

YEONJOO PARK

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Department of Statistics and Data Science
The University of Texas at San Antonio

EDUCATION

University of Illinois at Urbana-Champaign <i>Ph.D. in Statistics</i>	2017 Urbana-Champaign, IL
Seoul National University <i>M.S. in Statistics</i>	2011 Seoul, Korea
Ewha Womans University <i>B.S. in Statistics</i>	2009 Seoul, Korea

ACADEMIC APPOINTMENTS

The University of Texas at San Antonio <i>Assistant Professor</i>	Aug 2018 – Present <i>Department of Statistics and Data Science</i>
The University of Texas at San Antonio <i>Core Faculty</i>	Aug 2022 – 2025 <i>School of Data Science</i>
University of Illinois at Urbana-Champaign <i>Visiting Assistant Professor</i>	Aug 2017 – Aug 2018 <i>Department of Statistics</i>

RESEARCH INTERESTS

- Functional data analysis, spatial statistics, robust methods, nonparametric modeling, dimension reduction, and deep learning for functional and spatially indexed data.
- Interdisciplinary applications in biomedical engineering, aging research, marketing, and communication.

AWARDS AND HONORS

- Dean's Distinguished Research Award, UTSA, 2023
- 1969 Commemorative Award for Teaching Excellence, UTSA, 2023
- Outstanding Ph.D. Student Performance Award, UIUC, 2012
- Best Student Poster Award, Korean International Statistical Society, 2011
- Best Teaching Assistant Award, Seoul National University, 2011

JOURNAL PUBLICATIONS IN STATISTICAL METHODOLOGY

- **Park, Y.**, Li, B., and Li, Y. (2026). Spatially Varying Deep Functional Neural Network: Application in large-scale crop yield prediction. *Journal of the Royal Statistical Society: Series C*. qlago23. [link](#)
- **Park, Y.** and Han, A. (2026). Robust domain selection for functional data via interval-wise testing and effect size mapping. *Journal of the Royal Statistical Society: Series C*. qlago14. [link](#)
- Lim, Y. and **Park, Y.** (2025). Enhancing air quality forecasting with functional neural networks: A case study of PM_{2.5} in Seoul. *Atmospheric Pollution Research*, 16(12), 102732. [link](#)

- Han, K., **Park, Y.**, and Kim, S.-Y. (2025). Statistical inference for partially shape-constrained function-on-scalar linear regression models. *Computational Statistics and Data Analysis*, 211, 108200. [link](#)
- **Park, Y.**, Oh, H.-S., and Lim, Y. (2024). A data-adaptive dimension reduction for functional data via penalized low-rank approximation. *Statistics and Computing*, 34, 36. [link](#)
- **Park, Y.**, Li, B., and Li, Y. (2023). Crop yield prediction using Bayesian spatially varying coefficient models with functional predictors. *Journal of the American Statistical Association*, 118(541), 70–83. [link](#)
- **Park, Y.**, Han, K., and Simpson, D. G. (2023). Testing linear operator constraints in functional response regression with incomplete response functions. *Electronic Journal of Statistics*, 17(2), 3143–3180. [link](#)
- **Park, Y.**, Kim, H., and Lim, Y. (2023). Functional principal component analysis for partially observed elliptical process. *Computational Statistics and Data Analysis*, 184, 107745. [link](#)
- **Park, Y.**, Im, H., and Lim, Y. (2023). Change points detection for nonstationary multivariate time series. *Communications for Statistical Applications and Methods*, 30, 369–388. [link](#)
- **Park, Y.**, Chen, X., and Simpson, D. G. (2022). Robust inference for partially observed functional response data. *Statistica Sinica*, 32, 2265–2293. [link](#)
- **Park, Y.** and Simpson, D. G. (2019). Robust probabilistic classification applicable to irregularly sampled functional data. *Computational Statistics and Data Analysis*, 131, 37–49. [link](#)
- Lim, Y., **Park, Y.**, and Oh, H.-S. (2013). Robust principal component analysis via ES-algorithm. *Journal of the Korean Statistical Society*, 43, 149–159. [link](#)

