Sean Chang

OBJECTIVE

To offer my proficiency in data analysis and machine learning in a professionally challenging environment.

CONTACT INFORMATION

Ph.D. Candidate
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EDUCATION

Ph.D., Statistical Science; **Duke University**, Durham, NC, U.S.A. Est. 2015
Field: Bayesian Statistics. Advisor: Prof. Jim Berger

M.A., Mathematics **Duke University**, Durham, NC, U.S.A. 2011-2013
Field: Probability. Qualifying exam committee: Prof. Richard Durrett

B.S., Mathematics, **National Taiwan University**, Taipei, Taiwan 2006-2010

EXPERTISE

- *Statistics: Data Analysis, Machine Learning, Bayesian Nonparametrics, Markov Chain Monte Carlo, Map-Reduce*
- *Mathematics: Stochastic Processes, Stochastic Calculus, Probability Theory, Partial Differential Equations, Real and Complex Analysis*
- *Languages: Matlab, R (JAGS, ggplot2), Python (NumPy, SciPy), C++, SQL, Scalding, Linux, LaTeX*

EXPERIENCE

Statistical and Applied Mathematical Science Institute (SAMSI), NC Summer 2013

- *Modern Statistical & Computational Methods for Analysis of Kepler Data*: A 3-week workshop with statisticians, NASA scientists and astronomers leading by Prof. Eric Ford on developing new analysis techniques of high dimensional exoplanet data from Kepler mission.
- *Industrial Mathematical & Statistical Modeling Workshop*: Modeling trends and incidence rates of Sexually Transmitted Diseases in the US with Bayesian hierarchical model and spatial statistics, supervised by Dr. Howard Chang (Emory) and Dr. Simone Gray (CDC).
- *Low-dimensional Structure in High-dimensional Systems summer school*: Investigated recent advancements of analyzing big data and complicated structures in the fields of machine learning and genetic association studies.

Department of Mathematics, Duke University, Durham, NC Fall 2012

- *Instructor*: Taught Math111L (Calculus), managed the work of teaching assistants and a grader, received good course evaluations with overall score of 4.0/5.0.

PUBLICATIONS AND WORK IN PROGRESS

- (With J. Berger) "Comparison of Bayesian and frequentist multiplicity correction under a scenario of data dependence", submitted to *the Annals of Statistics*.
- (With A. Brouwer, et al.) "Burden of Chlamydia in the United States: Trend Analysis of Incidence Rates" Nineteenth Mathematical and Statistical Modeling Final Report, p.77-109. 2013.
- (With J. Berger) "Bayesian multiple testing in sequential clinical trials". In revision.
- (With DB. Dunson) "Sparse factor model with the application in ecology". In preparation.
- (With B. Engelhardt) "Bayesian structured model in Multiple Tissue eQTL Analysis".

AWARDS AND HONORS

Dean's Award, National Taiwan University 2009-2010
Study Abroad Scholarship, Ministry of Education, Taiwan 2011-present
Duke Reader Project, Duke University 2013 Fall

EXTRA-CURRICULAR ACTIVITIES

Member of *International Society for Bayesian Analysis (ISBA)* 2013-present
Statistical Science Journal Club, Duke University 2013-present
Varsity Table Tennis Team, National Taiwan University 2006-2008