

# Yoon-Bae Jun

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<https://github.com/junpeea>

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## EDUCATION

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### Iowa State University, United States

Postdoc Research Associate

Research Interests: Spatial Statistics, Spatial Epidemiology,  
Machine Learning for Spatial data

Academic advisor: Zhengyuan, Zhu; Dan Nettleton

### STATUS

AUGUST 2021 -  
CURRENT

### Seoul National University, South Korea

Postdoc Research Associate

Ph.D. in Statistics

Dissertation: Bayesian regression using non-parametric  
modeling of Fourier coefficients and its applications

Academic advisor: Chae Young, Lim

MARCH-JULY 2021  
FEBRUARY 2021

### Yonsei University, South Korea

B.A.Economics

B.A.Mathematics

FEBRUARY 2014

## PUBLICATION/ WORK IN PROGRESS

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### Published Papers

- Chakraborty, S\*, Dey, T\*, **Jun, Y\***, Lim, C. Y\*, Mukherjee, A., & Dominici, F. (2022). A Spatiotemporal Analytical Outlook of the Exposure to Air Pollution and COVID-19 Mortality in the USA. *Journal of Agricultural, Biological and Environmental Statistics*, 1-21. (\* Contributed equally)
- **Jun, YB.**, Song, I., Kim, OJ. et al. Impact of limited residential address on health effect analysis of predicted air pollution in a simulation study. *Journal of Exposure Science & Environmental Epidemiology* (2022).
- **Jun, Y. B.**, & Lim, C. Y. (2021). Spatial regression with non-parametric modeling of Fourier coefficients. *Journal of the Korean Statistical Society*, 1-24.

- Choe, S. A., Jang, J., Kim, M. J., **Jun, Y. B.**, & Kim, S. Y. (2019). Association between ambient particulate matter concentration and fetal growth restriction stratified by maternal employment. *BMC Pregnancy and Childbirth*, 19(1), 246.
- Choe, S. A., **Jun, Y. B.**, Lee, W. S., Yoon, T. K., & Kim, S. Y. (2018). Association between ambient air pollution and pregnancy rate in women who underwent IVF. *Human Reproduction*, 33(6), 1071-1078.
- Choe, S. A., **Jun, Y. B.**, Kim, S. Y. (2018). Exposure to air pollution during preconceptional and prenatal periods and risk of hypertensive disorders of pregnancy: a retrospective cohort study in Seoul, Korea, *BMC Pregnancy and Childbirth* 18:340

### Papers being submitted/reviewed

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### Working Papers

- **Jun, Y. B.**, Zhu, Z., Nettleton, D., Random Forest Prediction Intervals for Spatially dependent data, *Paper manuscript in preparation*
- **Jun, Y. B.**, Kim, K. H., Lim, C. Y., Nonparametric estimation of autocovariance of a model error in time series, *Paper manuscript in preparation*
- **Jun, Y. B.**, Kim, K. E., Kim, S. Y., Lim, C. Y., Detecting the effect of spatio-temporally correlated covariates under Bayesian spatially clustered survival modelling, *Paper manuscript in preparation*
- **Jun, Y. B.**, Dey, T., Lim, C. Y., Disease cluster analysis for diabetes and hypertension using the individual UDAY survey data in India

## SELECTED FELLOWSHIPS/ AWARDS

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### Awards

- Korean Statistical Society, SG Graduate Student Presentation Award, with Honors (The grand prize among graduate student presentations) 2019, 2017

### Grant / Fellowships

- Postdoc research associate, Iowa State University of science and technology, supported by AWD-021392-00001: HDR TRIPODS: D4 (Dependable Data-Driven Discovery) 10/01/2019 (version 5) 2021-CURRENT
- Postdoc research associate, The Basic Research Lab Project, Seoul National University
- Graduate Fellow, Next Generation Training Program for Statistical Sciences, Seoul National University (5295-20160100) 2007-2021
- Ministry of Education of the Republic of Korea / the National Research Foundation of Korea, Dept. of Statistics (326-20160010)
- President Post-Doc Fellow, the National Research Foundation of Korea, Dept. of Public Health (900-20150065)

- Graduate Fellow, Basic Research Foundation Project, Seoul National University (326-20140010)
- Mirae Asset PARK HYEON JOO Foundation, Scholarships for overseas exchange students, University of California, San Diego
- Science and Engineering Scholarship (4-years), Korea Student Aid Foundation.

## **PRESENTATION/ POSTER**

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### **Paper presentation**

- Paper presentation (2019), Detecting the effect of spatio-temporally correlated covariates under Bayesian spatially clustered Survival modelling, *Fall conference, The Korean Statistical Society*
- Paper presentation (2019), Bayesian Spatial Prediction with Nonparametric Modelling of a Spectral Density, *Spatial Statistics: Towards Spatial Science 2019 Conference, Spatial Statistics, Elsevier*
- Paper presentation (2018), Bayesian Spatial Regression with Nonparametric Modelling of Spectral Densities, *The 5th Institute of Mathematical Statistics Asia Pacific Rim Meeting (IMS-APRM 2018)*
- Paper presentation (2017), Bayesian Spatial Regression with Nonparametric Modelling of Spectral Densities, *Fall conference, The Korean Statistical Society*

### **Poster**

- Poster session (2018), Prediction approaches of particulate matter and other air pollutants in a cohort study of degenerative diseases, *The Korean society of Atmospheric Environment*
- Poster session (2018), Bayesian Spatial Regression with Nonparametric Modelling of Spectral Densities, *The 3rd Eastern Asia Meeting on International Society for Bayesian Statistics (EAC-ISBA 2018)*
- Poster session (2018), The Impact of using Incomplete Address data on estimating the Health effect of PM<sub>10</sub> on Low Birth Weight in Seoul Korea: A simulation study, *The Korean society of Environmental Health and Toxicology*
- Poster session (2017), Prediction of PM<sub>10</sub> and Health Effects on Low Birth Weight in Seoul, Korea, *The Korean society of Environmental Health and Toxicology*

## **TEACHING/WORK EXPERIENCE**

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Iowa State University, Instructor for undergraduates: Probability and Statistics for Computer Science (Summer, 2022)

Seoul National University, Statistical Research Institute - SAS tutorial (Summer, 2016)

Seoul National University, Statistical Research Institute - Statistical Consulting (Fall, 2015)

Research Assistant for graduates: Seminar in Recent Development of Applied Statistics (Spring, 2019; Fall, 2015)

Research Assistant for undergraduates: Statistics (Fall, 2016; Fall, 2014; Spring, 2014)

## **LANGUAGE/PROGRAMMING SKILLS**

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Language | Korean (native); English (fluent)

Programming skills | R, SAS, Python