

JING ZHOU

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EDUCATION

The University of North Carolina at Chapel Hill (UNC-CH), NC, USA

- Ph.D., Biostatistics, Aug. 2009- May 2014
Dissertation topic: Nonparametric Bayes Methods for High Dimensional Exposures and Outcomes
Advisors: Dr. Amy Herring & Dr. David Dunson

University of Waterloo, Ontario, Canada

- M.Math., Statistics, Aug. 2008
Master Thesis: Principal Components Selection of Predictors in Linear Mixed Effects Models for Longitudinal Data

Shanghai University of Finance & Economics (SUFU), Shanghai, China

- B.S., Mathematical Statistics, June 2007
- B.A., Business English, June 2007

HONORS & AWARDS

- Elected member, Delta Omega, 2014
- ENAR Distinguished Student Paper Award, 2014
- Winner of ASA Biopharmaceutical Section Student Paper Awards, 2013
- NSF Travel Award, 9th Workshop on Bayesian Nonparametrics (BNP), 2013
- UNC Biostatistics Department Travel Award, Spring 2013, Fall 2013
- Max Halperin Scholarship, Department of Biostatistics, UNC-CH, 2010, 2011
- Statistics and Actuarial Science Chair's Award, University of Waterloo, Winter 2008, Spring 2008
- University of Waterloo Graduate Scholarship, University of Waterloo, Winter 2008, Spring 2008
- Outstanding Graduate of SUFE, Shanghai University of Finance & Economics, 2007
- 1st place in Shanghai & 2nd place in China,
China Undergraduate Mathematical Contest in Modeling (CUMCM), China, 2006
- National Scholarship, Shanghai University of Finance & Economics, 2003-2007
- People's Scholarship, Shanghai University of Finance & Economics, 2003-2007

WORK EXPERIENCE

Genentech Inc., South San Francisco, CA, USA

Statistical Scientist, June 2014 - May 2017

- Contributed as the primary statistician for multiple clinical trials leading to valuable drug approvals
- Effectively collaborated with scientific and non-scientific partners in team settings to solve data-driven problems
- Managed statistical programmers, provided guidance on statistical analyses, and ensured the accuracy and validity of outputs
- Mentored an intern in building Bayes models to efficiently predict response rates in multi-cohort trials

Summer Intern, May 2013- Aug. 2013

- Saved the cost of complete-based independent review of progression-free survival endpoints by extending a sample-based strategy to eliminate local evaluation bias
- Independently conducted simulations of the audit strategy to compare with the existing method, and generalized it for use in boarder clinical settings

Merck & Co., Inc., Rahway, NJ, USA

Summer Intern, June 2012- Aug. 2012

- Developed a sample size recalculation methodology for longitudinal data under the framework of group sequential design to bring effective drugs to patients more quickly
- Verified the method through parallel computing
- Built an R package that is now widely used in the company
- Received outstanding feedback upon presenting company-wide and at the JSM conference

Collaborative Studies Coordinating Center, Department of Biostatistics, UNC-CH

Statistical programmer, Aug. 2011- May 2012

- Management of data and quality control for an Atherosclerosis Risk in Communities (ARIC) Study, a prospective epidemiologic study with 15,792 participants started in 1987
- Conducted high-quality data cleaning, manipulation, visualization to support ARIC

Department of Biostatistics, UNC-CH

Graduate Research Assistant, Aug. 2009- Aug. 2011

- Revealed important associations between Alzheimer's disease and demographic covariates by applying advanced statistical modeling
- Conducted functional principal component analysis on a longitudinal neuro-imaging study
- Collaborated with scientists to uncover significant drug effect in RNA interference screens by multiple T-tests

Department of Civil & Environmental Engineering, University of Waterloo

Statistician (**full-time**), Sep. 2008- Aug. 2009

- Provided statistical consulting in the civil engineering department on projects for the reliability of engineering systems
- Employed longitudinal analysis, survival analysis, and Bayesian inference to investigate cooling tubes from nuclear power plant systems
- Presented research reports and interpreted statistical results to non-statisticians on a weekly basis

PUBLICATIONS

Research papers:

1. **Zhou, J.**, Herring, A.H., Bhattacharya, A., Olshan, A.F., Dunson, D.B. (2016). "Nonparametric Bayes modeling for case control studies with many predictors", *Biometrics* **72**: 184–192.
2. **Zhou, J.**, Bhattacharya, A., Herring, A.H., Dunson, D.B. (2015). "Bayesian Factorizations of Big Sparse Tensors", *Journal of the American Statistical Association* **110(512)**: 1562-1576.
3. **Zhou, J.**, Adewale A., Shentu Y., Liu J., Anderson K. (2014). "Information-Based Sample Size Re-Estimation in Group Sequential Design for Longitudinal Trials", *Statistics in Medicine* **33.22**: 3801-3814.

