

Chuan Zhou, Ph.D.
Assistant Professor in Biostatistics
Vanderbilt University School of Medicine
Department of Biostatistics
S-2323 Medical Center North
Nashville, TN 37232-2158
Phone: (615) 343-4472 (O)
Fax: (615) 343-4924
E-mail: chuan.zhou@vanderbilt.edu

Education

- 2000 – 2003 **Ph.D in Biostatistics**
Department of Biostatistics, University of Washington,
Seattle, WA, U.S.A.
Dissertation: “A Bayesian Hierarchical Mixture Model for Curve Clustering”
Chair: Prof. Jon Wakefield, Departments of Statistics and Biostatistics
- 1998 – 2000 **M.S. in Biostatistics**
Department of Biostatistics,
School of Public Health and Community Medicine,
University of Washington, Seattle, WA.
- 1996 – 1998 **M.S. in Statistics**
Department of Mathematics and Statistics,
University of Maryland Baltimore County, Baltimore, MD.
- 1991 – 1996 **B.S. in Statistics**
Department of Probability and Statistics,
Peking University, Beijing, China.

Working and Research Experience

- 2005 – Present **Assistant Professor** (tenure-track)
Department of Biostatistics, School of Medicine, Vanderbilt University.
Conducting independent and collaborative research on methods, clinical trials
and health services.
- 2003 – 2005 **Postdoctoral Fellow**
Department of Biostatistics, University of Washington.
Worked with Dr. Xiao-Hua (Andrew) Zhou on health service research, profiling
analysis, diagnostics, clustered encouragement design and causal inference.
- 2000 – 2003 **Research Assistant**
Fred Hutchinson Cancer Research Center, Seattle, WA.
Worked under the supervision of Dr. Steve Self on design of microarray exper-
iments and gene expression analysis.
- 1998 – 2000 **Research Assistant**
National Research Center for Statistics and Environment.

Worked with Dr. Patrick Heagerty on developing novel approaches for analyzing Gypsy moth defoliation in United States using semi-parametric spatial Markov transition models.

Summer 1999

Research Assistant

Project: Informed Decision Making of Physicians

Worked with Clarence H. Braddock III, MD at VA Puget Sound Health Care System.

Provided support on data management, computing and statistical analysis.

Summer 1998

Statistical Intern

Becton Dickinson Microbiology Systems, Sparks, MD.

Duties included S-plus programming, statistical analysis, experimental design and quality control.

Summer 1997

Statistical Intern

Council of Landscape Architectural Registration Board, Arlington, VA.

Project: The L.A.D.P. Education/Experience and Test Performance Association Study

Duties included SAS programming, data analysis and report writing.

Teaching Experience

Winter 2002

Teaching Assistant

Course: BIOSAT 515 "Introduction to Linear Regression".

Department of Biostatistics, University of Washington.

1997 – 1998

Teaching Assistant

Course: Statistics for Biology Science

Department of Mathematics and Statistics, UMBC

1996 – 1997

Teaching Assistant

Courses: Algebra, Calculus and Complex Analysis.

Department of Mathematics and Statistics, UMBC.

Professional Service

Serve on the Regional Advisory Board of WNAR starting from 2005

Professional Memberships

American Statistical Association

International Biometric Society

Ongoing Grants and Projects

National Heart, Lung, and Blood Institute NIH
1 RO1 HL088459-01 05/20/2007 ? 05/20/2011
Principle Investigator: Alan B. Storrow, MD
Project Title: Improving Heart Failure Risk Stratification in the ED (Stratify trial)
Role: Co-investigator

Agency for Healthcare Research and Quality
Grant Number: 1 U18 HS016651-01
Principal Investigator: WEINGER, MATTHEW B MD
Project Title: STRAIT: Simulation Training for Rapid Assessment and Improved Teamwork
Role: Co-investigator

New Hampshire Industrial Research Center
Principal Investigator: STORROW, ALAN MD
Biosignetics project: "Heart Sound Energy Characterization in Emergency Department Patients With and Without Dyspnea"
Role: co-investigator

Anesthesia Patient Safety Foundation
PI: Jason Slagle
The Impact of Performance-Shaping Factors on Anesthesia Care Task Distribution.
01/01/2007-06/30/2008
Role: co-investigator

