# 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

Assistant Professor of Statistics, Miami University, August 2013–present.

RESEARCH INTERESTS

Longitudinal models
Time series
Nonparametric methods
Quantile regression

HONORS AND AWARDS

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; *: Students):

1. *Palma, D., **Kim, S.** and Miljkovic, T. (2018) Predictive Modeling of Obesity Prevalence for the United States Population. *North American Actuarial Journal*. To appear.

2. **Kim, S.**, Zhao, Z and Xiao, Z. (2018) Efficient estimation for time-varying coefficient longitudinal models. *Journal of Nonparametric Statistics*, 30, 680–702.

3. **Kim, S.** and Cho, H. (2018) Partially linear quantile regression for longitudinal studies. *Electronic Journal of Statistics*, 12, 824–850.

4. Cho, H. and **Kim, S.** (2017) Model specification test in a semiparametric regression model for longitudinal data. *Journal of Multivariate Analysis*, 160, 105–116.

5. Cho, H., **Kim, S.** and Kim M. (2017) Marginal quantile regression accounting for association across multiple quantiles. *Journal of Multivariate Analysis*, 155, 334–343.

6. Zambom, Z.A and **Kim, S.** (2017) A nonparametric hypothesis test for heteroscedasticity in multiple regression models. *Canadian Journal of Statistics*, 45, 425–441.

7. 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.

8. **Kim, S** and Zambom, Z.A. (2016) A nonparametric hypothesis test for heteroscedasticity. *Journal of Nonparametric Statistics*, 28, 752–767.

9. **Kim, S.** (2015) Hypothesis testing for ARCH models: a multiple quantile regressions approach. *Journal of Time Series Analysis*, 36, 26–38.

10. **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.

11. **Kim, S.** and Zhao, Z. (2014) Specification test for Markov models with measurement errors. *Journal of Multivariate Analysis*, 130, 118–133.

12. **Kim, S.** and Zhao, Z. (2013) Unified inference for sparse and dense longitudinal models. *Biometrika*, 100, 203–212.

**Revision** (all peer-reviewed):

1. **Kim, S.**, Cho, H. and Zhang X. (2018) Initial severity-dependent longitudinal model. Revision invited to *Statistics in Medicine*.

**Submitted** (all peer-reviewed):

1. Cho, H., **Kim, S.**, and Lee, M. (2018) Adjusting a subject-specific timing of event in longitudinal studies. Submitted to *Biostatistics*.

2. **Kim, S.**, Cho, H. and Wu, C. (2018) Risk-predictive probability models with application to the National Growth and Health Study. Submitted to *Statistica Sinica*.

**In preparation** (*: Students):

1. **Kim, S.**, Cho, H. and Kim, M. Novel bivariate varying coefficient model in longitudinal studies.

2. **Kim, S.**, Zhao, Z. and Xu, Z. Locally stationary quantile Regression for inflation and interest rates.

3. McLaughlin, S. and **Kim, S.** Healthy aging over time among midlife and older Americans: the impact of educational attainment on trajectories and determinants of healthy aging.

4. *Woodbury, G., **Kim, S.** and Maurer, K. Individual visual inference.

5. Zambom, Z.A and **Kim, S.**. Variable length Markov chain with exogenous covariates.

## Grants

1. NIH R03 (Co-Investigator) with Cho, H. (Biostatistics, University of Iowa). Submitted June 2018. $158,427

2. 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.

3. NSF proposal (PI). Personalized modeling and inference. Submitted November 2017. $121,168. Declined.

4. 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.

5. NIH R03 (PI). Initial severity-dependent longitudinal models. Submitted October 2016. $108,375. Declined.

6. Summer research grant for new tenure-track faculty, awarded for summer 2015. Miami University, College of Arts and Sciences. $5000.

7. Faculty research grant, awarded for summer 2014. Miami University, Committee on Faculty Research. $6200.

8. Travel grant to attend the professional development workshop 2014, Chicago, IL, KSEA.

## Presentations

1. Joint Statistical Meetings, Vancouver, Canada, August 2018.

2. Department of Mathematical Sciences, Korea Advanced Institute of Science and Technology, Deajeon, South Korea, June 2018.

3. Joint Statistical Meetings, Baltimore, MD, August 2017.

4. Young Statistician's Meetings, Seoul, South Korea, June 2017.

5. Joint Statistical Meetings, Chicago, IL, August 2016.

6. Department of Statistics, Korea University, Seoul, South Korea, June 2016.

7. Joint Statistical Meetings, Seattle, WA, August 2015.

8. Southwest Ohio Korean-American Scientists and Engineers Association (KSEA) Annual Conference, University of Cincinnati, May 2015.