Collaboration papers:

4. Soria, J.C., Adjei, A.A., Bahleda, R., Besse, B., Ferte, C., Planchard, D., **Zhou, J.**, Ware, J., Morrissey, K., Shankar, G., Lin, W., Schutzman, J., Dy, G.K., Groen, H.J.M. (2017). "A phase IB dose-escalation study of the safety and pharmacokinetics of pictilisib in combination with either paclitaxel and carboplatin (with or without bevacizumab) or pemetrexed and cisplatin (with or without bevacizumab) in patients with advanced non-small cell lung cancer", *European Journal of Cancer* **86**: 186 - 196
5. Leong, S., Moss, R.A., Bowles, D.W., Ware, J., **Zhou, J.**, Spoerke, J.M., Lackner, M.R., Shankar, G., Schutzman, J., van der Noll, R., Voest, E.E., Schellens, J.H.M. (2017). "A Phase I Dose-Escalation Study of the Safety and Pharmacokinetics of Pictilisib in Combination With Erlotinib in Patients With Advanced Solid Tumors", *The Oncologist* **22(8)**: published online before print

6. Vuylsteke, P., Huizing, M., Petrakova, K., Roylance, R., Laing, R., Chan, S., Abell, F., Gendreau, S., Rooney, I., Apt, D., **Zhou, J.**, Singel, S., Fehrenbacher, L. (2016). "Pictilisib plus paclitaxel for the treatment of hormone receptor-positive, HER2-negative, locally recurrent, or metastatic breast cancer: interim analysis of the multicentre, placebo-controlled, phase II randomised PEGGY study", *Annals of Oncology* **27(11)**: 2059-2066.
7. Zhang, S., Barros, S., Moretti, A., Yu, N., **Zhou, J.**, Preisser, J., Niculescu, M., Offenbacher, S. (2013). "Epigenetic Regulation of TNFA Expression in Periodontal Disease", *Journal of Periodontology* **84(11)**: 1606-1616.

RESEARCH & CONSULTING EXPERIENCE

Ph. D. Dissertation, Sep. 2011- May 2014

Nonparametric Bayes Methods for High Dimensional Exposures and Outcomes

- Discovered associations between birth defects and parental and environmental factors by using a Bayesian low-rank tensor decomposition method
- Greatly improved the tensor decomposition by introducing additional variable selection, created efficient algorithms for boosting computation, and beat multiple popular machine learning methods
- Developed a sparse nonparametric Bayes method for case control studies with high-dimensional predictors

Master's Thesis, May 2008- Aug. 2008

Principal Components Selection of Predictors in Linear Mixed Effects Models for Longitudinal Data

- Employed a linear mixed effects model to deal with protein data and determined the strong predictors of serum albumin
- Overcame computational problems within the model by utilizing machine learning techniques to reduce dimension

Consulting experience

- for a doctoral student in the School of Dentistry at UNC-CH, Mar. 2011- Sep. 2011
 - Applied Hotelling's T-test, missing data manipulation, and multiple testing techniques to compare DNA methylation profiles between study groups
- for a master student in the School of Public Health at UNC-CH, Sep. 2011
 - Employed categorical data analysis, ANOVA, Regression, and T-tests to detect the association between water filter use and other factors using data from the Guatemala Drinking Water Survey

PRESENTATIONS

Joint Statistical Meetings, Montreal, Canada, Aug. 2013

Information-Based Sample Size Re-estimation in Group Sequential Design for Longitudinal Trials, topic-contributed talk

9th workshop on Bayesian nonparametrics, Amsterdam, Netherlands, June 2013

Sparse Tensor Factorizations for Efficient Learning of High-dimensional Categorical Data, poster presentation

ENAR International Biometric Society Spring Meeting, Orlando, FL, Mar. 2013

Information-Based Sample Size Re-estimation in Group Sequential Design for Longitudinal Trials, presentation

International Society for Bayesian Analysis (ISBA) World Meetings, Kyoto, Japan, June 2012

Nonparametric Bayes Methods for Estimation in High-Dimensional Contingency Tables, poster presentation