

Contact Information

Department of Statistics, University of Florida
117D Griffin-Floyd Hall, Gainesville, FL 32611

Email: woojung.bae@ufl.edu

Education

- Aug 2018 – Aug 2024 Ph.D., Statistics, University of Florida
Advisor: Dr. Michael J. Daniels
- Mar 2016 – Feb 2018 M.A., Statistics, Yonsei University
Thesis: R Package afttest for Checking Semiparametric Accelerated Failure Time Models
Advisor: Dr. Sangwook Kang
- Mar 2009 – Feb 2016 B.S., Mathematics and B.E., Economics (Dual Degree), Kyung Hee University

Research Experience

Graduate Intern

- May 2022 – Aug 2022 Regeneron Pharmaceuticals Inc.
Advisor: Dr. Chenguang Wang

Research Assistant

- May 2020 – Aug 2024 Department of Statistics, University of Florida
Advisor: Dr. Michael Daniels
- Sep 2016 – Feb 2018 Department of Applied Statistics, Yonsei University
Advisor: Dr. Sangwook Kang

Teaching Experience

Teaching Assistant

Department of Statistics, University of Florida

- STA 5328 Fundamentals of Statistics
STA 5325 Fundamentals of Probability
STA 4322 Introduction to Statistics Theory
STA 4321 Introduction to Probability
STA 3032 Engineering Statistics
STA 3024 Introduction to Statistics 2
STA 2023 Introduction to Statistics 1

Department of Applied Statistics, Yonsei University

- STA 3123 Sampling Theory
STA 3108 Survival Analysis
STA 1001 Introduction to Statistics

Research Interests

Bayesian methodology, semi-parametric method, stochastic process, machine learning, casual inference, mediation analysis, hierarchical model, computational methods, software development, methods for incomplete data (intercurrent event data and missing data), survival data and longitudinal data

Skills

Software: High performance computing, R, Rcpp, RcppArmadillo, Stan, SAS, MATLAB, L^AT_EX, GitHub

Papers

† : Co-first author

Working Papers

5. **Bae, W.**, Daniels, M., and Wang, CG. Missing data introduced by applying hypothetical strategies: are they really missing?
4. **Bae, W.**, Daniels, M., and Hogan, J. Semiparametric Bayesian inference for causal mediation in cluster randomized trials.
3. **Bae, W.**, Choi, D., Yan, J., and Kang, S. `afttest`: model diagnostics for semiparametric accelerated failure time models in R.

Preprint

2. Choi, D.[†], **Bae, W.**[†], Yan, J., and Kang, S. A general goodness-of-fit tests for semiparametric accelerated failure time models, revision submitted. [preprint](#)
1. **Bae, W.**, Daniels, M., and Perri, M. A Bayesian non-parametric approach for causal mediation with a post-treatment confounder, revision submitted. [preprint](#)

Software

R package

`afttest` Model diagnostics for accelerated failure time models ([CRAN](#), [GitHub](#))

Presentation

† : Virtually

Invited Talk

- | | |
|----------|---|
| Oct 2023 | Missing data introduced by applying hypothetical strategies: are they really missing?, <i>Regeneron</i> , Tarrytown, NY. [†] |
| Jun 2023 | A Bayesian non-parametric approach for causal mediation with a post-treatment confounder, <i>International Chinese Statistical Association China Conference</i> , Chengdu, Sichuan, China. [†] |
| May 2023 | Missing data introduced by applying hypothetical strategies: are they really missing?, <i>Society for Clinical Trials</i> , Baltimore, MD. |
| Dec 2022 | A Bayesian non-parametric approach for causal mediation with a post-treatment confounder, <i>Yonsei University</i> , Seoul, Korea. |
| Sep 2022 | Missing data introduced by applying hypothetical strategies: are they really missing?, <i>ASA Biopharmaceutical Section Regulatory-Industry Statistics Workshop</i> , Washington, D.C. |

Topic Contributed Talk

- | | |
|----------|--|
| Aug 2023 | Missing data introduced by applying hypothetical strategies: are they really missing?, <i>Joint Statistical Meeting</i> , Toronto, Canada. |
|----------|--|

Contributed Talk

- | | |
|----------|---|
| Mar 2024 | A Bayesian non-parametric approach for causal mediation with a post-treatment confounder, <i>Eastern North American Region</i> , Baltimore, MD. |
| Mar 2023 | Semiparametric Bayesian inference for causal mediation in cluster randomized trials, <i>Eastern North American Region</i> , Nashville, TN. |

- Aug 2022 Causal mediation in weight management trials using Bayesian nonparametrics, *Joint Statistical Meeting*, Washington, D.C.
- Mar 2022 A more flexible Bayesian nonparametric approach to causal mediation, *Eastern North American Region*, Houston, TX.
- Dec 2021 A more flexible Bayesian nonparametric approach to causal mediation, *US-KOREA Conference*, Los Angeles, CA.
- Aug 2021 A more flexible Bayesian nonparametric approach to causal mediation, *Joint Statistical Meeting*, Seattle, WA.[†]
- Jul 2021 A more flexible Bayesian nonparametric approach to causal mediation, *International Society for Bayesian Analysis*, University of Connecticut, Storrs, CT.[†]
- Nov 2017 R package afttest for checking semiparametric accelerated failure time models afttest, *Korean Statistical Society Fall Meeting*, Seoul, Korea.

