Suhwan Bong

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in suhwanbong

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 obsevational 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)
 - O Developed causal inference methodologies and established their mathematical foundations.
 - O 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
 - O 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 obsevational 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 obsevational 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)