INTERDISCIPLINARY PUBLICATIONS

- Kang, S., Alaeddini, A., and **Park, Y.** (2026). Effects of Augmented Reality News Use on Attitudes toward Civil Rights: Immersive Information Processing. *Journal of Media Research*, 19(1), 5-28.
- Kang, S. and **Park, Y.** (2024). Issue frames influencing peacebuilding efforts in war in Ukraine: An analysis of global news and implications for South Korea. *Journal of Digital Economy and Society*, 2(2), 261–302.
- Campos, F., Wikberg, E., Orkin, J., **Park, Y.**, Snyder-Mackler, N., Cheves, S., Fedigan, L., Gurven, M., Higham, J., Jack, K., and Melin, A. (2024). Wild capuchin monkeys as a model system for investigating the social and ecological determinants of aging. *Philosophical Transactions of the Royal Society B*, 379, 20230482. [link](#)
- Kang, S., **Park, Y.**, and Caro, V. (2024). Framing of Russia-Ukraine war: comparisons of global news. *Journal of Media Research*, 17:2(49), 24–43. [link](#)
- Wirtzfeld, L. A., Ghoshal, G., Rosado-Mendez, I. M., Nam, K., Kumar, V., **Park, Y.**, Pawlicki, A., Kurowski, M., Hartman, E., Miller, R., Labyed, Y., Simpson, D. G., Bigelow, T. A., Zagzebski, J. A., Oelze, M. L., Hall, T. J., and O'Brien, W. D. (2015). Quantitative ultrasound comparison of MAT and 4T1 mammary tumors in mice and rats across multiple imaging systems. *Journal of Ultrasound in Medicine*, 34, 1373–1383. [link](#)

SUBMITTED OR UNDER REVISION

- Wallig, M., O'Brien, W. D., Andre, M. P., Han, A., **Park, Y.**, and Kabir, R. Exploration of structure function to identify a statistical correlation with total severity score: A method to determine steatotic liver disease. Revision invited at *IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control*.
- Kim, Y., **Park, Y.**, Chandrasekaran, D., Gretz, R., and Basuroy, S. The impact of post-launch continuous improvement on user engagement in digital products: evidence from the mobile application industry. Under revision.

GRANTS

- **PI**, \$5,000, UTSA INTRA. *Deep learning approaches to functional data analysis: Applications from data reconstruction to predictive modeling*. Oct 2024 – Mar 2026.
- **Collaborator**, \$28,486 (my share), National Institute on Aging, NIH. *A new model system for assessing the socio-environmental determinants of the pace of aging: leveraging a long-term study of wild capuchins*. Sep 2022 – Aug 2025.

TALKS AND PRESENTATIONS

- Spatially Varying Deep Functional Neural Network: Application in large-scale crop yield prediction. *Department of Information Systems and Statistics, Baruch College, New York, NY, 03/2026*.
- Deep Spatial Neural Net Models with functional predictors: Application in large-scale crop yield prediction. *Conference of Texas Statisticians (COTS), Sam Houston State University, Woodlands, TX, 03/2025*.
- A data-adaptive dimension reduction for functional data via penalized low-rank approximation. *Statistics and Data Science Seminar, Auburn University, Auburn, AL, 11/2024*.
- Robust domain selection for functional data via interval-wise testing and effect size mapping. *ENAR Spring Meeting, Baltimore, MD, 03/2024*.
- Crop yield prediction with Spatial DeepKriging with functional inputs. *Academic Data Science Alliance (ADSA) Annual Meeting, San Antonio, TX, 10/2023*.
- Crop yield prediction using Bayesian spatially varying coefficient models with functional predictors. *Southern Regional Council on Statistics (SRCOS), Waco, TX, 06/2023*.
- A data-adaptive dimension reduction for functional data via penalized low-rank approximation. *Alamo Symposium in Statistics, San Antonio, TX, 03/2023*.
- Crop yield prediction using Bayesian spatially varying coefficient models with functional predictors. *Southern Methodist University, Dallas, TX, 10/2022*.
- Testing shape constraints in varying coefficient regression models for functional data. *Recent Developments in Statistical Science and Its Applications: 9th International Conference, Chung-Ang University, Korea, 06/2022*.
- Data-adaptive robust functional principal component analysis for partially observed functional data. *Recent Developments in Statistical Science and Its Applications: 8th International Conference, Chung-Ang University, Korea, 12/2021*.
- Robust principal component analysis for partially observed functional data. *INFORMS, 10/2021*.
- Spatially varying coefficient model with functional predictors. *UIC MSCS Department Seminar Series, University of Illinois at Chicago, IL, 03/2021*.
- Prediction with spatially correlated functional covariates. *INFORMS, Seattle, WA, 10/2019*.
- Robust M-estimation for partially observed functional data. *MSS Research Seminar, San Antonio, TX, 10/2019*.
- Robust M-estimation for partially observed functional data. *Joint Statistical Meetings, Denver, CO, 08/2019*.
- Functional signal-to-noise ratio analysis with applications in quantitative ultrasound. *ENAR Meeting, Miami, FL, 03/2015*.
- Robust probabilistic classification for functional data with applications in quantitative ultrasound. *Beckman Institute, University of Illinois, Urbana-Champaign, IL, 11/2014*.

