson</li></ul>	
	<b>Lindenwood University</b> , St. Charles, MO	
	BS Mathematics and BA Philosophy	May 2009
PUBLICATIONS	<ol style="list-style-type: none"><li>1. <b>Simpson, M.</b>, Holand, S. H., Wikle, C. K., and Bradley, J. R. (2017) Interpolating Distributions for Populations in Nested Geographies using Public-use Data with Application to the American Community Survey. <i>Under Review</i>.</li><li>2. <b>Simpson, M.</b>, Wikle, C. K., and Holan, S. H. (2017) Adaptively Tuned Particle Swarm Optimization with Application to Spatial Design. <i>Stat</i>.</li><li>3. <b>Simpson, M.</b>, Niemi, J. and Roy, V. (2016) Interweaving Markov Chain Monte Carlo Strategies for Efficient Estimation of Dynamic Linear Models. <i>Journal of Computational and Graphical Statistics</i>.</li><li>4. Alvarez-Castro, I., <b>Simpson, M.</b>, Niemi, J. (2015) Covariance Matrix Prior Distributions for Hierarchical Linear Models. 2015. <i>Proceedings of the Kansas State University Conference on Applied Statistics in Agriculture</i>.</li><li>5. <b>Simpson, M.</b> (2015) Application of Interweaving in DLMS to an Exchange and Specialization Experiment. <i>Bayesian Statistics from Methods to Models and Applications: Research from BAYSM 2014</i>.</li></ol>	
AWARDS	Student Awards — Iowa State University	
	<ul style="list-style-type: none"><li>• T.A. Bancroft Award for Excellent Doctoral co-Majors in Statistics</li><li>• Teaching Excellence Award, Economics Department</li></ul>	Aug 2012 May 2012
	Travel Awards	
	<ul style="list-style-type: none"><li>• Second Bayesian Young Statisticians Meeting, Vienna, Austria</li><li>• Economics Finance and Business Workshop at Bayes 250, Raleigh, NC</li></ul>	Sept 2014 Dec 2013

POSTERS AND PRESENTATIONS

- Estimating Distributions for Populations Within Nested Geographies with Public-Use Data, *Topic Contributed Session, JSM 2017*, Baltimore, IL, Aug. 2017.
- Estimating Distributions for Populations Within Nested Geographies with Public-Use Data, *ACS Data Users Conference, 2017*, U.S. Patent and Trademark Office, Alexandria, VA, May 2017.
- Introduction to Stan for Markov Chain Monte Carlo, U.S. *Center for Survey Research and Methodology invited seminar*, Census Bureau, Suitland, MD, April 2017. *Accompanying Files*
- Estimating Distributions for Populations Within Nested Geographies with Public-Use Data, *NSF-Census Research Network meeting, Spring 2017*, U.S. Census Bureau, Suitland, MD, April 2017.
- Particle Swarm Optimization Assisted Markov Chain Monte Carlo, *Topic Contributed Session, JSM 2016*, Chicago, IL, Aug. 2016.
- Particle Swarm Optimization Assisted Markov Chain Monte Carlo, *Poster Session, Spatial and Spatio-Temporal Design and Analysis for Official Statistics Workshop*, Columbia, MO, May 2016.
- Interweaving Markov Chain Monte Carlo Strategies for Efficient Estimation of Dynamic Linear Models, *Plenary Session, BAYSM'14*, Vienna, Austria, Sept. 2014.
- Ancillary-Sufficiency or not; Interweaving to Improve MCMC Estimation of the Local Level Model, *Poster Session, EFaB@Bayes250*, Durham, NC, Dec. 2013.

PROGRAMMING SKILLS

Significant experience with R, Stan, and the rstan R package.  
 Experience with github, C/C++, and Rcpp for calling C/C++ from within R.  
 Minimal experience with Cuda C/C++, Python, and SAS.

GRADUATE RESEARCH EXPERIENCE

Research Assistant Fall 2012  
 Department of Economics  
 Iowa State University  
 Supervisor: Brent Kreider

INTERNSHIPS

**Economic Science Institute**, Orange, CA Summer 2009/10  
**Show-Me Institute**, Clayton, MO Summer 2008

TEACHING EXPERIENCE

Instructor Summer 2014  
 Econ 301 – Intermediate Microeconomics  
 Econ 371 – Introductory Econometrics Spring 2013  
 Stat 104 – Introduction to Statistics Spring 2011

Teaching Assistant / Lab Instructor  
 Econ 101 – Principles of Microeconomics (Head TA, 2 Sections) Fall 2012/13/14  
 Econ 101 – Principles of Microeconomics Fall 2011 / Spring 2012  
 Econ 101L – Principles of Microeconomics Lab Fall 2011  
 Stat 305 – Engineering Statistics Summer 2011  
 Stat 226 – Introduction to Business Statistics I Fall 2010/ Summer 2011  
 Stat 326 – Introduction to Business Statistics II (Lab Instructor) Fall 2009/10  
 Stat 401 – Stat Methods for Research Workers Spring/Fall 2010

Other  
 Supervised Undergrad Stat Research Projects Summer 2016 — Fall 2016  
 Fall 2015 — Spring 2016  
 Economics Help Room Coordinator Spring 2012/13/14/15 and Fall 2012/13/14