

Suhwan Bong

Last Updated on May 26, 2024

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Research Interests

Causal inference, Non-/Semi-parametric inference, Machine learning, Spatial statistics, Measurement error, Survival analysis, Instrumental variable

Education

- 2024– **Ph.D. in Biostatistics**, *Harvard University*, Boston, MA
- 2022–2024 **M.S. in Statistics**, *Seoul National University*, Seoul, South Korea
Advisor: Kwonsang Lee
Thesis: *Causal Inference with Exposure Misclassification in Observational Studies*
- 2016–2022 **B.S. in Statistics & Mathematics**, *Seoul National University*, Seoul, South Korea
Summa Cum Laude

Publications

- [1] **S. Bong** and K. Lee. Local causal effects with continuous exposures: A matching estimator for the average causal derivative effect. *arXiv*, preprint, 2024. <https://arxiv.org/abs/2311.18532>.
- [2] **S. Bong**, K. Lee, and F. Dominici. Differential recall bias in estimating treatment effects in observational studies. *Biometrics*, accepted, 2024. <https://arxiv.org/abs/2307.02331>.

Research Experience

- 2022–2024 **Graduate Research Assistant**, *Seoul National University*, Seoul, South Korea
Causal Inference Laboratory (PI: Kwonsang Lee)
 - Developed causal inference methodologies and established their mathematical foundations.
 - Focused on measurement error and continuous exposures in observational studies.
- 2021–2022 **Undergraduate Research Assistant**, *Seoul National University*, Seoul, South Korea
Spatial Statistics Laboratory (PI: Chae Young Lim)
 - Methodological and application-driven projects dealt with spatial and spatio-temporal data.
 - Aimed to develop a statistical model explaining the transmission of COVID-19 in Korea.
- 2021 **Undergraduate Research Assistant**, *Seoul National University*, Seoul, South Korea
Nonparametric Inference Laboratory (PI: Byeong U. Park)
 - Statistical methodologies on infinite-dimensional parametric spaces and asymptotic theory.
 - Focused on studying additive regression with Hilbertian responses and its properties.

Joint Research Project

- 2023 **Joint Researcher**, *Samsung Medical Center*, Seoul, South Korea
 - Examined the clinical data of Chronic Obstructive Pulmonary Disease (COPD) patients.

- 2022-2023 **Joint Researcher**, *Seoul National University Hospital*, Seoul, South Korea
○ Designed the study and analyzed the data of epilepsy patients during the COVID-19 pandemic.

Teaching Experience

Teaching Assistant

- Spring 2024 **Causal Inference**, *Seoul National University*, Department of Statistics
Fall 2023 **Data Analysis and Lab.**, *Seoul National University*, Department of Statistics
Spring 2023 **Mathematical Statistics 1**, *Seoul National University*, Department of Statistics
Fall 2022 **Data Analysis and Lab. 1**, *Seoul National University*, Department of Statistics
Spring 2022 **Nonparametric Statistics and Lab.**, *Seoul National University*, Department of Statistics

Presentations

Conference and Seminar Talks

- [1] **S. Bong**, K. Lee, and F. Dominici. Differential recall bias in estimating treatment effects in observational studies. *6th International Conference on Econometrics and Statistics*, Tokyo, Japan, Aug. 2023.

Posters

- [1] **S. Bong** and K Lee. Local causal effects with continuous exposures. *Korean Statistical Society Conference*, Busan, South Korea, Dec. 2023.
[2] **S. Bong**, K. Lee, and F. Dominici. Differential recall bias in estimating treatment effects in observational studies. *Korean Statistical Society Conference*, Jeju, South Korea, Dec. 2022.

Awards & Honors

- 2024–2029 **KFAS Overseas PhD Scholarship**, *Korea Foundation for Advanced Studies*
Additional \$13,000 annual research grant for five years.
Dec. 2022 **Outstanding Poster Presentation Award**, *Korean Statistical Society Conference*
Dec. 2022 **Best Teaching Assistant Award**, *Seoul National University*, Department of Statistics
2016–2022 **Korea Presidential Science Scholarship**, *Korea Student Aid Foundation*
Received full financial support for tuition and an additional \$4,000 annual stipend.
2016–2022 **Dean's List**, *Seoul National University*
Dec. 2019 **Army Commendation Medal (ARCOM)**, *United States Department of the Army*
2017–2018 **GLEAP (The Honor Society of College of Natural Sciences)**, *Seoul National University*
2014–2015 **Hanseong Gifted Scholarship**, *Hanseong Sonjaehan Scholarship Foundation*
Given in recognition of academic excellence in mathematics, received \$4,000 annual stipend.

Skills

- Programming** Python, R, SQL, C/C++, \LaTeX
Language Korean (Native), English (Fluent)