

Seonjin Kim

CONTACT INFORMATION

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EDUCATION

The Pennsylvania State University, University Park, PA.

Ph.D., Statistics, August 2013.

Korea Advanced Institute of Science and Technology (KAIST), Deajeon, Republic of Korea.

B.S., Applied Mathematics, February 2006.

EMPLOYMENT

Professor of Statistics, Miami University, July 2024–present.

Associate Professor of Statistics, Miami University, July 2019–June 2024.

Assistant Professor of Statistics, Miami University, August 2013–June 2019.

RESEARCH INTERESTS

Longitudinal models
Time series
Nonparametric methods
Quantile regression

HONORS AND AWARDS

Outstanding Professor Awards, Miami University, 2022.

International Statistical Institute (ISI) Elected member, 2020.

Korean International Statistical Society Career Development Award, 2015.

Nonparametric Statistics Student Paper Award, American Statistical Association (ASA), Joint Statistical Meetings, 2012.

Department Scholarship, KAIST, 2003–2005.

PUBLICATIONS

Accepted (all peer-reviewed; *: Miami Students, **: Students at other institutes):

1. Cho, H. and **Kim, S.** (2024) Assessing heterogeneity of treatment initiation guideline effect over time in longitudinal randomized controlled trials. *Journal of Statistical Planning and Inference*. In press.
2. *Wang, S., **Kim, S.**, Cho, H. and Chang, W. (2024) Nonparametric predictive model for sparse and irregular longitudinal data. *Biometrics*. 80.
3. Cho, H. and **Kim, S.** (2024) Modeling the population mean outcome trajectory in an observational study with a guideline-based intervention. *Statistica Sinica*, 34, 1-23.
4. **Bhatnagar, S., Chang, W., **Kim, S.**, and Wang, Jiali. (2022) Computer Model Calibration with Time Series Data using Deep Learning and Quantile Regression. *Journal on Uncertainty Quantification*, 10, 1-26.

5. Zambom, Z.A., **Kim, S.** and Garcia, N.L. (2022) Variable length Markov chain with exogenous covariates. *Journal of Time Series Analysis*, 43, 312-328.
6. **Xu, Z., **Kim, S.**, and Zhao, Z. (2022) Locally stationary quantile regression for inflation and interest rates. *Journal of Business and Economic Statistics*, 40, 838-851.
7. Han, M.K. and **Kim, S.** (2021) Hearing Symptoms, Attitude towards Noise, and Use of Hearing Protection in Young Adults. *Communication Sciences & Disorders*, 26, 510-524.
8. **Kim, S.**, Cho, H. and Kim, M. (2021) Predictive generalized varying-coefficient longitudinal model. *Statistics in Medicine*, 40, 6243-6259.
9. **Kim, S.**, Cho, H. and Wu, C. (2021) Risk-predictive probability models with application to the National Growth and Health Study. *Statistica Sinica*, 31, 1415-1439.
10. Han, M.K. and **Kim, S.** (2020) A Study on the Korean-Version of Youth Attitudes to Noise Scale (K-YANS). *Communication Sciences & Disorders*, 25, 764-773.
11. Cho, H., **Kim, S.**, and Lee, M. (2020) Adjusting a subject-specific timing of event in longitudinal studies. *Statistical Methods in Medical Research*, 29, 1787-1798.
12. McLaughlin, S., **Kim, S.**, Li, L., Zhang, J. (2020) Educational differences in trajectories and determinants of healthy ageing in midlife and older Americans. *Maturitas*, 134, 21-28.
13. **Kim, S.**, Cho, H. and Zhang X. (2019) Initial severity-dependent longitudinal model with application to a randomized controlled trial of women with depression. *Statistics in Medicine*, 38, 1678-1689.
14. *Palma, D., **Kim, S.** and Miljkovic, T. (2019) Predictive Modeling of Obesity Prevalence for the United States Population. *North American Actuarial Journal*, 23, 64-81.
15. **Kim, S.**, Zhao, Z and Xiao, Z. (2018) Efficient estimation for time-varying coefficient longitudinal models. *Journal of Nonparametric Statistics*, 30, 680-702.
16. **Kim, S.** and Cho, H. (2018) Partially linear quantile regression for longitudinal studies. *Electronic Journal of Statistics*, 12, 824-850.
17. Cho, H. and **Kim, S.** (2017) Model specification test in a semiparametric regression model for longitudinal data. *Journal of Multivariate Analysis*, 160, 105-116.
18. Cho, H., **Kim, S.** and Kim M. (2017) Marginal quantile regression accounting for association across multiple quantiles. *Journal of Multivariate Analysis*, 155, 334-343.
19. Zambom, Z.A. and **Kim, S.** (2017) A nonparametric hypothesis test for heteroscedasticity in multiple regression models. *Canadian Journal of Statistics*, 45, 425-441.
20. Zambom, Z.A. and **Kim, S.** (2017) Lag selection and model validation in nonparametric autoregressive conditional heteroscedastic models. *Journal of Statistical Planning and Inference*, 186, 13-27.
21. **Kim, S.** and Zambom, Z.A. (2016) A nonparametric hypothesis test for heteroscedasticity. *Journal of Nonparametric Statistics*, 28, 752-767.

