Kan Li

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SUMMARY

- Research Interests: Bayesian hierarchical model; Joint model of longitudinal and survival process; Dynamic prediction; Functional data analysis; Item response theory; Clinical trial.
- Proficient in R, SAS, WinBugs, and implementing parallel computing on HPC clusters.
- Willing to learn and accept constructive criticism.
- Outstanding teamwork building ability and strong interpersonal skills.

EDUCATION

The University of Texas Health Science Center at Houston　　　　　Houston, TX
Ph.D. Candidate in Biostatistics　(GPA: 4.0/4.0)　　*Expected Graduation*: *Dec.* 2017
Minor: Bioinformatics

University of Pittsburgh　　　　　Pittsburgh, PA
M.S. in Industrial Engineering & Operations research　(GPA: 3.9/4.0)　　*May* 2011

Beijing Institute of Technology　　　　　Beijing, China
B.S. in Electrical Engineering　(GPA: 3.7/4.0)　　*July* 2009

WORK EXPERIENCE

The University of Texas Health Science Center at Houston　　　　　Houston, TX
Graduate Research Assistant, Department of Biostatistics　　*July* 2015 – Present
Dissertation: Functional Joint Models: an application to Alzheimer's disease (AD)

- Developed methods to incorporate longitudinal functional data in Bayesian joint models framework.
- Developed Bayesian longitudinal item response theory model to understand AD progression.
- Investigated approaches to handle computing issues for large-scale data and compute-intensive models.

Project: Personalized Dynamic Prediction of Huntington's disease (HD) using PREDICT-HD data

- Analyzed HD progression using joint model of longitudinal and survival data.
- Conducted dynamic prediction of future health outcome and risk of HD progression for early diagnosis.
- Developed Web-based App of HD prediction tool for clinical use.
  https://kanli.shinyapps.io/HD_prediction/

Project: Longitudinal analyses of National Parkinson Foundation Quality Improvement Initiative data

- Fitted multilevel linear/generalized linear mixed models to examine the effect of consistent exercise and physical therapy to mobility and health-related quality of life in people with PD.
- Prepared statistical reports for non-statistical medical researchers and revised analysis based on their feedback accordingly.

The University of Texas MD Anderson Cancer Center　　　　　Houston, TX
Research Assistant, Department of Health Service Research　　*Jan.* 2014 – *June* 2015
Project: Treatment of Hepatitis C in Correctional Setting

- Conducted survival analysis to estimate transition probability of HCV progression in a Markov model.
- Developed large-scale agent-based simulation models for health economic evaluation of intervention strategies in Hepatitis C prevention.

University of Pittsburgh   Pittsburgh, PA
Research Associate, Center for Public Health Practice   *Sep. 2011 - Aug. 2013*
Project: Social Mixing and Respiratory Transmission in Schools

- Served in multiple roles and cooperated with other researchers to achieve the project objectives of each phase, including data collection, data management, analyzing, and publication preparation.
- Fitted logistic regression model to classify subjects based on their features and contact patterns.
- Developed simulation models of flu transmission on parameterized social networks.

University of Pittsburgh   Pittsburgh, PA
Graduate Research Assistant, Department of Industrial Engineering   *Jan. 2010 - Aug. 2011*
Project: Vaccine Modeling Initiative

- Applied linear programming and Markov decision process models to optimize the performance of vaccine supply chain in resource allocation and capabilities-based planning.
- Developed Excel VBA based spreadsheet tools for decision-making in vaccine administration.

The University of Texas Health Science Center at Houston   Houston, TX
Teaching Assistant, Department of Biostatistics   *Fall 2013, Spring 2014, Fall 2016*

- Graduate-level courses: Linear Model; Categorical data analysis; Statistical Computing

TECHNICAL SKILLS

- Statistical Packages: R, SAS, Stan, WinBugs, Rcpp, Shiny.
- Programming language: Java, Python, Shell, SQL, VBA.

CERTIFICATIONS

- SAS Advanced Programming Certificate for SAS 9   July 2013
- SAS Base Programming Certificate for SAS 9   May 2013

HONORS

R. Hardy and C. Morton Hawkins Endowed Scholarship   The University of Texas Health Science Center
May. 2016

Doctoral Outstanding New Student Scholarship   The University of Texas Health Science Center
Aug. 2013

COURSE WORK

Multiple Regression Analysis (**SAS, R**)	Correlate data Analysis (**R**)	Survival Analysis (**SAS, R**)
Multivariate Statistical Analysis (**SAS, R**)	Time Series Analysis (**R**)	Distribution free methods (**R**)
Categorical Data Analysis (**SAS, STATA**)	Linear Model (**R**)	Sampling Techniques (**R**)
Bayesian Data Analysis (**R, WinBugs**)	Theory of Statistics I, II	Data Mining (**R**)
Nonparametric Regression (**R**)	Stochastic Process (**R**)	Design of Experiments
Statistical Computing (**R, WinBugs, LaTex**)	Practical Bioinformatics (**R, Python**)	

PUBLICATIONS

1. **Li, K**., Luo, S., 2016. "Functional Joint Model for Longitudinal and Time-to-Event Data: An Application to Alzheimer's Disease." *Statistics in Medicine.* (Submitted for Initial Review)
2. **Li, K**., Chan, W., Doody, R.S., Luo, S., the ADNI, 2016. "Prediction of Conversion to Alzheimer's Disease with Longitudinal Measures and Time-to-Event Data." *Alzheimer's & Dementia*. (Invited to Resubmit)
3. He, T., **Li, K**., Roberts, M.S., Spaulding, A.C., Ayer, T., Grefenstette, J.J. and Chhatwal, J., 2015. "Prevention of Hepatitis C by Screening and Treatment in US Prisons." *Annals of Internal Medicine*.