

# Curriculum Vitae

## **Amber J. Hackstadt**

Vanderbilt University Medical Center  
Department of Biostatistics  
2525 West End Suite 11116

### **Education:**

Southeast Missouri State University, Cape Girardeau, MO  
B.S. in Mathematics and Mathematics Education, 2003  
Summa Cum Laude

Southeast Missouri State University, Cape Girardeau, MO  
Masters of Natural Science in Mathematics, 2005  
Thesis: *Behrens-Fisher Problem for Bivariate Dichotomous Data*

Colorado State University, Fort Collins, CO  
M.S. in Statistics, 2008  
Ph.D. in Statistics, 2011  
Dissertation: *Bayesian Shape-restricted Regressions Splines*

Johns Hopkins University, Baltimore, MD  
Postdoctoral fellowship in Department of Biostatistics, 2014  
Environmental Biostatistics

### **Academic Appointments:**

Assistant Professor, Department of Biostatistics, Vanderbilt University Medical Center,  
2018-Present

Research Assistant Professor, Department of Biostatistics, Vanderbilt University Medical  
Center, 2015-2018

### **Other Employment:**

Instructor, Department of Mathematics, Southeast Missouri State University, Cape  
Girardeau, MO, 2003-2005

Instructor, Department of Statistics, Colorado State University, Fort Collins, CO, 2006-  
2009

Research Assistant, Center for Bioinformatics, Colorado State University, Fort Collins,  
CO, 2008

Biometric Intern, U.S. Fish and Wildlife Service, Anchorage, Alaska, Summer 2008

Online Course Coordinator, Department of Statistics, Colorado State University, Fort Collins, CO, 2009-2010

Statistical Consultant, Franklin A. Graybill Statistical Laboratory, Colorado State University, Fort Collins, CO, 2011

Biostatistician, Social & Scientific Systems, Inc. Durham, NC, 2014-2015

## **Professional Organizations:**

American Statistical Association (ASA)

International Biometric Society - Eastern North American Region (ENAR)

## **Professional Activities:**

### Intramural

Member of Graduate Program Committee, Department of Biostatistics, Vanderbilt University, 2015-Present

Biostatistics staff promotions committee, Department of Biostatistics, Vanderbilt University, Jan 2018-Present

### Extramural

Member of Data Safety and Monitoring Board, “Preliminary Investigation of optimal Oxygen Targets (PILOT) trial,” 2018-Present

Ad hoc reviewer for and National Center for Complementary and Integrative Health, National Institutes of Health, “Mechanistic Studies to Optimize Mind and Body Interventions (R61/R33 and R33)” August 2018

Ad hoc reviewer for and National Center for Complementary and Integrative Health, National Institutes of Health, “Exploratory Clinical Trials of Mind and Body Interventions (R34 and U01)” November 2018

Reviewed for the following journals:

*American Journal of Epidemiology*

*Biostatistics*

*BMC Bioinformatics*

*BMJ Open*

*Communications in Statistics – Theory and Methods*

*Environmental International*

*Transportation Research Part D: Transport and Environment*

Academic Awards

B. F. and Carrie Woodburn Johnson Scholarship, 2002-2003, Southeast Missouri State University

George A. Penzel Family Scholarship, 2002-2003, Southeast Missouri State University

Russel and Elnora Michel Mathematics Scholarship, 2001-2003, Southeast Missouri State University

Cecil Elsie Gross Education Scholarship, 2001-2003, Southeast Missouri State University

Homer Roscoe and Carrie Findley Bolon Scholarship, 2001-2002, Southeast Missouri State University

Elmer Remmenga Scholarship in Applied Statistics, 2007, Colorado State University

Student Poster Competition Winner, Graybill Conference, 2011, Colorado State University

**Teaching Activities:**

Lab Instructor

STAT204 Statistics for Business Students, State University, Fort Collins, CO 2005-2006

Instructor

BIOS6341 Introduction to Probability and Statistical Theory, Vanderbilt University, Nashville, TN  
2018

MA153 Intermediate Algebra, Three Rivers Community College, Popular Bluff, MO  
2004

MA095 Intermediate Algebra, Southeast Missouri State University, Cape Girardeau, MO  
2003-2005

STAT 307 Introduction to Biostatistics, Colorado State University, Fort Collins, CO  
2007-2009

## Online course coordinator

Created and managed website, created and graded homework and exams for

STAT460/STAT560 Multivariate Statistics, Colorado State University, Fort Collins, CO  
2009-2010

STAT650 Experimental Design, Colorado State University, Fort Collins, CO  
2010

## Guest Lecturer

STAT 675K, Bayesian Statistics, Guest Lecturer, Colorado State University,  
2010

## Internal Seminars, Lectures, and Workshops

A Brief Introduction to Environmental Biostatistics  
Health Services Research Work in Progress Seminar, Vanderbilt University Medical  
Center, January 24, 2017 and March 27, 2018

Introducing Bayesian Methods by Example  
Health Services Research Work in Progress Seminar, Vanderbilt University Medical  
Center, November 28, 2017

An Introduction to Propensity Score Methods  
CRC Research Skills Workshop, Vanderbilt University Medical Center, October 6, 2017

## **Research Program:**

R01 ES019560                      PI: Peng                      10/01/11-12/31/13  
Statistical methods for complex environmental health data  
Role: Trainee