22. **Kim, S.** (2015) Hypothesis testing for ARCH models: a multiple quantile regressions approach. *Journal of Time Series Analysis*, 36, 26–38.
23. **Kim, S.**, Zhao, Z. and Shao, X. (2015) Nonparametric functional central limit theorem for time series with application to self-normalized confidence interval. *Journal of Multivariate Analysis*, 133, 277–290.
24. **Kim, S.** and Zhao, Z. (2014) Specification test for Markov models with measurement errors. *Journal of Multivariate Analysis*, 130, 118–133.
25. **Kim, S.** and Zhao, Z. (2013) Unified inference for sparse and dense longitudinal models. *Biometrika*, 100, 203–212.

Submitted (all peer-reviewed; *: Miami Students, **: Students at other institutes):

1. Chang, W., **Kim, S.** and Kim, J. Statistical Inference with Neural Network Imputation for Item Nonresponse.
2. Cho, H., **Kim, S.**, and Lee, M. Assessing heterogeneous causal effects of a guideline in a randomized clinical trial.
3. *Dhakar, U., McLaughlin, S.J., **Kim, S.**, Vivoda, J., Brown, S. and Roberts, A. Determinants of cognitive functioning in older adults with mild cognitive impairment.
4. **Kim, S.**, **Lee, S., Hong, H., Kim, M. and Grantz, K. Assessing Longitudinal Health Disparities: A Decomposition and Inferential Methodology.
5. *Woodbury, G., **Kim, S.** and Maurer, K. A new lineup protocol for visual statistical inference: the lady tasting tea procedure.

In preparation (*: Miami Students, **: Students at other institutes):

1. Fan, X., **Lee, S., **Kim, S.**, **Kelly, B., Hong, H. and Kim, M. Causal Decomposition Random Forest of Survival Disparity.
2. Hwang, Y., **Kim, S.**, Zhang, S., Kuepie, M. and Kim, J. Small Area Estimation with a Unit-Level Model and Data Augmentation for Incomplete Auxiliary Variables.
3. *Kim, J., **Kim, S.**, and Malin, J. Winner’s Game in Education Finance.
4. *Wang, S. and **Kim, S.** Enhancing Prediction with a Novel Kernel Estimation Method.

PRESENTATIONS

1. Joint Statistical Meetings, Portland, OR, August 2024.
2. The Korean Statistical Society Seminar, Seoul, South Korea, July 2014.
3. Joint Statistical Meetings, Toronto, Canada, August 2023.
4. International Conference on Econometrics and Statistics, Tokyo, Japan, June 2023.
5. Institute for Basic Science, Daejeon, South Korea, June 2023.
6. Department of Statistics, Korea University, Seoul, South Korea, May 2023.
7. ASA Cincinnati chapter, Miami University, Oxford, OH, April 2023.
8. Department of Statistics University of Akron, March 2023.
9. Joint Statistical Meetings, Washington, D.C., August 2022.
10. International Conference on Econometrics and Statistics, Tokyo, Japan, June 2022.

