QI QI

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EDUCATION

University of Connecticut 2017 - 2020
Ph.D. Statistics, Department of Statistics
Thesis: *Statistical Methods for Longitudinal Data with Applications to Dementia and Human Microbiome Projects.*
Committee: Dr. Lynn Kuo (Main advisor), Dr. Ming-hui Chen and Dr. Xiaojing Wang

University of Connecticut 2015 - 2017
M.S. Statistics, Department of Statistics

Renmin University of China 2011 - 2015
B.S. Statistics, School of Statistics

WORK EXPERIENCE

Statistical Scientist: Genentech Aug 2020 - present

- Work on the QT study, Phase II and Phase III studies of Fenebrutinib for Multiple Sclerosis.

Research Fellow: Boehringer - Ingelheim Dec 2019 - Jul 2020

- Conducted research for potential type I error inflation if using Chronic slope to assess treatment effect. Promoted random change point model regarding preserved type I error rate.
- Conducted research for exposure-response analysis and construct segmented sigmoid Emax model for Phase II dose finding study.

Internship: Boehringer - Ingelheim May 2019 - Aug 2019

- Established change point detection model based on stochastic process and applied to Chronic Kidney Disease (CKD) data.

Research Assistant: Albert Einstein College of Medicine Aug 2017 - Dec 2019

- Conducted analyses to evaluate a new memory impairment classification system and investigated the prediction performance on Alzheimer's Disease.

Statistical Consultant: University of Connecticut Aug 2017 - May 2019

- Presented workshops: *Variable Selection with Demos in R* and *Survival Study Design and Analysis.*
- Conducted R shiny apps to visualize the occupancy of classrooms at University of Connecticut. Built a web-page for registrar office to describe the difficulties of classroom schedule and analyze the compliance of standard meeting pattern.
- Completed several full projects, provided walk-in and online service.

RESEARCH INTERESTS

Longitudinal Data Analysis, Survival Analysis, Joint Modeling, Multi-stage Analysis, Stochastic Models, Data Visualization, Bayesian Methods, Machine Learning, Statistical Computing.

TECHNICAL SKILLS

R (mainly using packages *nimble, ggplot2, shiny, dplyr, R2jags, vegan, phyloseq, etc.*), SAS, SQL, Python, BUGS, JAGS, SPSS, AMOS, Matlab, Stata, LaTeX, Github, Mathematica

LEADERSHIP AND SCIENTIFIC ACTIVITIES

- **Committee Member**: Conference on Bayesian Modeling, Computation and Applications 2018
- **Session Chair**:
  - Joint Statistical Meeting 2019
  - Conference on Bayesian Modeling, Computation and Applications 2018

PUBLICATION

Grober, Ellen, Qi Qi, Lynn Kuo, Jason Hassenstab, Richard J. Perrin, and Richard B. Lipton. "Stages of Objective Memory Impairment Predict Alzheimer's Disease Neuropathology: Comparison with the Clinical Dementia Rating Scale–Sum of Boxes." *Journal of Alzheimer's Disease* Preprint (2021): 1-11.

Grober, Ellen, Qi Qi, Lynn Kuo, Jason Hassenstab, Richard J. Perrin, and Richard B. Lipton. "The Free and Cued Selective Reminding Test Predicts Braak Stage." *Journal of Alzheimer's Disease* Preprint (2021): 1-9.

WORKING PAPERS

- Qi Qi, Lynn Kuo, Susan Resnick, Ellen Grober. A Bayesian Joint Model of Longitudinal Ordinal Outcomes and Time-to-Event Data.
- Qi Qi, Lynn Kuo, Ming-Hui Chen, Yanjiao Zhou. A Bayesian Multistage Model for Joint Transitional Data.
- Qi Qi, Lynn Kuo, Yanjiao Zhou. A Bayesian Transitional Model for High Dimensional Data with Application to Human Microbiome Project.
- Yaoshi Wu, Wansuk Choi, Qi Qi, Zhichao Sun, Qiqi Deng, Brian Jin. A Random Change Point Model Using Stopping Time of Poisson Process for Estimating Two Intersecting Lines.
- Yaoshi Wu, Qi Qi. A Random Two-change-point Model Using Stopping Time of Poisson Process and Estimation Function for Estimating Three Intersecting Lines.
- Yaoshi Wu, Qi Qi. Segmented Emax model of exposure-response relationship for clinical trials.

WORK IN PROGRESS

- Qi Qi, Lynn Kuo, Susan Resnick, Ellen Grober. A Multi-stage Stochastic Transitional Model with Application to Baltimore Longitudinal Study of Aging.

PRESENTATIONS

Interactive Visualization of Housing Condition Changes in NYC 2019
Speed presentation and e-poster for data challenge competition: *Joint Statistical Meeting (JSM)*

Predicting Alzheimer's Disease Using a New Classification System Based on Objective Memory Impairment Assessment 2019
Poster session for student paper competition: *the 33rd New England Statistics Symposium (NESS)*

A Multi-Stage Stochastic Model in the Analysis of Longitudinal Data 2018
Invited presentation: *Conference on Bayesian Modeling, Computation and Applications*

TEACHING EXPERIENCE

- Instructor, Introduction to Mathematical Statistics II (STAT 3345)
  - Spring 2019, Teaching Evaluation: 4.0 out of 5, Class Size: 41
- Instructor, Discussion Section of Introduction to Statistics (STAT 1000Q) and Elementary Concepts of Statistics (STAT 1100Q)
  - Fall 2018, Spring 2018, Fall 2017, Spring 2017, Class Size: 12
- Teaching Assistant, Advanced Probability (STAT 6325)
  - Fall 2018