HHS A2902010000161          PI: Griffin                      08/01/15-11/01/2015  
Comparative Effectiveness DEcIDE-2 Consortia Task Order 2  
Role: Key personnel

VA Merit                              PI: Roumie                      10/01/12 – 09/30/16  
Effectiveness of Second Line Hypoglycemic Medications Among Veterans  
Role: Co-Investigator

VUMC57172                      Subrecipient PI: Hackstadt    11/01/15-12/31/16  
Statistical Methods for Complex Environmental Health Data  
Role: Subrecipient PI

2I01CX000570                      PI: Roumie                      10/01/16-9/30/20

Effectiveness of Hypoglycemic Medications Among Veterans with CKD  
Role: Co-Investigator

P30 DK92986                      PI: Elasy                      09/19/17-07/30/21  
Vanderbilt Center for Diabetes Translation Research  
Role: Biostatistician

P30DK20593                      PI: Powers (PI)                      01/12/1996-03/31/22  
Diabetes Research and Training Center  
Role: Biostatistician

## **Publications and Presentations:**

### Articles in Refereed Journals

Min JY, Griffin MR, Chipman J, Hackstadt AJ, Greevy RA, Grijalva CG, Hung AM, and Roumie CL. Recent metformin adherence and the risk of hypoglycaemia in the year following intensification with a sulfonylurea. *Diabetic Medicine*. Published online Oct 30, 2018.

Chakkalakal RJ, Hackstadt AJ, Trochez R, Gregory R, and Elasy TA. Gestational Diabetes and Maternal Weight Management During and After Pregnancy. *Journal of Women's Health*. Published online Nov 29, 2018.

Murff HJ, Roumie CL, Greevy RJ, Hackstadt AJ, D'Agostino McGowan LE, Hung AM, Grijalva CG, and Griffin MR. Metformin Use and Incidence Cancer Risk: Evidence for a Selective Protective Effect against Liver Cancer. *Cancer Causes & Control: CCC* 2018; 29(9) 823-832.

Xia M, Huang R, Shi O, Boyd WA, Zhao J, Sun N, Rice JR, Dunlap PE, Hackstadt AJ, Bridge MF, Smith MV, Dai S, Zheng W, Chu PH, Gerhold D, Witt KL, DeVito M, Freedman JH, Austin CP, Houck KA, Thomas RS, Paules RS, Tice RR, and Simeonov A. Comprehensive analyses and prioritization of Tox2110K chemicals affecting mitochondrial function by in-depth mechanistic studies. *Environmental Health Perspectives* 2018; 126(7).

Roumie CL, Min, JY, McGowan, LD, Presley C, Grijalva C, Hackstadt AJ, Hung A, Greevy R, Elasy T, Griffin, M. Comparative safety of sulfonylurea and metformin monotherapy on the risk of heart failure: a cohort study. *Journal of the American Heart Association* 2017; 6(4).

Krall JR, Hackstadt AJ, Peng RD. A hierarchical modeling approach to estimate regional acute health effects of particulate matter sources. *Statistics in Medicine* 2017; 36(9) 1461–1475.

Peng RD, Butz AM, Hackstadt AJ, Williams DL, Diette, GB, Breyse PN, Matsui EC. Estimating the Health Benefit of Reducing Indoor Air Pollution in a Randomized

Environmental Intervention. *Journal of Royal Statistical Society-Series A* 2015; 178(2) 425-443.

Hackstadt AJ, Matsui EC, Williams DL, Diette GB, Breyse PN, Butz AM, Peng RD. Inference for Environmental Intervention Studies using Principal Stratification. *Statistics in Medicine* 2014; 33(28) 4919-4933.

Hackstadt AJ, Peng RD. A Bayesian Multivariate Receptor Model for Estimating Source Contributions to Particulate Matter Pollution using National Databases. *Environmetrics* 2014; 25(7) 513-527.

Meyer MC, Hackstadt AJ, Hoeting JA. Bayesian Estimation and Inference for Generalised Partial Linear Models Using Shape-Restricted Splines. *Journal of Nonparametric Statistics* 2011; 23(4) 867-884.

Hackstadt AJ, Hess AM. Filtering for Increased Power for Microarray Data Analysis. *BMC Bioinformatics* 2009; 10(11).

## Presentations

### Invited

“Shape-Restricted Fixed and Free-knot Regression Splines.” Biostatistics and Informatics Department; University of Colorado Denver, Denver, CO, April 27, 2011.

“Estimating the health benefit of reducing indoor air pollution in a randomized environmental intervention using principal stratification.” Royal Statistical Society 2016 Conference; Manchester, England, September 8, 2016.

“Statistical methods to estimate exposures to multiple pollutants.” Western North American Region of the International Biometric Society Annual Meeting, Santa Fe, NM, June 25, 2017.

### Contributed

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

“A Bayesian Approach to Mixed Models using Shape-Restricted Regression Splines.” Joint Statistical Meetings; Vancouver, British Columbia, August 3, 2010.

“Changepoint Analysis using Shape-Restricted Regression Splines in a Bayesian Framework.” Joint Statistical Meetings; Miami, FL, August 3, 2011.

“Examining the Effectiveness of a Pollution-Targeted Environmental Intervention on Improving Health.” Joint Statistical Meetings; Montréal, Canada, August 7, 2013.