11. Korean-American Mathematical Scientists conference, Miami University, March 2022.
12. Joint Statistical Meetings Virtual Conference, August 2021.
13. Joint Statistical Meetings, Denver, CO, August 2019.
14. Department of Epidemiology & Biostatistics, University of California San Francisco, June 2019.
15. Joint Statistical Meetings, Vancouver, Canada, August 2018.
16. Department of Mathematical Sciences, Korea Advanced Institute of Science and Technology, Daejeon, South Korea, June 2018.
17. Joint Statistical Meetings, Baltimore, MD, August 2017.
18. Young Statistician's Meetings, Seoul, South Korea, June 2017.
19. Joint Statistical Meetings, Chicago, IL, August 2016.
20. Department of Statistics, Korea University, Seoul, South Korea, June 2016.
21. Joint Statistical Meetings, Seattle, WA, August 2015.
22. Southwest Ohio Korean-American Scientists and Engineers Association (KSEA) Annual Conference, University of Cincinnati, May 2015.
23. Joint Statistical Meetings, Boston, MA, August 2014.
24. Summer Undergraduate Mathematical Sciences Research Institute, Miami University, July 2014.
25. The Korean Statistical Society Seminar, Daejeon, South Korea, May 2014.
26. Department of Mathematical Sciences, University of Cincinnati, March 2014.
27. Southwest Ohio KSEA Kickoff Meeting, Cincinnati Children's Hospital Medical Center, November 2013.
28. Joint Statistical Meetings, San Diego, CA, August 2012.
29. Joint Statistical Meetings, Miami, FL, July 2011.

TEACHING
EXPERIENCE

Pennsylvania State University:

1. STAT 401 Experimental Methods.
2. STAT 418 Intro to Probability and Stochastic Processes for Engineering.
3. STAT 463 Applied Time Series Analysis.

Miami University:

1. STA 261 Statistics
2. STA 301 Applied Statistics in class and online
3. STA 333 Intro to Nonparametric Statistics
4. STA 363 Intro to Statistical Modeling
5. STA 4/501 Probability
6. STA 4/562 Inferential Statistics
7. STA 4/563 Regression analysis
8. STA 4/583 Analysis of Forecasting Systems (Times Series Analysis)
9. STA 650 Topics in Statistics (Generalized Linear Model, Nonparametric Regression)

10. STA 664 Theory of Statistics I
11. STA 665 Theory of Statistics II

Teaching Evaluation Scores at Miami University:

The teaching effectiveness scores were rated on a scale of 0 (strongly disagree) to 4 (strongly agree). “Mean score” column reports the mean score with the percentage of students in parentheses who rate positively (3 or 4). For comparison, the department mean score and university mean score are also reported. “Size” column provides information on the number of students in the class (the number of students who respond the evaluation).

