

# Wei Jin

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## EDUCATION

### **Johns Hopkins University, Baltimore, MD** (Advisor: Prof. Yanxun Xu)

Ph.D. in Applied Mathematics and Statistics	2018 - 2022
Dissertation Title: <i>Novel Bayesian Methods for Precision Medicine in HIV</i>	
M.S.E in Computer Science	2019 - 2021
M.S.E in Applied Mathematics and Statistics	2016 - 2018
Cumulative GPA: 4.00/4.00	

### **Sichuan University, Chengdu, China**

B.S. in Mathematics and Applied Mathematics	2012 - 2016
Honor Degree in Wu Yuzhang Honors College	
Cumulative GPA: 3.72/4.00 (Rank: 1/37)	

## EMPLOYMENT

<b>Postdoctoral Fellow</b> (Advisors: Prof. Yanxun Xu and Prof. Peter Müller)	2022 - Present
Department of Applied Mathematics and Statistics	
Johns Hopkins University, Baltimore, MD	

<b>Research Scientist Intern</b>	Summer 2022
Eli Lilly and Company, Indianapolis, IN	

<b>Research Assistant</b>	2018 - 2022
Department of Applied Mathematics and Statistics	
Johns Hopkins University, Baltimore, MD	

## RESEARCH INTERESTS

- **Theory and Methods**  
Bayesian Nonparametrics, Dynamic Treatment Regimes, Reinforcement Learning, Causal Discovery, Graphical Models
- **Applications**  
Electronic Health/Medical Data, Precision Medicine in HIV, Alzheimer's Disease Biomarkers

## PUBLICATIONS AND PREPRINTS

1. **Jin, W.**, Ni, Y., O'Halloran, J., Spence, A.B., Rubin, L.H., and Xu, Y. (2023) "*A Bayesian Decision Framework for Optimizing Sequential Combination Antiretroviral Therapy in People with HIV.*" **Annals of Applied Statistics**. Accepted. (**Winner of the Conference on Advances in Bayesian and Frequentist Statistics Poster Award**)
2. Rubin, L.H., Maki, P.M., Dastgheyb, R., Steigman, P., Burke-Miller, J., Xu, Y., **Jin, W.**, Sosanya, O., Gustafson, D., Merenstein, D., Milam, J., Weber, K., Springer, G., and Cook, J. (2023) "*Trauma Across the Lifespan and Multisystem Morbidity in Women with HIV.*" **Psychosomatic Medicine**. Accepted.

3. **Jin, W.**, Ni, Y., Rubin, L.H., Spence, A.B., and Xu, Y. (2022) “A Bayesian Nonparametric Approach for Inferring Drug Combination Effects on Mental Health in People with HIV.” **Biometrics**, 78(3), 988-1000. (Winner of the Joint Statistical Meetings (JSM) Student Paper Award, Mental Health Statistics Section)
4. Gouet, C., **Jin, W.**, Naiman, D.Q., Peña, M., and Halberda, J. (2021) “Bias and Noise in Proportion Estimation: A Mixture Psychophysical Model.” **Cognition**, 213, 104805.
5. Fitzgerald, K.C., Maki, P.M., Xu, Y., **Jin, W.**, Dastgheyb, R., Williams, D.W., Springer, G., Anastos, K., Gustafson, D., Spence, A.B., Adimora, A.A., Waldrop, D., Vance, D.E., Bolivar, H., Valcour, V.G., and Rubin, L.H. (2020) “Factors Predicting Detrimental Change in Declarative Memory Among Women with HIV: A Study of Heterogeneity in Cognition.” **Frontiers in Psychology**, 11, 548521.
6. Xie, F., **Jin, W.**, and Xu, Y. (2019) “Rates of Contraction with Respect to  $L_2$ -Distance for Bayesian Nonparametric Regression.” **Electronic Journal of Statistics**, 13(2), 3485-3512.

### PAPERS IN PREPARATION

1. **Jin, W.**, Ni, Y., Spence, A.B., Rubin, L.H., and Xu, Y. “Long-Short-Term Cyclic Structural Causal Model for Time-Series Causal Discovery.”
2. **Jin, W.**, Ni, Y., Spence, A.B., Rubin, L.H., and Xu, Y. “A Bayesian Tree Model for Inferring Longitudinal Drug Combination Effects on Depression in People with HIV.”
3. **Jin, W.**, Wang, Z., and Xu, Y. “Longitudinal Model of Alzheimer’s Disease Biomarkers with an Unknown Gold Standard.”

### ACADEMIC PRESENTATIONS

- 07/2022 Bayesian Seminar at Eli Lilly and Company, Indianapolis, IN.  
“A Bayesian Nonparametric Approach for Inferring Drug Combination Effects on Mental Health in People with HIV.”
- 04/2022 Conference on Advances in Bayesian and Frequentist Statistics, Rutgers University, New Brunswick, NJ.  
“A Bayesian Decision Framework for Optimizing Sequential Combination Antiretroviral Therapy in People with HIV.”
- 08/2021 Joint Statistical Meetings (JSM), Virtual.  
“A Bayesian Nonparametric Approach for Inferring Drug Combination Effects on Mental Health in People with HIV.”
- 06/2021 World Meeting of the International Society for Bayesian Analysis (ISBA), Virtual.  
“A Bayesian Tree Model for Inferring Longitudinal Drug Combination Effects on Depression in People with HIV.”
- 12/2020 International Chinese Statistical Association (ICSA) Applied Statistics Symposium, Virtual.  
“A Bayesian Nonparametric Approach for Inferring Drug Combination Effects on Mental Health in People with HIV.”
- 10/2020 Applied Mathematics and Statistics Student Seminar, Johns Hopkins University, Baltimore, MD.  
“A Bayesian Nonparametric Approach for Inferring Drug Combination Effects on Mental Health in People with HIV.”
- 10/2017 Applied Mathematics and Statistics Student Seminar, Johns Hopkins University, Baltimore, MD.  
“Mathematical Models of Proportional Reasoning in Cognitive Science.”

### TEACHING EXPERIENCE

**Teaching Assistant** 2018 - 2020  
Johns Hopkins University, Baltimore, MD

- EN.553.602 Research and Design in Applied Mathematics Spring 2020

- EN.553.636 Introduction to Data Science Fall 2018, Spring 2019, Spring 2020
- EN.553.720 Probability Theory I Fall 2019
- EN.553.731 Statistical Theory II Spring 2018, Spring 2019
- EN.553.782 Statistical Uncertainty Quantification Fall 2018

## **HONORS AND AWARDS**

- Rufus P. Isaacs Graduate Fellowship, Johns Hopkins University 2022
- Conference on Advances in Bayesian and Frequentist Statistics Poster Award 2022
- Joint Statistical Meetings (JSM) Student Paper Award, Mental Health Statistics Section 2021
- Acheson J. Duncan Fund for the Advancement of Research in Statistics 2017
- Honorable Mention of Mathematical Contest in Modeling 2014

## **TECHNICAL SKILLS**

- Proficient in R, Python, C++, SQL, Linux, LaTeX