- Robust probabilistic classification for functional data. *Robert Bohrer Memorial Workshop*, Urbana-Champaign, IL, 11/2014.
- Poster presentation. *Midwest Statistics Research Colloquium*, Chicago, IL, 03/2014.
- Poster presentation. *Korean Statistical Society Meeting*, Daejeon, Korea, 03/2011.

TEACHING EXPERIENCE

The University of Texas at San Antonio

- **STA 3513** Probability and Statistics, 2024–2026
- **STA 4723** Introduction to Design of Experiments, 2024–2025
- **STA 6713** Linear Models, 2023–2024
- **STA 6413** Nonparametric Statistics, 2022
- **STA 6853** Categorical Data Analysis, 2019
- **DA 6213** Data-Driven Decision Making and Design, 2021
- **STA 6443** Data Analytics Algorithms I, 2018–2024

University of Illinois at Urbana-Champaign

- **STAT 448** Advanced Data Analysis, 2017–2018
- **STAT 200** Statistical Analysis, 2015

ADVISING

Doctoral Student Supervision

- Mihyun Oh, Ph.D. student in Applied Statistics, expected 2027 (co-supervising).
- Ambassador Negash, Ph.D. in Applied Statistics, 2024 (co-supervising). Dissertation: *Event detection in the absence of ground truth with empirical Bayes methods*.

Ph.D. Thesis Committee Member

- Haifa Ismail, Ph.D. in Applied Statistics, 2024. Dissertation: *Adaptive design and inference for step-stress accelerated life tests with lifetimes from exponential and log-location-scale families of distributions*.
- Aruni Jayathilaka, Ph.D. in Applied Statistics, 2022. Dissertation: *Contributions to modeling and inference for k-level step stress accelerated life tests under progressive type-I censoring with lifetimes for a log-location scale family*.

SERVICE ACTIVITIES

Service to the Department

- Graduate Advisory of Record (GAR) for Master's in Statistics and Data Science, 2025 – present

Service to the Profession

- President, San Antonio Chapter of the American Statistical Association, Aug 2025 – present
- Vice President, San Antonio Chapter of the American Statistical Association, Aug 2023 – Aug 2025

VOLUNTARY ACTIVITIES

- Poster judge, Conference of Texas Statisticians, 2025
- Judge, Alamo Regional Science Fair special award for best use of statistics, 2024
- Poster judge, Alamo Symposium in Statistics, 2023

JOURNAL REFEREE

- Annals of Applied Statistics; Biometrics; Computational Statistics; Environmental and Ecological Statistics; Journal of Applied Statistics; Journal of Computational and Graphical Statistics; Journal of the Korean Statistical Society; Stat; Statistics and Computing; Spatial Statistics

INDUSTRY EXPERIENCE

Anheuser-Busch InBev

May 2015 – Aug 2015

Data Analyst Intern

Illinois

- Developed and implemented a sales algorithm to predict customers' next order for B2B application order suggestion in a pilot study across seven major U.S. cities.

CPRD

May 2014 – Dec 2014

Data Analyst Intern

Illinois

- Center for Prevention Research and Development, Institute of Government and Public Affairs
- Evaluated Illinois programs and policies using statistical models including growth curve models and mixed-effects models.