Emergency Nurses Association Grant
PI: Karen Miller, RN, MPA
07/01/2006 - 06/30/2007
Study effect of emergency nurse report cards on work efficiency.
Role: Co-investigator

Emergency Medicine Foundation for the 2007-2008 Resident Research Grant
PI: Benjamin Heavrin, MD
Medicaid Disenrollment: Intrastate Emergency Department Impact
7/01/2007-6/30/2008
Role: Co-investigator

Publications

Storrow AB, Miller KF, **Zhou C**, Mayor J, Harrow J, Han JH, Harris PA, Polyshchuk V, Kudriavtsev V. (2007). Improving the stethoscope: optimizing computerized analysis of heart tones in emergency department patients with possible heart failure. *J Cardiac Fail*,13:S95.

Hoot, N., **Zhou, C.** and Aronsky, D. (2007). Measuring and Forecasting Emergency Department Crowding in Real Time. *Annals of Emergency Medicine*, 49(6):747-755.

Han, J., **Zhou, C.**, Zhong, S. France, D., Jones, I., and Aronsky, D. (2007). The Effect of Emergency Department Expansion on Emergency Department Overcrowding and Ambulance Diversion. *Academic Emergency Medicine*,14(4):338-43.

Monahan, K., **Zhou, C.**, Rose, J., and Adler, D. (2006) Determinants of changes in serial B-type natriuretic peptide levels in hospitalized patients. *Journal of Clinical and Basic Cardiology*,9:31-36.

Zhou, C., Wakefield, J. and Breedon, L. (2006). Bayesian analysis of cell cycle gene expression data. In “Bayesian Inference for Gene Expression and Proteomics”, Marina Vannucci, Kim Anh Do and Peter Müller (editors), Cambridge University Press.

Zhou, C. and Wakefield, J. (2006). A Bayesian mixture model for partitioning gene expression data. *Biometrics*, 62(2): 515-525.

Zhou, X., Castelluccio, P., **Zhou, C.** (2005). Non-parametric estimation of ROC curves in the absence of a gold standard. *Biometrics*, 61(2): 600-610.

Wakefield, J., **Zhou, C.** and Self, S. (2003). Modelling gene expression data over time: curve clustering with informative prior distributions. *Bayesian Statistics 7*.

Publications (Submitted or In Preparation)

Zhou, C., Burgess, J., Fishman, P., Wang, L. and Sloan, K. (2006). A multi-piece model for health care cost. Submitted to *Statistics in Medicine*.

Fishman, P, Sloan, K, Burgess Jr., J, Zhou, C and Wang, L. (2006) Can a Single Risk Model Serve Multiple Health Care Finance and Management Objectives?: Evidence from the US Veteran Population. Submitted to *Inquiry*.

Zhou, C., Wakefield, J., Breedon, L., Self, S. and Pramila, T. (2006). Cell-cycle gene expression analysis based on a Bayesian partitioning model. In preparation.

Zhou, C., Zhou, X., Sloan, K. and Fishman, P. (2006). Bayesian hierarchical model for health care profiling. In preparation.

Zhou, C. and Zhou, X. (2006). A random effect model for ROC curve estimation in the absence of gold standard. In preparation.

Presentations and Abstracts

- 2006 Invited talk at 2006 ICSA meeting, UConn.
Title: Causal inference in randomized encouragement design studies.
- 2005 Accepted abstract by 2005 iHEA Conference in Barcelona
Title: Risk adjustment for provider profiling - alternative models, additional considerations
Presenting Author: Kevin L. Sloan, U.S. Veterans Health Administration and University of Washington.

Co-authors: Paul Fishman, James F. Burgess, Jr., Xiao-Hua (Andrew) Zhou, Chuan Zhou.

- 2005 Accepted abstract by 2005 iHEA Conference in Barcelona
Title: Issues in Evaluating Alternative Risk Assessment Models: Evidence from the US Veterans Population
Presenting Author: Paul Fishman, Center for Health Studies, Group Health Cooperative and University of Washington.
Co-Authors: Kevin L. Sloan, James F. Burgess, Jr., Xiao-Hua (Andrew) Zhou, Chuan Zhou.
- 2004 Invited seminar at Simon Fraser University, Department of Statistics and Actuarial Science.
- 2004 Invited seminar at University of Washington, Department of Biostatistics.
- 2005 Contributed talks at the annual WNAR meeting.