Kraig J. Andrews

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Research Interests

Bayesian modeling, spatiotemporal modeling, spatial data analysis, longitudinal data analysis, computing

Education

Wayne State University, Detroit, MI

Ph.D., Physics, *Expected:* May 2018

- Thesis Topic: ...
- Advisor: Zhixian Zhou, Ph.D

M.S., , Physics, Feb 2016

Michigan State University, East Lansing, MI

B.S., Physics, 2014

B.S., Astrophysics, 2014

Research Experience

Graduate Research Assistant May 2015–Present
Nano Fabrication and Electron Transport Laboratory,
Department of Physics and Astronomy,
Wayne State University
Supervisor: Zhixian Zhou, Ph.D.

Undergraduate Research Assistant May 2012–Jan 2013
High Resolution Array Group (HIRA): SAMURAI-TPC Project
National Superconducting Cyclotron Laboratory,
Michigan State University
Supervisors: William Lynch, Ph.D and Betty Tsang, Ph.D.

Undergraduate Research Assistant Feb 2013–Dec 2013
Neutron Star Evolution and Developmental Limits,
Department of Physics and Astronomy,
Michigan State University
Supervisor: Edward Brown, Ph.D

Refereed Journal Publications

1. Baker, J., Duprez, D., Rapkin, J., Huppler-Hullsiek, K., **Quick, H.**, Grimm, R., Neaton, J.D., and Henry, K. "Untreated HIV infection and large and small artery elasticity." *JAIDS*, 52(1):25–31, 2009.
2. Baker, J., Ayenew, W., **Quick, H.**, Huppler-Hullsiek, K., Tracy, R., Henry, K., Duprez, D., and Neaton, J.D. "High-density lipoprotein particles and markers of inflammation and thrombotic activity in patients with untreated HIV infection." *Journal of Infectious Diseases*, 201(2):285–292, 2010.
3. Baker, J., **Quick, H.**, Huppler-Hullsiek, K., Tracy, R., Duprez, D., Henry, K., and Neaton, J.D. "IL-6 and d-dimer levels are associated with vascular dysfunction in patients with untreated HIV infection." *HIV Medicine*, 11(9):608–609, 2010.
4. Kunisaki, K.M., **Quick, H.**, and Baker, J.V. "HIV antiretroviral therapy reduces circulating surfactant protein-D levels." *HIV Medicine*, 12(9):580–581, 2011.

5. Toomey, T.L., Erickson, D.J., Carlin, B.P., **Quick, H.S.**, Harwood, E.M., Lenk, K.M., and Ecklund, A.M. "Is the density of alcohol establishments related to non-violent crime?" *Journal of Studies on Alcohol and Drugs*, 73(1)21–25, 2012.

6. Toomey, T.L., Erickson, D.J., Carlin, B.P., Lenk, K.M., **Quick, H.S.**, Jones, A.M., and Haroowd, E.M. "The association between density of alcohol establishments and violent crime within urban neighborhoods." *Alcoholism: Clinical and Experimental Research*, 36(8):1468–1473, 2012.

7. **Quick, H.**, Banerjee, S., and Carlin, B.P. "Modeling temporal gradients in regionally aggregated California asthma hospitalization data." To appear in *The Annals of Applied Statistics*, 2012.

Submitted Journal Publications

1. Toomey, T.L., Erickson, D.J., Carlin, B.P., Lenk, K.M., **Quick, H.S.**, and Harwood, E.M. "Do neighborhood attributes moderate the relationship between alcohol establishment density and crime?" 2012. Submitted to *Prevention Science*.

Papers in Preparation

1. **Quick, H.**, Banerjee, S., and Carlin, B.P. "Heteroscedastic variances in areally referenced temporal processes with an application to California asthma hospitalization data."

2. **Quick, H.**, Carlin, B.P., and Banerjee, S. "Space-time Gaussian process modeling of temporal air pollution gradients."

