## **Sean Chang**

CONTACT INFORMATION	Department of Statistical Science Duke University, Box 90251 Durham, NC 27708-0251 U.S.A.	Citizenship: U.S. Permanent Resident Mobile: (609) 375-8415 Email: sean.chang@duke.edu Website: https://stat.duke.edu/~sc268
EDUCATION	<b>Ph.D.</b> , Statistical Science, <b>Duke University</b> , Durham, NC <b>B.Sc.</b> , Mathematics, <b>National Taiwan University</b> , Taipei, Taiwan	Aug 2011 - Dec 2015 Jun 2010
EXPERTISE	Machine Learning, Statistics, Data Mining, Experimental Design, Markov Chain Monte Carlo Python (NumPy, SciPy, Pandas, scikit-learn), C++, R (Rcpp, Armadillo, ggplot2), FBLearner Hive, SQL, Presto, Slang, SecDB, Matlab, Git, Linux	
WORK Experience	<ul> <li>Data Science Intern, Facebook, Menlo Park, CA</li> <li>Adopted Facebook's SVD-based recommendation system to Instagram likes graph.</li> <li>Provided product insights through analysis of A/B tests of cluster browsing and blended search.</li> <li>Conducted cohort studies and competitive analysis in order to evaluate the performance and impacts of Instagram video filters.</li> </ul>	
	<ul> <li>Risk Management Summer Associate, Goldman Sachs, London, UK</li> <li>Developed and implemented new methods for modeling cross currency swap basis using currency forward. This work is now utilized for daily risk management in Goldman Sachs.</li> </ul>	
	<ul> <li>Collaborated with engineers and analysts in Bangalore and Singapore to deploy code into production.</li> <li>Analytics Summer Researcher, Verisk Analytics, San Francisco, CA May-Jul 2014</li> <li>Proposed and implemented a health care fraud detection algorithm based on reclassifying insurance providers' specialities using random forest. The algorithm improved the existing one by 10%.</li> <li>Visualized data and results with the data-driven JavaScript library d3.js and impress.js</li> </ul>	
	<ul> <li>Instructor, Department of Mathematics, Duke University, Durha</li> <li>Taught Single Variable Calculus and managed the work of TAs, re</li> </ul>	
RESEARCH AND PUBLICATIONS	<ul> <li>Department of Statistical Science, Duke University, Durham, NC</li> <li>Bayesian statistics: Investigated asymptotic behaviors of Bayesian and frequentist procedures in the scenario of high dimensional multivariate normal distribution with arbitrary covariance dependence.</li> </ul>	
	(With J. Berger) "Comparison of Bayesian and frequentist multiplicity correction for testing mutually exclusive hypotheses under data dependence". final revision.	
	(With J. Berger) "Frequentist multiplicity control of Bayesian model selection with spike-and-slab priors". final revision.	
	• Clinical trials: Examined efficacy of HIV vaccines with Bayesian sequential tests.	
	• Analyzed trends and incidence rates of sexually transmitted diseases in the US over the past thirteen years with Bayesian hierarchical model and spatial 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.	
AWARDS AND HONORS	The Grand Prize & Validic mHealth Prize, Triangle Health Innovat AAAS/Science Program for Excellence in Science, Duke University National Collegiate Table Tennis Men's Consolation Singles, Quart Dean's Award, National Taiwan University (top 10% of class)	May 2015
EXTRA- CURRICULAR ACTIVITIES	Educational outreach, Brogden Middle School, Durham, NC Member of International Society for Bayesian Analysis (ISBA) Statistical Science Journal Club, Duke University Varsity Table Tennis Team, National Taiwan University & Duke University	2014-present 2013-present 2014 iversity 2015