Amber Hackstadt **https://sites.google.com/site/ajhackstadt/**

Current Position:

Research Assistant Professor	Department of Biostatistics at Vanderbilt University, Nashville, TN (August 2015-Present): Health Services Research

Education and Training:

Postdoctoral Fellowship	Biostatistics	Johns Hopkins University, Baltimore, MD (2011-2014) Projects: Bayesian multivariate receptor models to estimate source contributions to air pollution; Generalized linear models to estimate source-specific health effects; Causal inference techniques to estimate effects of environmental interventions on asthma
PhD	Statistics	Colorado State University, Fort Collins, CO (2011) Dissertation Title: *Bayesian Shape-restricted Regressions Splines*
MS	Statistics	Colorado State University, Fort Collins, CO (2008)
Masters of Natural Science	Mathematics	Southeast Missouri State University, Cape Girardeau, MO (2005) Thesis title: *Behrens-Fisher Problem for Bivariate Dichotomous Data*
BS	Mathematics and Secondary Education	Southeast Missouri State University, Cape Girardeau, MO (2003)

Professional Experience:

Summer 2014 - Summer 2015	Biostatistician: Social & Scientific Systems, Inc. Durham, NC. Duties: Aid in the preparation of study protocols and contribute to the planning and execution of statistical analyses for epidemiological, toxicological, and public health studies
January 2011-May 2011	Statistical Consultant: Franklin A. Graybill Statistical Laboratory, Department of Statistics, Colorado State University, Fort Collins, CO. Duties: Performing and providing source code for sample size calculations, t-tests, analysis of variance tests, and other statistical analyses

Spring 2010 - Fall 2010	Research Assistantship: Department of Statistics, Colorado State University, Fort Collins, CO; Non- and semi-parametric function estimation, regression splines, and Bayesian inference
Fall 2005 - Summer 2010	Instructor/Online Course Coordinator/Teaching Assistant: Department of Statistics, Colorado State University, Fort Collins, CO
Summer 2008	Biometric Internship: U.S. Fish and Wildlife Service, Anchorage, Alaska. Project: Modeled and estimated the reproductive behavior of Peregrine falcons in Tetlin National Wildlife Refuge using maximum likelihood estimation
Spring 2007 - Spring 2008	Research Assistantship: Center for Bioinformatics, Colorado State University, Fort Collins, CO; Microarray and tiling array data, detection of differentially expressed genes, filtering
Fall 2003 - Spring 2005	Instructor: Southeast Missouri State University, Cape Girardeau, MO
Fall 2004	Adjunct Instructor: Three Rivers Community College, Poplar Bluff, MO

Teaching Experience:

Instructor

STAT 307	Introduction to Biostatistics: Colorado State University, Fort Collins, CO (Fall 2007, Fall 2008-Spring 2009)
MA095	Intermediate Algebra: Southeast Missouri State University, Cape Girardeau, MO (Fall 2003-Spring 2005)
MATH 153	Intermediate Algebra: Three Rivers Community College, Poplar Bluff, MO (Fall 2004)

Online Course Coordinator

STAT650	Experimental Design: Colorado State University, Fort Collins, CO (Fall 2009)
STAT460/STAT560	Multivariate Statistics: Colorado State University, Fort Collins, CO (Summer 2009 - Fall 2009, Summer 2010)

Lab Instructor/Teaching Assistant

STAT 204	Statistics for Business Students: Colorado State University, Fort Collins, CO (Fall 2005-Spring 2006)

Guest Lecturer
STAT 675K Bayesian Statistics (Fall 2010)

Honors and Awards:

2011	Student Poster Competition Winner, Graybill Conference, Colorado State University, Fort Collins, CO
2007	Elmer Remmenga Scholarship in Applied Statistics, Colorado State University
2002-2003	B. F. and Carrie Woodburn Johnson Scholarship, Southeast Missouri State University, Cape Girardeau, MO
2002-2003	George A. Penzel Family Scholarship, Southeast Missouri State University
2001-2003	Russel and Elnora Michel Mathematics Scholarship, Southeast Missouri State University, Cape Girardeau, MO
2001-2003	Cecil Elsie Gross Education Scholarship, Southeast Missouri State University
2001-2002	Homer Roscoe and Carrie Findley Bolon Scholarship, Southeast Missouri State University, Cape Girardeau, MO

Publications:

Roger D. Peng, Arlene M. Butz, Amber J. Hackstadt, D'Ann L. Williams, Gregory B. Diette, Patrick N. Breysse, and Elizabeth C. Matsui (2015). Estimating the Health Benefit of Reducing Indoor Air Pollution in a Randomized Environmental Intervention. *Journal of Royal Statistical Society-Series A* 178(2) 425-443.

