ZHENGFAN WANG

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Education

University of Massachusetts-Amherst
August 2017 - Now
Ph.D., Biostatistics

Georgetown University
August 2014 - December 2015
Master of Science, Biostatistics

Beijing Normal University - Hong Kong Baptist University United International College(UIC)
September 2010 - June 2014
Bachelor of Science, Statistics

Research Experience

Department of Biostatistics, University of Massachusetts-Amherst **Amherst, MA**
Research Assistant *September 2018 - Now*
Advisor: Leontine Alkema, PhD

- Estimating the stillbirth rate using a Bayesian hierarchical temporal sparse regression model
- Proposing Bayesian Reference Distribution Variable Selection method based on horseshoe prior
- Predicting reporting errors in sibling survival data using covariates related to the respondent and their sibling
- Using sibling reporting error model to estimate survival probabilities from sibling survival data while accounting for reporting errors

Department of Biostatistics, University of Massachusetts-Amherst **Amherst, MA**
Research Assistant *September 2017- September 2018*
Advisor: Xiangrong Kong, PhD

- Using a hybrid modeling strategy based on Markov transition models with pairwise composite likelihood to deal with the high dimensional correlated data from Stargardt disease trials.
- Studying the visual impairment and eye diseases in HIV-infected people in the Antiretroviral Therapy era in Rakai, Uganda

Department of Biostatistics, Georgetown University **Washington, DC**
Research Assistant *September 2015- January 2017*
Advisor: Ao Yuan, PhD

- Creating the robust test for multiple endpoints in sequential design based on symmetric distribution assumption instead of normal distribution via simulation and empirical clinical trial data

Department of Biostatistics, Georgetown University **Washington, DC**
Research Assistant *January 2015-May 2015*
Advisor: Lin Cai, PhD

- Conducted data analysis to compare mixing lidocaine and propofol decreases the severity but not the incidence of propofol pain on injection to injecting lidocaine before propofol in non-premedicated patients undergoing colonoscopy
- Designed questionnaire and test for the study to evaluate first year medical students' HIV/STI attitudes and counseling knowledge
- Analyzed outcome difference between GLM procedure and MIXED procedure in R and SAS based on CONNOR data

- Conducted data analysis for the study to explore the risk factor of haploid leukemia and URD leukemia

Department of Biostatistics, Georgetown University **Washington, DC**
Practicum *January 2015-December 2015*
Advisor: Ming Tan, PhD
- Developed Sequential Conditional Probability Ratio Test(SCPRT) for clinic trial data analysis, designed the R packages, evaluated the SCPRT through type I& type II error and discordance probability via simulation

Department of Science and Technology, UIC **Zhuhai, China**
Advisor: Ping He, PhD *January 2014-May 2014*
Research Content: Application of Markov Chain-Monte Carlo method in logistic regression
- Created a method to predict result of NBA basketball game by using Markov Chain-Monte Carlo method in logistic regression via 2014 NBA data

Department of Science and Technology, UIC **Zhuhai, China**
Advisor: Jianzhong Zhang, PhD *September 2012-November 2012*
Research Content: Application of MATLAB programing
- Solved a classical complex logistics problem-optimizing the logistics network by using method of enumeration in MATLAB

Publications and Presentations

Wang, Z., Fix, M. J., Hug, L., Mishra, A., You, D., Blencowe, H., ... & Alkema, L. (2020). Estimating the Stillbirth Rate for 195 Countries Using A Bayesian Sparse Regression Model with Temporal Smoothing. *arXiv preprint arXiv:2010.03551*.

Wang, Z., Yuan, A., & Tan, M. T. (2016). Computation of the Properties of Multi-Stage Clinical Trial Design Based on SCPRT. J Clin Trials, 6(274), 2167-0870.

Jian-Yu, E., **Wang, Z.,** Ssekasanvu, J., Munoz, B., West, S., Ludigo, J., ... & Kong, X. (2021). Visual Impairment and Eye Diseases in HIV-infected People in the Antiretroviral Therapy (ART) Era in Rakai, Uganda. *Ophthalmic Epidemiology*, *28*(1), 63-69.

Hannallah, M. S., Lopatin, J., Cestare, T., Tefera, E., **Wang, Z.,** & Cai, L. Mixing Lidocaine and Propofol Decreases the Severity but not the Incidence of Propofol Pain on Injection Compared to Injecting Lidocaine Before Propofol in Non-Premedicated Patients Undergoing Colonoscopy.

Wang, Z., Kong, X. Multivariate Longitudinal Data from Eyes – Microperimertry Macular Sensitivity Loss in Patients with Stargardt Disease. (Poster presentation. JSM. Denver, CO.)

Wang, Z., Alkema, L. Imposing Sparseness in a Bayesian Hierarchical Regression Model with Temporal Smoothing via the Horseshoe prior with an Application to Estimate Stillbirths for All Countries. (Paper presentation. JSM.)

Wang, Z., Alkema, L. Stillbirth estimation model (Presentation. Core Stillbirth Estimation Group Meeting UN Inter-agency Group for Child Mortality Estimation Meeting. Switzerland)

Wang, Z., Stillbirth rate estimation model (Presentation. Core Stillbirth Estimation Group Meeting UN Inter-agency Group for Child Mortality Estimation Meeting. Online)

Professional Experience

Department of Biostatistics, Georgetown University **Washington, DC**
Biostatistics Consultant *January 2015-Present*
- Worked as an assistant of statistical counselor, and helped customers conduct projects

Johnson &Johnson **Shanghai, China**
Internship-Project Assistant *May 2015-August 2015*

- Worked in statistical department, and participated in the VELCADE and ZYTIGA program
- Assisted finishing the SAP of VELCADE and ZYTIGA and analyzing clinical trial data
- Communicated academic experiment design methods with colleagues in J&J in Japan

Sealand Securities **Taiyuan, China**
Internship-Sales Assistant *June 2012-September 2012*

- Wrote the financial plan for VIP client of Sales Department under the guidance of experienced staff
- Designed the classification of customer survey

National Bureau of Statistics of the People's Republic of China **Beijing, China**
Internship- Statistic consultant *June 2011-September 2011*

- Trained colleagues using advanced statistical software (SAS, R)
- Increased the efficiency of public transportation system by more than 10%
- Participated in statistic enforcement for a company