9. Joint Statistical Meetings, Boston, MA, August 2014.

10. Summer Undergraduate Mathematical Sciences Research Institute, Miami University, July 2014.

11. The Korean Statistical Society Seminar, Daejeon, South Korea, May 2014.

12. Department of Mathematical Sciences, University of Cincinnati, March 2014.

13. Southwest Ohio KSEA Kickoff Meeting, Cincinnati Children's Hospital Medical Center, November 2013.

14. Joint Statistical Meetings, San Diego, CA, August 2012.

15. 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 301 Applied Statistics in class and online.
2. STA 333 Intro to Nonparametric Statistics
3. STA 363 Intro to Statistical Modeling.
4. STA 4/501 Probability.
5. STA 4/563 Regression analysis.
6. STA 4/583 Analysis of Forecasting Systems (Times Series Analysis.)
7. STA 664 Theory Of Statistics.

**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 2013 | STA 4/501 | **2.77(63.6)** | 3.41 | 3.22 | 26(22) |
| Spring 2014 | STA 301 A | **3.03(90.3)** | 3.33 | 3.24 | 36(31) |
| | STA 301 B | **3.23(88.2)** | 3.33 | 3.24 | 38(34) |
| | STA 4/501 | **3.23(82.4)** | 3.33 | 3.24 | 17(17) |
| Fall 2014 | STA 4/501 B | **3.60(90.0)** | 3.32 | 3.23 | 22(20) |
| | STA 4/501 C | **3.79(100)** | 3.32 | 3.23 | 16(14) |
| | STA 4/583 | **3.72(94.4)** | 3.32 | 3.23 | 24(18) |
| Spring 2015 | STA 301 | **3.29(82.4)** | 3.36 | 3.26 | 40(34) |
| | STA 363 | **3.48(95.2)** | 3.36 | 3.26 | 25(21) |
| Summer 2015 | STA 301 | **3.71(100)** | 3.47 | 3.41 | 20(17) |
| Fall 2015 | STA 301 | **3.51(91.2)** | 3.20 | 3.30 | 45(37) |
| | STA 4/583 | **3.63(94.7)** | 3.20 | 3.30 | 24(19) |
| Spring 2016 | STA 401 A | **3.43(85.7)** | 3.28 | 3.29 | 36(35) |
| | STA 401 B | **3.52(97.0)** | 3.28 | 3.29 | 37(33) |
| Spring 2017 | STA 4/563 A | **3.62(100)** | 3.03 | 3.27 | 29(26) |
| | STA 4/563 B | **3.54(100)** | 3.03 | 3.27 | 26(24) |
| Summer 2017 | STA 301 Online | **3.63(100)** | 3.47 | 3.33 | 20(16) |
| Fall 2017 | STA 664 | **3.44(94.4)** | 2.86 | 3.29 | 19(18) |
| | STA 4/583 | **3.59(95.5)** | 2.86 | 3.29 | 25(22) |
| Spring 2018 | STA 363 A | **3.44(96)** | 3.20 | 3.31 | 27(25) |
| | STA 363 B | **3.40(88)** | 3.20 | 3.31 | 30(25) |
| | STA 4/583 | **3.68(96)** | 3.20 | 3.31 | 31(26) |

## Service to the Profession

1. ASA Committee on Career Development, 2018.
2. Inter-society Task force of the ASA to support the professional development of Asian statisticians initiated by ASA President, Dr. Barry Nussbaum, 2016-present.
3. Committee of National Math and Science Competition offered by the KSEA, 2016-2017.

SERVICE TO THE DEPARTMENT

1. Co-Director of Graduate Studies, Fall 2017-present.
2. Colloquium organizer, Fall 2017-present.
3. Search Committee, 2016 and 2017
4. Graduate Committee, Fall 2013-present.
5. Department picnic organizer, Fall 2013-present.

JOURNAL REFEREE

*Journal of the American Statistical Association Journal of the Royal Statistical Society Series B*, *Journal of Multivariate Analysis*, *Biometrics*, *Statistics in Medicine*, *Computational Statistics & Data Analysis*, *Stat*, *Journal of Statistical Computation and Simulation*, *Journal of the Korean Statistical Society*, *Communications for Statistical Applications and Methods*, *Advances and Applications in Statistics* and *The open Statistics & Probability Journal*.

CONSULTING EXPERIENCE

Statistical Consulting Center, Pennsylvania State University, August 2010–May 2011.