

Bruce J. Swihart

Department of Biostatistics 615 N. Wolfe Street E3036 Baltimore, Maryland 21205

bruce.swihart [at] gmail [dot] com * <http://www.biostat.jhsph.edu/~bswihart>

Education

Johns Hopkins University:

- PhD in Biostatistics
- Expected graduation date: May, 2011

University of Colorado at Denver and Health Sciences Center Graduate:

- Master of Science in Biometrics/Biostatistics, 2006
- Cumulative G.P.A.: 4.0

University of Colorado at Boulder Graduate:

- Bachelor of Science in Applied Mathematics with Distinction, 2004
- Minor: Computational Economics
- Cumulative G.P.A.: 3.835

Relevant Work/Research Experience

Google, Summer Intern 2009

- Statistical Analyst working with Pete Meyeri, PhD on Human Evaluation of Ads / Rater Performance

Johns Hopkins University, 2005-2009

- Statistical Analyst working with N. Punjabi, MD/PhD on Sleep Heart Health Study
- Statistical Analyst working with D. Segev, MD on Kidney Transplantation Policy

Western Slope Sleep Center: Sleep Lab Altitude Study, 2006-2009

- Statistical Analyst working with D. Patz, MD

National Jewish Research Center, 2006

- Statistical Programmer working with M. Strand, PhD on monotone nonparametric regression

Mathematics Tutor, 1999-2006

The Retina Center, 2001-2004

- Employed by William Waterhouse, MD Ophthalmologist/Retina Specialist
- Patient History Research, Article Retrieval, Creating Digital Slide Library

SimAuthor, Inc. 2002-2003

- Data Analyst for desktop flight simulator product

Mesa State College, 2002

- Mathematics Researcher investigating digital de-blurring techniques

National Oceanic and Atmospheric Administration (Dept. of Commerce), 2000

- Funded by competitive Summer Undergraduate Research Experience Grant
- Weather modeling with Matlab

Relevant Teaching Experience (Johns Hopkins Biostatistics Department)

280.345	Biostatistics in Public Health	Teaching Assistant	2009
140.656	Multi-Level Modeling	Teaching Assistant	2009
140.655	Longitudinal Data Analysis	Teaching Assistant	2009
140.751-4	Advanced Biostatistics	Teaching Assistant	2007-2008
xxx.xxx	Computing Club	Co-President	2007-2008
140.614	Data Analysis Workshop II	Teaching Assistant	2007-2009
140.613	Data Analysis Workshop I	Teaching Assistant	2007-2009

Publications

Gentry SE, et. al. The roles of dominos and never-ending altruistic donor chains in kidney paired donation. *American Journal of Transplantation*. *In revision, 2009*.

Caffo B, Swihart B, Laffan A, Crainiceanu C, Punjabi N (2009). An Overview of Observational Sleep Research With Application to Sleep Transitioning. *Invited from Chance* 22 (1):10-15.

Swihart BJ, et. al. Characterizing Sleep using the Hypnogram. *Journal of Clinical Sleep Medicine*. 2008 Aug 15;4(4):349-55.

Patz D, et. al. The Effect of Altitude Descent on Obstructive Sleep Apnea. *CHEST*. 2006;130:1744-1750.

Talks

COAH*:	Matching for Multiple Groups	2009
Journal Club:	Gibbs Sampler and Metropolis Hastings Algorithm,	2008
Journal Club:	Your brain on logarithm of the likelihood.	2008
COAH*:	Lasagna plots: A saucy alternative to spaghetti plots,	2007
COAH*:	Heterogeneity? Yeah, I have a model for that,	2007
Lord Lecture:	The Compression of Multi-state Morbidity,	2007
COAH*:	Aging and The Tipping Point,	2007
COAH*:	Novel Methods in the Visualization of Transitional Phenomena,	2006
JSM:	Novel Methods in the Visualization of Transitional Phenomena,	2006
WNAR:	Novel Methods in the Visualization of Transitional Phenomena,	2006

* JHU Center on Aging and Health

Honors / Positions Held

June B. Culley Award,	2009
Student-Faculty Liaison JHSPH Dept. of Biostatistics,	2008-2009
Thomas I. and Louis D. Dublin Award,	2008
Best Biostatistics Poster, Delta Omega Poster Competition,	2008
2 nd Overall, Applied Research section, Delta Omega Poster Competition,	2008
Honorary membership to American Public Health Association (APHA),	2008
United States Institute of Peace Conflict Resolution Workshop Participant,	2008
Mason F. Lord Lecture and Poster Competition, 2 nd Place,	2007
NSF Graduate Research Fellowship Honorable Mention,	2006
UCDHSC Biostatistics Marvin Porter Outstanding Student Award,	2006
Baltimore Half Marathon Finisher,	2006, 2007
Baltimore Marathon Finisher,	2005, 2008
UCDHSC Graduate Fellowship Grant recipient,	2005
Student/Faculty Biometrics Department Liaison,	2004-2005
Student Service Award Dept. of Preventive Medicine and Biometrics,	2004-2005
Eight semesters on Dean's List,	2000-2004
Honorary Officer, Society for Industrial and Applied Mathematicians,	2000-2004
Greatest Contribution, Spring	2004
▪ Alpha Gamma Omega, serving as Chaplain	
Trustee of the Engineering Excellence Fund,	2002-2004
▪ Responsible for management of annual 1.1 million dollar budget	
Student Government Rep at Large on the Univ. of Colorado Engineering Council,	2002
3 rd Highest Scorer in State of Colorado on Putnam Examination,	2000
Eugene Carroll Scholarship recipient,	2000-2004
Boettcher Scholar,	2000
▪ full ride undergraduate scholarship	

Software Knowledge

Statistics: R, WinBUGS, Matlab, SAS, Splus, STATA
Document preparation: LaTeX, Microsoft Office

Additional Information

Areas of Interest and Research Statement: My research has been primarily applied in the fields of kidney transplantation and sleep. Currently my theoretical research includes establishing properties of a bridge link function for Generalized Linear Mixed Models. I formulated a framework called lasagna plotting which is useful in graphing and exploring very large datasets. I work closely with my advisor, Brian Caffo, on statistical imaging problems. We seek ways to gain inference on collections of individuals based on their statistical images. Given that the data for one individual's image over time can be of immense size and complexity, exciting challenges exist for the cleaning, exploration, visualization, and analysis of a *population* of individuals' images over time.