Contributed Poster

- Oct 2022 Missing data introduced by applying hypothetical strategies: are they really missing?, *Southern Regional Council on Statistics*, Jekyll Island, GA.
- Aug 2022 Missing data introduced by applying hypothetical strategies: are they really missing?, *Statistics in Pharmaceuticals conference*, University of Connecticut, Storrs, CT.[†]
- Jun 2022 Causal mediation in weight management trials using Bayesian nonparametrics, *International Society for Bayesian Analysis*, Montreal, Canada.
- Oct 2021 A more flexible Bayesian nonparametric approach to causal mediation, *Southern Regional Council on Statistics*, Jekyll Island, GA.
- Aug 2020 R package afttest for checking semiparametric accelerated failure time models afttest with an Induced Smoothing Approach, *Joint Statistical Meeting*, Philadelphia, PA.[†]

Honors and Awards

Fellows

- Nov 2023 FDA-OCE-ASA Oncology Educational Fellows
Food and Drug Administration's Oncology Center of Excellence (FDA-OCE), the American Statistical Association (ASA), and the ASA's Biopharmaceutical Statistics Section (BIOP)

Travel Award

- Mar 2024 College of Liberal Arts and Sciences at the University of Florida
Eastern North American Region, Baltimore, MD.
- Aug 2023 College of Liberal Arts and Sciences at the University of Florida
Joint Statistical Meeting, Toronto, Canada.
- Mar 2023 College of Liberal Arts and Sciences at the University of Florida
Eastern North American Region, Nashville, TN.
- Oct 2022 Boyd Harshbarger Travel Award (granted by NSF)
Southern Regional Council on Statistics
- Sep 2022 College of Liberal Arts and Sciences at the University of Florida
ASA Biopharmaceutical Section Regulatory-Industry Statistics Workshop, Washington, D.C.
- Aug 2022 College of Liberal Arts and Sciences at the University of Florida
Joint Statistical Meeting, Washington, D.C.
- Jun 2022 International Society for Bayesian Analysis (granted by NSF)
International Society for Bayesian Analysis, Montreal, Canada.
- Mar 2022 College of Liberal Arts and Sciences at the University of Florida
Eastern North American Region, Houston, TX.
- Dec 2021 UKC Fellow Award (Korean-American Scientists and Engineers Association)
US-KOREA Conference, Los Angeles, CA
- Oct 2021 Boyd Harshbarger Travel Award (granted by NSF)
Southern Regional Council on Statistics

Scholarship

2017S – 2017F Internal Scholarship (Merit-based Scholarship), **Yonsei University**
2013F – 2015S Superiority Scholarship (Merit-based Scholarship), **Kyunghee University**

Assistantship

May 2020 – Present Research Assistantship, **University of Florida**
Aug 2018 – Apr 2020 Teaching Assistantship, **University of Florida**
Sep 2016 – Feb 2018 Research Assistantship, **Yonsei University**
Sep 2016 – Feb 2018 Teaching Assistantship, **Yonsei University**

Professional Memberships

2023 – Present Member, **Institute of Mathematical Statistics**
2021 – Present Member, **International Society for Bayesian Analysis**
2021 – Present Member, **Eastern North American Region**
2020 – Present Member, **American Statistical Association**
2017 – Present Member, **International Biometrics Society**

Services

Journal Referee

Journal of the Korean Statistical Society

Military Service

Oct 2010 – July 2012 Capital Mechanized Infantry Division, the Republic of Korea Army
Served and honorably discharged from the Republic of Korea Army

References

Michael J. Daniels, Professor

Department of Statistics
University of Florida

Phone: +1 (352) 273-2966

E-mail: daniels@ufl.edu

Chenguang Wang, Senior Director

Statistical Innovation, Biostatistics and Data Management
Regeneron Pharmaceuticals

Phone: +1 (914) 648-8305

E-mail: chenguang.wang@regeneron.com

Sangwook Kang, Professor

Department of Applied Statistics
Department of Statistics and Data Science
Yonsei University

Phone: +82 (02) 2123-2538

E-mail: kanggi1@yonsei.ac.kr