Amber J. Hackstadt, Elizabeth C. Matsui, D'Ann L. Williams, Gregory B. Diette, Patrick N. Breysse, Arlene M. Butz, and Roger D. Peng (2014). Inference for Environmental Intervention Studies using Principal Stratification. *Statistics in Medicine* 33(28) 4919-4933.

Amber J. Hackstadt and Roger D. Peng (2014). A Bayesian Multivariate Receptor Model for Estimating Source Contributions to Particulate Matter Pollution using National Databases. *Environmetrics* 25(7) 513-527.

Mary C. Meyer, Amber J. Hackstadt, and Jennifer A. Hoeting (2011). Bayesian Estimation and Inference for Generalised Partial Linear Models Using Shape-Restricted Splines. *Journal of Nonparametric Statistics* 23(4) 867-884.

Amber J. Hackstadt and Ann M. Hess (2009). Filtering for Increased Power for Microarray Data Analysis, *BMC Bioinformatics* 10(11).

In Progress

Jenna Krall, Amber J. Hackstadt and Roger D. Peng. A Method to Identify Regional Particulate Matter Sources and their Associations with Cardiovascular Hospitalizations. *Submitted to Journal of the Royal Statistical Society Series A*.

Presentations:

Podium Presentations at Scientific Meetings

"Examining the Effectiveness of a Pollution-Targeted Environmental Intervention on Improving Health." Joint Statistical Meetings; Montréal, Canada (2013).

"Changepoint Analysis using Shape-Restricted Regression Splines in a Bayesian Framework." Joint Statistical Meetings; Miami, Florida (2011).

"A Bayesian Approach to Mixed Models using Shape-Restricted Regression Splines." Joint Statistical Meetings; Vancouver, British Columbia (2010).

"A Bayesian Approach to Fitting Mixed Models using Shape-Restricted Regression Splines." ASA CO/WY Spring Meeting; Boulder, CO (2010).

"Microarray Analysis: P-values, Filtering, and Multiple Testing Adjustments." Conference on Applied Statistics in Agriculture; Manhattan, Kansas (2007).

Invited Presentations
"Shape-Restricted Fixed and Free-knot Regression Splines." Biostatistics and Informatics Department; University of Colorado Denver, Denver, CO (April 27, 2011).

Posters
"Inference for Environmental Intervention Studies using Principal Stratification." Women in Statistics Conference: Cary, NC (2014).

"Estimating Source-Specific Effects of Fine Particulate Matter Emissions on Cardiovascular and Respiratory Hospitalizations using SPECIATE and NEI Data." ENAR Spring 2013 Meeting; Orlando, FL (2013).

"A Bayesian Source Apportionment Model for PM Monitoring Data." International Society for Environmental Epidemiology Conference; Columbia, SC (2012).

"Bayesian Shape-Restricted Spline Model Including Changepoints." Graybill Conference; Fort Collins, CO (2011).

Chaired Sessions:
Session Chair. "Statistical Challenges of Spatial Multi-Pollutant Data in Environmental Epidemiology- Topics Contributed Papers." ENAR Spring 2012 Meeting; Washington, DC (2012).

Session Chair. "Bayesian Modeling in Physics and Engineering - Contributed Papers." Joint Statistical Meetings; Miami, FL (2011).

Peer Review Activities:
BMC Bioinformatics, Biostatistics, and Communications in Statistics – Theory and Methods.

Academic Service:
Environmental Biostatistics and Epidemiology Working Group Coordinator, Johns Hopkins University, Baltimore, MD (Fall 2011- Summer 2014)

Graduate Student Seminar Coordinator, Colorado State University, Fort Collins, CO (Fall 2008 - Spring 2010)

Community Service:
Volunteered as a tutor and mentor to high school students through the Incentive Mentoring Program at Johns Hopkins University (January 2012 - August 2013)

Professional Memberships:
American Statistical Association (ASA)
Eastern North American Region (ENAR) International Biometric Society

Other Professional Qualifications:
Experience with R programming language, SAS, LaTeX, and WinBUGS