

XIAOFEI (SUSAN) WANG, PH.D.

xiaofei-wang.com

Dept of Mathematics and Statistics ◊ P.O. Box: AC# 2239 ◊ Amherst, MA 01002

(413) 542-5626 ◊ swang@amherst.edu

EDUCATION

Yale University

May 2014

Ph.D. in Statistics

Dissertation Title: Generalized Bayesian Change Point Analysis Via Product Partition Models

Advisors: John W. Emerson and Joseph T. Chang

University of California, Berkeley

May 2006

B.A. in Applied Mathematics

Overall GPA: 3.821

RESEARCH INTERESTS

Statistics education, Bayesian statistics, change point analysis, machine learning, statistical computing, big data.

PUBLICATIONS

Oatts, Julius T., Xiaofei Wang, and Nils A. Loewen (2015). "Effect of Alpha-2-Agonist Premedication on Intraocular Pressure after Selective Laser Trabeculoplasty." *Indian journal of ophthalmology* 63.12 (2015): 891.

Emerson, John W. and Xiaofei Wang (2013). "Advances in Big Data and High-Performance Computing." *Proceedings of the 2013 IASC Satellite for the ISI WSC and the 8th IASC-ARS Conference*, August 21-23, 2013 (pp. 79-84).

Emerson, John W. and Xiaofei Wang (2013). "Amazon EC2, Big Data and High-Performance Computing." *Statistical Computing and Graphics Newsletter*, July 2013, 23(1).

Wang, Xiaofei, Sean G. Byars, and Stephen C. Stearns (2013). "Genetic links between post-reproductive lifespan and family size in Framingham." *EMPH 2013: eot013v1-eot013*.

Ryslik, Gregory and Xiaofei Wang. Exam 4/C Theoretical Knowledge & Exercises Preparation Textbook. New Haven: Actuarial Empire, LLC 2013. Print.

WORK IN PROGRESS

Wang, Xiaofei and John W. Emerson. "Bayesian Change Point Analysis of Linear Models on Graphs." Submitted to *Journal of the American Statistical Association*. Preprint: <http://arxiv.org/abs/1509.00817>.

Gramieri, Paul, Alexander Titelbaum, and Xiaofei Wang. "Understanding Earnings and Work via the American Time Use Survey." Submitted to *Journal of Statistics Education*.

Feng, Derek and Xiaofei Wang. "ABtree: An Algorithm for Subgroup-Based Treatment Assignment." Working paper.

Wang, Xiaofei and Nicholas Reich. "Understanding uncertainty: an activity with confidence intervals." Working paper.

Wang, Xiaofei and Cynthia Rush. "Visualization as the Gateway Drug to Statistics in Week One." Working paper.

Kim, Eunice and Xiaofei Wang. “Engaging Students Offline Using Online Tools.” Working paper.

Ki, Caleb, Pei Gong, and Xiaofei Wang. “A Survey of Resampling Methods in Statistical Software.” Working paper.

SOFTWARE

R Package: Bayesian change point analysis (package `bcp` version 4.0.0), with John W. Emerson and Chandra Erdman.

TEACHING EXPERIENCE

As lecturer at Amherst College:

- STAT 111 - Introduction to Statistics (2014)
- STAT 135 - Introduction to Statistics via Modeling (2015, 2016)
- STAT 220 - Bayesian Modeling and Inference (2016)
- STAT 230 - Intermediate Statistics (2015)

As teaching fellow at Yale University:

- STAT 107 - Introduction to Statistics (2010, 2011, 2014)
- STAT 361 - Data Analysis (2011)
- STAT 625 - Case Studies (2011)
- STAT 627 - Statistical Consulting (2011, 2012)
- STAT 365 - Data Mining and Machine Learning (2012)
- STAT 230 - Introductory Data Analysis (2012, 2013)
- STAT 238 - Probability and Statistics (2012)

CONFERENCES

Contributed Speaker, **Learning Statistics with R, from the Ground Up**, *Joint Statistical Meetings, Seattle, August 2015*.

Poster, **Visualization as the Gateway Drug to Statistics in Week One**, *USCOTS, State College, May 2015*.

Contributed Speaker, **Graphical Product Partition Models**, *Joint Statistical Meetings, Montreal, August 2013*.

Poster, **Soul of the Community**, *Joint Statistical Meetings, Montreal, August 2013*.

AWARDS AND ACHIEVEMENTS

Joint Statistical Meetings Data Expo Competition, Second Place, August 2013.

YGCC Annual Case Consulting Competition, First Place, March 2013.

Leonard J. Savage Writing Prize, May 2012.

WORK EXPERIENCE

Amherst College
Lecturer

2014 - present
Amherst, MA

- Teaching five statistics courses per year in the Department of Mathematics and Statistics.
- Coordinating the *Statistics Fellows program*, a program supporting nine undergraduate students in statistical consulting.
- Advising 10+ undergraduate students.
- Managing placement/enrollment in introductory statistics courses.
- Assisting with comprehensive evaluations.
- Providing statistical consulting to faculty/students in biology and astronomy.

Yale StatLab

Consultant

2010 - 2012

New Haven, CT

- Helped other students and non-statistics faculty with their statistical computing needs, offering high-level statistical advice as well as basic programming assistance.
- Translated Stata code for analyzing datasets in 5 academic papers into R code.
- Led 2 intensive workshops on **Microsoft Excel** and **web scraping via R**.

The Climate Corporation

Mathematician/Quantitative Analyst

2008 - 2009

San Francisco, CA

- Simulated daily snowfall for 40 cities from temperature/rain data via machine learning algorithms.
- Prepared customized weather risk analyses with proposed hedging solutions for large businesses in retail, energy, and outdoor entertainment industries.
- Produced automated weather risk profile generator to provide dynamically populated factsheet based on client location and industry.
- Priced simple and compound weather derivatives using R.

Mercer

Pension Actuary

2006 - 2008

San Francisco, CA

- Performed 20+ valuations projecting client firms pension liabilities decades into the future.
- Reported 7 client firms liabilities in government accounting forms.
- Managed data (up to 30,000+ records per project) prepared data questions, updated data per client response.
- Programmed 3 calculators used to estimate benefit for clients employees.
- Tested 10+ retirement plans for discrimination in favor of executives.

PROFESSIONAL MEMBERSHIPS/SERVICE

- Member, American Statistical Association (2012-present)
- Associate Editor, Journal of Statistics Education (2015-present)
- Secretary-Treasurer, Five College Statistics (2015-present)
- Associate, Society of Actuaries (2008-present)

JOURNALS REFEREED

Computational Statistics, Journal of Statistical Software, Journal of Statistics Education, Chance, The American Statistician

TECHNICAL STRENGTHS

Programming
Database

R, Python, Stata, MatLab, C++, Java, HTML, PHP, ColdFusion
MySQL, MS Access, MS Excel