| Semester | Course | Mean score | Department mean | University mean | Size |
|-------------|-------------|-------------|-----------------|-----------------|--------|
| Fall 2014 | STA 4/501 B | 3.60 | 3.32 | 3.23 | 22(20) |
| | STA 4/501 C | 3.79 | 3.32 | 3.23 | 16(14) |
| | STA 4/583 | 3.72 | 3.32 | 3.23 | 24(18) |
| Spring 2015 | STA 301 | 3.29 | 3.36 | 3.26 | 40(34) |
| | STA 363 | 3.48 | 3.36 | 3.26 | 25(21) |
| Fall 2015 | STA 301 | 3.51 | 3.20 | 3.30 | 45(37) |
| | STA 4/583 | 3.63 | 3.20 | 3.30 | 24(19) |
| Spring 2016 | STA 401 A | 3.43 | 3.28 | 3.29 | 36(35) |
| | STA 401 B | 3.52 | 3.28 | 3.29 | 37(33) |
| Spring 2017 | STA 4/563 A | 3.62 | 3.03 | 3.27 | 29(26) |
| | STA 4/563 B | 3.54 | 3.03 | 3.27 | 26(24) |
| Fall 2017 | STA 664 | 3.44 | 2.86 | 3.29 | 19(18) |
| | STA 4/583 | 3.59 | 2.86 | 3.29 | 25(22) |
| Spring 2018 | STA 363 A | 3.44 | 3.20 | 3.31 | 27(25) |
| | STA 363 B | 3.40 | 3.20 | 3.31 | 30(25) |
| | STA 4/583 | 3.68 | 3.20 | 3.31 | 31(26) |
| Fall 2018 | STA 333 A | 3.52 | 3.12 | 3.34 | 26(23) |
| | STA 664 | 3.57 | 3.12 | 3.34 | 21(21) |
| Spring 2019 | STA 4/583 A | 3.29 | 3.27 | 3.34 | 46(42) |
| | STA 665 | 3.67 | 3.27 | 3.34 | 20(18) |
| Fall 2019 | STA 4/583 | 3.81 | 3.33 | 3.34 | 30(26) |
| | STA 650 | 3.59 | 3.33 | 3.34 | 22(22) |
| | STA 664 | 3.71 | 3.33 | 3.34 | 22(21) |
| Fall 2021 | STA 4/583 | 4.00 | 3.33 | 3.38 | 18(15) |
| | STA 651 | 3.78 | 3.33 | 3.38 | 12(9) |
| | STA 664 | 3.90 | 3.33 | 3.38 | 10(10) |
| Spring 2022 | STA 363 A | 3.53 | 3.16 | 3.34 | 29(17) |
| | STA 363 B | 3.68 | 3.16 | 3.34 | 30(25) |
| | STA 665 | 3.30 | 3.16 | 3.34 | 10(10) |
| Fall 2022 | STA 363 C | 3.57 | 3.34 | 3.34 | 53(47) |
| | STA 363 D | 3.50 | 3.34 | 3.34 | 50(47) |
| | STA 664 | 3.82 | 3.34 | 3.34 | 11(11) |
| Spring 2023 | STA 462 | 3.50 | 3.34 | 3.34 | 28(24) |
| | STA 665 | 3.80 | 3.34 | 3.35 | 10(10) |
| Fall 2023 | STA 363 C | 3.26 | 3.38 | 3.34 | 45(35) |
| | STA 363 D | 3.49 | 3.38 | 3.34 | 43(39) |
| | STA 664 | 3.79 | 3.38 | 3.34 | 16(16) |
| Spring 2024 | STA 363 B | 3.74 | 3.38 | 3.36 | 36(31) |
| | STA 665 | 3.80 | 3.38 | 3.36 | 16(15) |

FACULTY STAFF
COMMENDATION

I am identified by at least one graduating students (undergraduates and graduate students) in **2015, 2017, 2018, 2019, 2020, 2021 and 2022** as a faculty member who made a positive impact on students’ learning and development while at Miami University.

