Kan Li

RAS-803N, Department of Biostatistics
University of Texas Health Science Center at Houston
Houston, Texas, 77030

Email: kan.li@uth.tmc.edu
Tel: (412) 706-3451
Web: li-kan.com

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, Stan, 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 predictive 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, Julia, 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*.