

XIAOFEI (SUSAN) WANG, PH.D.

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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

Wang, Xiaofei, Nicholas Horton, and Nicholas Reich. “Understanding uncertainty: an activity with confidence intervals.” In press, *The American Statistician*.

Wang, Xiaofei, Cynthia Rush, and Nicholas Horton. “Data Visualization on Day One: Bringing Big Ideas into Intro Stats Early and Often.” In press, *Technology Innovations in Statistics Education*.

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.

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.” Resubmitted to *Journal of the American Statistical Association*, March 2017. Working paper: <http://arxiv.org/abs/1509.00817>.

Gramieri, Paul, Alexander Titelbaum, and Xiaofei Wang. “Understanding Earnings and Work via the American Time Use Survey.” Revision in progress to *Journal of Statistics Education*.

Feng, Derek and Xiaofei Wang. “ABtree: An Algorithm for Subgroup-Based Treatment Assignment.” 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 Yale University:

- STAT 365/665 - Applied Machine Learning and Data Mining (2017)
- STAT 230/530 - Introductory Data Analysis (2017)
- STAT 238/538 - Probability and Statistics (2016)
- STAT 325 - Case Studies (2016)

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)

CONFERENCES AND PRESENTATIONS

Invited Talk, **ABtree: An Algorithm for Subgroup-Based Treatment Assignment.**, *Yale Biostatistics Seminar*, September 2016.

Contributed Poster, **ABtree: An Algorithm for Subgroup-Based Treatment Assignment.**, *Conference on Statistical Learning and Data Science*, May 2016.

Invited Paper, **A Change Point Model for Housing Values**, *Joint Statistical Meetings*, August 2016.

Invited Talk, **A Bayesian Method for General Change Point Problems**, *Smith College*, November 2015.

Topic-Contributed Paper, **Learning Statistics with R, from the Ground Up**, *Joint Statistical Meetings*, August 2015.

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

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

Poster, **Soul of the Community**, *Joint Statistical Meetings*, 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

Yale University

Lecturer/Research Scholar

2016 - present
New Haven, CT

- Teaching four statistics courses per year in the Department of Statistics.

- Providing statistical consulting to faculty and doctoral students in forestry and medicine.

Amherst College

Lecturer

2014 - 2016

Amherst, MA

- Taught five statistics courses per year in the Department of Mathematics and Statistics.
- Coordinated the *Statistics Fellows program*, a program supporting nine undergraduate students in statistical consulting.
- Advised 15+ undergraduate students.
- Managed placement/enrollment in introductory statistics courses.
- Assisted with comprehensive evaluations.
- Provided 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 (2015-2016)
- 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	R, Python, Stata, MatLab, C++, Java, HTML, PHP, ColdFusion
Database	MySQL, MS Access, MS Excel