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| GRANTS | <ol style="list-style-type: none"> 1. NIH R03 (PI) Nonparametric Longitudinal Data Analysis for Future Response Prediction. June 2023 \$68,973. Declined. 2. NIH R03 (Co-Investigator) with Cho, H. (Biostatistics, University of Iowa). Submitted June 2018. \$158,427. Declined. 3. NIH R61/R33 proposal (Project Statistician) with Applebaum, R., Lokon, E., McLaughlin, S. (Sociology & Gerontology, Miami University) and Connell, C. (Health Behavior and Health Education, University of Michigan). Opening Minds Through Art: A Pragmatic Clinical Trial of an Intergenerational Visual Arts Program for Nursing Home Residents with Dementia. Submitted March 2018. \$2,400,000. Declined. 4. NSF proposal (PI). Personalized modeling and inference. Submitted November 2017. \$121,168. Declined. 5. NIH R21/R33 proposal (Statistic consultant) with Applebaum, R., Lokon, E., McLaughlin S., Connell, C. and Cummins, P. (Sociology & Gerontology, Miami University). Opening Minds Through Art: A Pragmatic Clinical Trial of an Intergenerational Visual Arts Program for Nursing Home Residents with Dementia. Submitted February 2017. \$2,440,000. Declined. 6. NIH R03 (PI). Initial severity-dependent longitudinal models. Submitted October 2016. \$108,375. Declined. 7. Summer research grant for new tenure-track faculty, awarded for summer 2015. Miami University, College of Arts and Sciences. \$5000. 8. Faculty research grant, awarded for summer 2014. Miami University, Committee on Faculty Research. \$6200. 9. Travel grant to attend the professional development workshop 2014, Chicago, IL, KSEA. |
| MASTER'S STUDENT ADVISEMENT | Steve Kiplagat (2014), Palma Daawin (co-advisor with Tatjana Miljkovic, 2016), Tianchi Zhang (2016), George Woodbury (2018), Sanjay Tamrakar (2019) Joey Davis (co-advised with Dr. Thomas Fisher, 2020) Kaity Sullivan (2020), Yongjun Liu (2020), Paul Gunsalus (2020), Cole Falco (2021), Shixuan Wang (2022), Jungwook Kim (2023), Kunyao Xu (2024), Thao Nguyen (in progress) |
| MASTER'S PROJECT/THESES COMMITTEES | Bo Wang (2014), Adam Barnhard (2015), Sooyoung Lisa (2019), Daniel Cirkovic (2020), Weijia Zhang (2020), Mark Miller (2020), Brant Imhoff (2020), Xiu Gao in Biology (2021), Jie Yin (2021), Ying Zhang (2021), Qin Zhang (2022), Myungjin Lee (2022), Bretho Danzy (2022), Sheikh Arafat (2023), Kunting Qi (2024). |
| PH.D.'S COMMITTEE MEMBER | Woodbury George in Psychology (2020), Elizabeth Pettit in Psychology (2023), Usha Dhakal in Gerontology (2023). |
| SERVICE TO THE PROFESSION | <ol style="list-style-type: none"> 1. ASA Committee on Career Development (CCD), 2018–2023. <ul style="list-style-type: none"> • CCD Vice Chair, 2023. • Webinar subcommittee chair 2021-2022 <p>As the webinar subcommittee chair, I organized a series of 4 webinars on the theme of “Along Your Career Path in Statistics and Data Science”.</p> <ol style="list-style-type: none"> (a) Early data science careers and the job search process. (b) Next-Steps and Promotions. (c) Distinguished Careers in Statistics and Data Science. (d) Changing Careers |

- Attended the following JSM events as a mentor
 - JSM 2024 Guided Networking Session
 - JSM 2023 Guided Networking Session
 - JSM 2022 Guided Networking Session
 - JSM 2021 Guided Networking Session
 - JSM 2019 Guided Networking Session

2. Vice President, ASA Cincinnati Chapter, 2023-present.

I proposed a series of talks presented by ASA Cincinnati chapter members and volunteered as the first speaker. The talks will be held alternately at the University of Cincinnati and Miami University

3. Inter-society Task force of the ASA to support the professional development of Asian statisticians initiated by ASA President, Dr. Barry Nussbaum, 2016-2018.

4. Committee of National Math and Science Competition offered by the KSEA, 2016-2017.

SERVICE TO THE DEPARTMENT

1. Director of Graduate Studies, Fall 2019-present.
2. Promotion and tenure committee, Fall 2019-present.
3. Qualifying exam committee, Fall 2017-present.
4. Workload policy committee chair, Spring 2020-Winter 2021.
5. Graduate assistants policy committee, Summer 2019.
6. Co-Director of Graduate Studies, Fall 2017-Summer 2019.
7. Colloquium organizer, Fall 2017-Summer 2019.
8. Search Committee, 2016 and 2017
9. Graduate Committee, Fall 2013-present.
10. Department picnic organizer, Fall 2013-present.

SERVICE TO THE UNIVERSITY

1. Graduate Diversity Enhancement Committee, Fall 2023-present.
2. Graduate Council petitions, Spring 2017 - Fall 2018.

JOURNAL REFEREE

Journal of the American Statistical Association, Journal of the Royal Statistical Society Series B, Statistica Sinica, Biometrics, Statistics in Medicine, Journal of Business & Economic Statistics, Journal of Multivariate Analysis, Journal of Time Series Analysis, Journal of Machine Learning Research, Computational Statistics & Data Analysis, Statistical Analysis and Data Mining, Open Mathematics, The American Statistician, The open Statistics & Probability Journal, Stat, Journal of Statistical Computation and Simulation, Journal of the Korean Statistical Society, Communications for Statistical Applications and Methods, Advances and Applications in Statistics.