

Justin Williams

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EDUCATION

University of California, Los Angeles (UCLA)

Ph.D. – Biostatistics

Expected 2020

M.S. - Biostatistics

2016

Boston College

B.A. – Mathematics

2013

RESEARCH EXPERIENCE

Graduate Student Researcher

2015 - Present

Connie Kasari Lab

- Constructed Bayesian multi-level hierarchical model incorporating spatial random effects
- Established longitudinal data visualization tools available in GitHub R package, `ggplot.spaghetti`
- Clinical trial longitudinal analysis using mixed effects and generalized estimating equations
- Adjusted for empirical trends using zero-inflated and hurdle models with count outcomes
- Automated analysis for inter rater reliability
- Data management and data cleaning for multisite clinical trial database

Product Development Biostatistics Intern

Summer 2019

Genentech

- Designed software to simulate longitudinal differential abundance for microbiome: `microbiomeDASim`
 - Flexibly specify form of the trend over time including polynomial, oscillating, or hockey stick trends
 - Define desired sample size, number of repeated measures, and signal:noise ratio
 - Multiple choices for longitudinal dependence including: AR(1), compound, or independent
- Compared multiple methods for estimating differential abundance over time

Biostatistics R&D Intern

Summer 2018

Alcon

- Developed methodology for parameter estimation of censored data from truncated normal distribution
- Investigated available methods for estimation with left censoring using R and SAS
- Produced functions and macros to simulate data and calculate bias metrics
- Applied methods to estimate parameters for historical clinical trial data

TEACHING EXPERIENCE

Special Reader: Computer Management of Health Data

Sep '16 – Dec '16

UCLA, Biostatistics Department

Student Evaluation: 9/9

- Taught data management tools with SAS to 23 first-year Biostatistics graduate students
- Introduced tools for creating randomization schemes and generating reproducible data

Special Reader: Basic Biostatistics

Jan '16 – Mar '16

UCLA, Biostatistics Department

Student Evaluation: 8.89/9

- Led weekly lab sections using Stata on topics such as linear regressions, ANOVA, logistic regression, and non-parametric tests
- Designed and administered discussion sections weekly
- Graded homework and lab assignments

SOFTWARE SKILLS

R (coursework/teaching/research/preferred)
Stata (coursework/teaching)
Julia (coursework)
GitHub (primary version control software)

SQL (work experience)
SAS (internship/coursework/teaching/work)
Python (research)
HPC (high performance computing on cluster)

RESEARCH INTERESTS

-Causal Inference	-Longitudinal Analysis	-Machine Learning
-Bayesian Analysis	-Spatial Modeling	-Trial Design

PUBLICATIONS

Academic Journals

- (1) Locke, J., Williams, J., Shih, W., & Kasari, C. (2017). "Characteristics of socially successful elementary school-aged children with autism", *Journal of Child Psychology and Psychiatry* **58**(1), 94-102.
 - (2) Gulsrud, A., Carr, T., Williams, J., Panganiban, J., Jones, F., Kimbrough, J., Shih, W., & Kasari, C. (2019). "Developmental screening and early intervention in a childcare setting for young children at-risk for autism and other developmental delays: A feasibility trial", *Autism Research*.
 - (3) Dean, M., Williams, J., Kasari, C., & Orlich, O. (In Revision). "Adolescents with autism spectrum disorder and social skills groups at school: A randomized trial comparing intervention environment and peer composition", *School Psychology Review*.
 - (4) Williams, J., Kim, H., & Crespi, C. (In Review). "Maximum Likelihood Estimation of a Truncated Normal Distribution with Censored Data", *Statistics in Medicine*.
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AWARDS & HONORS

- **Most Outstanding Oral Presentation**

Awarded By: *Western North American Region of the International Biometric Society*

Received: June, 2019

- **Juneal Marie Smith Fellowship in International Nutrition**

Awarded By: *UCLA Fielding School of Public Health*

Received: June, 2019

- **Dissertation Year Fellowship**

Awarded By: *UCLA Graduate Division*

Received: December 2019 – December 2020

- **Graduate Summer Research Mentorship**

Awarded By: *UCLA Graduate Division*

Received: June 2017 – September 2017