Jianan Hui

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Research Interests

Data Mining, Computational statistics, Markov Chain Monte Carlo, Bayesian statistics.

Education

Ph.D. in Applied Statistics — GPA: 3.95/4.00
UC Riverside — *2012 - August 2017(expected)*

B.S in Mathematics — Magna Cum Laude, GPA: 4.00/4.00
UT Arlington — *2010 - 2012*

B.S in Information and Computational Science — GPA: 3.60/4.00
University of Science and Technology Beijing — *2008 - 2012*

Skills

Proficient in R, SAS (SAS Certified Base and Advanced Programmer for SAS 9), SPSS, MATLAB, HLM, LaTeX, MS office, WordPress. Some experience with Unix, Shell, Python, C/C++/C#, Mathematica, JSP, SQL.

Work Experience

Clinical Biostatistician Intern — *June 2016 - August 2016*
Janssen R&D, Johnson & Johnson

- Validated surrogate endpoint Minimal Residual Disease for the true endpoint overall survival in Acute Myeloid Leukemia by establishing two types of correlation, ”individual-level” and ”trial-level”.
- Developed simulation studies under various scenarios.

Clinical Biostatistician Intern — *June 2015 - September 2015*
Janssen R&D, Johnson & Johnson

- Develop surrogate endpoint on medically treated exacerbation. The whole process includes the development of a daily dairy with a scoring system that collects patient-reported outcome and a detection algorithm for exacerbations in Asthma and Chronic Obstructive Pulmonary Disease (COPD).
- Conduct data simulations, graphical exploration of data, and design of experiments.
- Support research and development in areas that range from drug discovery through Phase 2 and 3 clinical studies, including data preparation, statistical analyses and report writing.

Lead Consultant — *September 2014 - June 2015*
Graduate Quantitative Methods Program, Graduate Division, UCR

- Developed and presented workshops topics ranging from remedial to advanced statistical methods, computing and programming.
- Conducted individual consultations to UCR graduate students using statistical methods: ANOVA, ANCOVA, Nonparametric Test, Longitudinal Data Analysis, Logistic Regression, Linear Mixed model, Generalized linear model, Survival Analysis, Multivariate Analysis Techniques, Sampling Plan, Experiment Design and etc.

- Assisted in all aspects of program planning, including administering the email list, designing and sending surveys to graduate students and faculty members, planning curriculum and designing the space.
- Maintained GradQuant website, supervised part-time consultants, and created resources for the program.

Assistant *January 2010 - July 2010*
Tsinghua University

- Prepared and edited of correspondence, communications, marketing and publicity material received by partner organizations and members of the public.
- Managed travel and hospitality arrangements; maintained executive schedules.
- Coordinated events as necessary; arranged venue and daily schedule.

Reasearch Experience

Tree-like structure classification with application to galaxy data
Department of Statistics, UCR *Advisors: Xinping Cui, James Flegal, Miguel Aragon*

- Study galaxies as nodes in an evolving graph and analyze the change in their properties as the graph evolves.
- Classify the Large Scale Structures around galaxies based on their intrinsic properties along with their merger trees (tree-like structures).
- Develop statistical algorithms to analyze large graphs, which represent the evolutionary history of galaxies across time and across adjacent realizations in a new ”parallel universe” simulation.

Generalization of a modified conditional Metropolis Hastings sampler
Department of Statistics, UCR *Advisor: James Flegal*

- Prove the generalization can lead to substantial gains in statistical efficiency while maintaining the overall quality of convergence.
- Fully investigate two types of generalization schemes on a modified Metropolis Hastings sampler based on both simulated data and real data.

Modeling the Distribution of Invaded Grasslands throughout Chaparral Shrublands
Department of Statistics, UCR *Advisor: James Flegal*

- Investigate the progression of grass invasions into chaparral shrublands with spatio-temporal Bayesian hierarchical model.
- Assess the risk of future invasion across locations with different characteristics and under different fire and drought regimes.

Stratified sampling *Advisor: Guohua Zou*
Chinese Academy of Sciences

- Self-studied ”Sampling Theory and Methods” and ”Probability and Mathematical Statistics”.
- Analyzed data to develop the fourth degree formula of stratified sampling.

- Created detailed report outlining the process of formula derivation.

Teaching Experience

Instructor *July 2014 - August 2014*
Department of Statistics, UCR

- Instructed the course "Introduction to Probability and Statistics" during the summer.

Teaching Assistant *September 2012 - June 2014*
Department of Statistics, UCR

- Worked under the course instructor and school administration to support instruction and social development of students.
- Prepared learning materials, supervised lab and/or discussion session, executed teaching in statistics, implemented instructional materials and graded lab worksheets and/or quizzes.

Tutor *January 2012 - May 2012*
Math Clinic, UTA

- Worked with students in small groups of 3 to 4 to assist with problems in Algebra, Calculus, Linear Algebra, Ordinary Differential Equations, Partial Differential Equations, etc.
- Helped students to prepare for final exams.

Honors and Awards

Dissertation Year Program Awards, UCR *2017*

NASA MIRO FIELDS Graduate Fellowship, UCR & NASA *2015-2016*

Dean's Distinguished Fellowship, UCR *2012-2017*

Outstanding Graduate, USTB *2012*

Outstanding Senior, UTA *2012*

Advanced Individual In Social Practice, USTB *2010*
Less than 500 out of more than 7,000 students received this award. Our team won the Gold Medal, which was only awarded to 15 out of 600 teams.

Pioneer Of College Students' Summer Social Practice, USTB *2009*
Attended the Fiftieth Anniversary of National Day Parade.

Academic Excellence Scholarship, USTB *2008-2010*

Papers in preparation

Hui, J., Cui, X., Flegal, J.M., Aragon, M. Tree-like structure Classification based on Distance Matrix LU Decomposition with Application to Galaxy Profile Data.

Hui, J., Flegal, J.M. Generalization on a modified Metropolis Hastings sampler.