Awards

Travel Awards

- Workshop on Environmetrics, Raleigh, NC — Oct 2012
- Case Studies in Bayesian Statistics and Machine Learning, Pittsburgh, PA — Oct 2011
- IMS/ISBA Joint International Meeting, Park City, UT — Jan 2011

Student Awards — University of Minnesota, Division of Biostatistics

- Outstanding Teaching Assistant Award — May 2012
- Outstanding Research Assistant Award — May 2011
- James R. Boen Student Achievement Award — May 2009

Student Awards — University of Minnesota, Graduate School

- Doctoral Dissertation Fellowship — 2012–2013
  - The Doctoral Dissertation Fellowship (DDF) program is intended to give the most accomplished final-year PhD candidates an opportunity to complete the dissertation within the 2012–13 academic year by devoting full-time effort to research and writing.

Presentations

Statistical Meetings

- Workshop on Environmetrics, Raleigh, NC — Oct 2012
- Joint Statistical Meetings, San Diego, CA — Aug 2012
- Biometric Society (ENAR) Regional Meeting, Washington, D.C. — Apr 2012
- Case Studies in Bayesian Statistics and Machine Learning, Pittsburgh, PA — Oct 2011
- Biometric Society (ENAR) Regional Meeting, Miami, FL — Mar 2011
- IMS/ISBA Joint International Meeting, Park City, UT — Jan 2011

University of Minnesota

- Mostly Markov Chain Seminar Series — Nov 2011
- School of Public Health Research Day — Apr 2011

Teaching Experience

Teaching Assistant — Fall 2015
PHY 2130 - General Physics I
Instructor: Karur Padmanabhan, Ph.D.
Wayne State University

Teaching Assistant — Summer 2015
PHY 2131 - General Physics Laboratory I
Instructor: Xiang-Qiang Chu, Ph.D.
Wayne State University

Teaching Assistant — Fall 2014–Winter 2015
AST 2010 - Descriptive Astronomy Laboratory
Instructor: Edward Cackett, Ph.D
Wayne State University

Teaching Assistant — Winter 2014
PHY 0232 - Introductory Physics II
Instructor: Stuart Tessmer, Ph.D
Michigan State University

Teaching Assistant — Winter 2013
AST 0208 - Planets and Telescopes
Instructor: Edward Loh, Ph.D
Michigan State University

Teaching Assistant — Fall 2013
PHY 0231 - Introductory Physics I
Instructor: Tibor Nagy, Ph.D
Michigan State University

Teaching Assistant — Winter 2012
PHY 0232 - Introductory Physics II
Instructor: Stuart Tessmer, Ph.D
Michigan State University

Service

Recruiting Committee, Division of Biostatistics — May 2010 – Present
- Assist with planning of annual Division of Biostatistics Open House and Admitted Student Visit Days
- Meet with prospective and admitted students

Student Member of Search Committee for the — June 2010 – Aug 2010
SPH Coordinator of Recruitment and Student Leadership
- Assisted in job search for the SPH Coordinator of Recruitment and Student Leadership
- Reviewed applications, conducted interviews

References

Bradley P. Carlin
Mayo Professor in Public Health, Division Head — Phone: 612-624-6646
Division of Biostatistics — E-mail: carli002@umn.edu
University of Minnesota

Sudipto Banerjee
Professor — Phone: 612-624-0624
Division of Biostatistics — E-mail: baner009@umn.edu
University of Minnesota

Traci Toomey
Professor — Phone: 612-626-9070
Division of Epidemiology — E-mail: toome001@umn.edu
University of Minnesota

Hardware and Software Skills

Fabrication, Data Acquisition, Test, and Measurement:

- LabView, Atomic Force Microscopy (AFM), Electron Beam Lithography, Photolithography, Computer-Aided Design (CAD), Scanning Tunneling Microscopy (STM), Transmission Electron Microscopy (TEM), Scanning Electron Microscopy (SEM), and others

Computer Programming:

- C, C++, Fortran, GNU make, MATLAB, Mathematica, Python, UNIX shell scripting, and Visual Basic

Operating Systems:

- Microsoft Windows family, Apple OS X, Linux OS

Desktop Editing:

- TEX(LATEX, BIBTEX)
- Microsoft Office, OpenOffice, LibreOffice
- GIMP, InkScape