

# Justin Williams

(720) 936-7272 | williazo@ucla.edu | <https://williazo.github.io>

---

## EDUCATION

### University of California, Los Angeles (UCLA)

*Ph.D. – Biostatistics*

*Expected 2020*

*M.S. - Biostatistics*

*2016*

### Boston College

*B.A. – Mathematics*

*2013*

---

## WORK EXPERIENCE

### Graduate Student Researcher

*2015 - 2019*

*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

---

## SOFTWARE SKILLS

**R** (coursework/teaching/research/preferred)

**SQL** (work experience)

**Stata** (coursework/teaching)

**SAS** (internship/coursework/teaching/work)

**Julia** (coursework)

**Python** (research)

**GitHub** (primary version control software)

**HPC** (high performance computing on cluster)

---

## RESEARCH INTERESTS

-Causal Inference

-Longitudinal Analysis

-Machine Learning

-Bayesian Analysis

-Spatial Modeling

-Trial Design

---

## PUBLICATIONS

### Academic Journals

- (1) Dean, M., Williams, J., Kasari, C., & Orlich, O. (2020). “Adolescents with autism spectrum disorder and social skills groups at school: A randomized trial comparing intervention environment and peer composition”, *School Psychology Review*, 49:1, 60-73. doi:[10.1080/2372966X.2020.1716636](#)
- (2) Williams, J., Bravo HC, Tom J & Paulson JN. (2020). “microbiomeDASim: Simulating longitudinal differential abundance for microbiome data [version 2; peer review: 2 approved]”, *F1000Research* 8:1769. doi:[10.12688/f1000research.20660.2](#).

- (3) Williams, J., Kim, H., & Crespi, C. (2019). "Maximum Likelihood Estimation of a Truncated Normal Distribution with Censored Data", *arXiv preprint arXiv:1911.11221*.
- (4) 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* **12**(9), 1423-1433. doi:[10.1002/aur.2160](https://doi.org/10.1002/aur.2160)
- (5) 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. doi:[10.1111/jcpp.12636](https://doi.org/10.1111/jcpp.12636)

---

#### AWARDS & HONORS

---

- **Dissertation Year Fellowship** (\$20,000)

Awarded By: *UCLA Graduate Division*

Received: December 2019 – December 2020

- **Most Outstanding Oral Presentation** (\$500)

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

Received: June, 2019

- **Juneal Marie Smith Fellowship in International Nutrition** (\$2,500)

Awarded By: *UCLA Fielding School of Public Health*

Received: June, 2019

- **Graduate Summer Research Mentorship** (\$6,000)

Awarded By: *UCLA Graduate Division*

Received: June 2017 – September 2017