

MIHYUN KIM

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ACADEMIC POSITIONS

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| West Virginia University , Morgantown, WV, USA
Assistant Professor, Department of Statistics | Aug 2022 - Present |
| University of Waterloo , Waterloo, ON, Canada
Postdoctoral Fellow, Department of Statistics and Actuarial Science
Supervisor: Gregory Rice | Sep 2021 - July 2022 |

EDUCATION

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| Colorado State University , Fort Collins, CO, USA
Dissertation: Heavy tail analysis for functional and internet anomaly data
PhD, Statistics
Advisor: Piotr Kokoszka | Aug 2016 - Aug 2021 |
| Yonsei University , Seoul, S. Korea
Masters of Mathematics | 2012 |
| Yonsei University , Seoul, S. Korea
Bachelor of Mathematics, Civil engineering | 2009 |

RESEARCH INTEREST

Functional data analysis, extreme value analysis, time series analysis, statistical machine learning, applications to environmental science, finance, health science, sociology, and astrophysics.

PUBLICATIONS

Published

1. **Kim, M.**, Kokoszka, P. (2025). Extremal correlation coefficient for functional data. *Biometrika* <https://doi.org/10.1093/biomet/asaf077>.
2. **Kim, M.**, Kokoszka, P., Rice, G. (2024). Projection-based white noise and goodness-of-fit tests for functional time series. *Statistical Inference for Stochastic Processes*, **27**, 693–724.
3. **Kim, M.**, Kokoszka, P., Rice, G. (2023) White noise testing for functional time series. *Statistics Surveys*, **17**, 119–168.

4. **Kim, M.**, Kokoszka, P. (2023). Asymptotic and finite sample properties of Hill-type estimators in the presence of errors in observations. *Journal of Nonparametric Statistics*, **35**, 1–18.
5. **Kim, M.**, Kokoszka, P. (2022). Extremal dependence measure for functional data. *Journal of Multivariate Analysis*, **189**, 104887.
6. Nigg C., Nigg C., **Kim M.**, Sharp, J., Burg, X., Cunningham-Sabo, L. (2021). How should we choose the most appropriate Epoch-Length for Children’s Physical Activity? *Proceedings from the 8th International Society for Physical Activity and Health Congress*, **14**(3).
7. **Kim, M.**, Kokoszka, P. (2020). Consistency of the Hill estimator for time series observed with measurement errors. *Journal of Time Series Analysis*, **41**, 421–435.
8. **Kim, M.**, Kokoszka, P. (2019). Hill estimator of projections of functional data on principal components. *Statistics*, **53**, 699–720.
9. **Kim, M.**, Kim, J., Yoon, J. (2015). Optimal portfolio selection under stochastic volatility and stochastic interest rates. *Journal of the Korean Society for Industrial and Applied Mathematics*, **19**, 417–428.

Under review

1. **Kim, M.**, Lee, J. Hypothesis testing for partial tail correlation in multivariate extremes. *submitted*.

GRANTS/AWARDS

PI, NSF grant DMS-2413516, “*Measuring extremal dependence of functional data*,” (\$115,000)
Aug 1, 2024 - July 31, 2027

WVU Faculty Travel/Development Grants (\$900), July 1, 2022 - Aug 31, 2023

James L., M. Leslie, and Edna Madison Memorial Award, 2020
This award is given to the student selected by the statistics faculty as the outstanding graduate student in the Department of Statistics at CSU.

Department Distinguished Service Award, 2019
This award honors a student for the service given to the Department of Statistics at CSU.

INVITED/CONTRIBUTED TALKS

<i>Invited</i> , NSF@75 Conference: Advancing Statistical Science for a Data-Driven World, Virtual, ASA	2025 July
<i>Invited</i> , Bridging Mountains: Eberly Dialogues on Environment, WVU,	2024 Oct
<i>Contributed</i> , Joint Statistical Meetings, Portland, OR,	2024 Aug
<i>Invited</i> , International Conference on Extremes, Statistics and Quantitative Risk Management, Fudan University, China,	2024 July
<i>Invited</i> , The Sixth ICSA-Canada Chapter Symposium, Niagara Falls, Canada,	2024 June
<i>Invited</i> , Computational and Methodological Statistics, King’s College London, UK	2022

<i>Invited</i> , Chair of Statistical Data Science (group meeting), EPFL, Switzerland,	2022
<i>Invited</i> , Department of Statistics, West Virginia University,	2022
<i>Invited</i> , Department of Mathematics and Statistics, Auburn University,	2022
<i>Invited</i> , Department of Mathematics and Statistics, Montana State University,	2021
<i>Contributed</i> , Joint Statistical Meetings, virtual,	2020
<i>Contributed</i> , Joint Statistical Meetings, Denver, CO,	2019
<i>Contributed</i> , Extreme Value Analysis, Zagreb, Croatia,	2019
<i>Contributed</i> , Colorado Wyoming Chapter of the ASA's Spring Meeting, Boulder, CO,	2019

TEACHING EXPERIENCE

West Virginia University

STAT 512: Statistical Methods 2 (for non stats graduates)	F22, S23, F23
STAT 461/561: Theory of Probability	F23, F24, F25
STAT 462/562: Theory of Statistics	S24, S25
STAT 445/545: Regression Analysis	F24, F25

University of Waterloo

STAT 220: Probability theory	W22
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Colorado State University

(Instructor)

STAT 301: Introduction to Applied Statistical Methods	S21*
STAT 307: Introduction to Biostatistics	F19

* delivered in a hybrid and asynchronous format during pandemic, with lectures pre-recorded by another instructor and recitation-type classes run by Mihyun Kim.

(Recitation)

STAA 577: Statistical Learning and Data Mining	S19
STAT 201: General Statistics	F18

(Course Development)

STAT 472: Statistical Consulting Capstone	W18, W19
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(Distance Course Coordinator**)

STAT 315: Introduction to Theory and Practice of Statistics	Sm21
STAT 201: General Statistics	Sm21
STAT 301: Introduction to Applied Statistical Methods	F20
STAA 577: Statistical Learning and Data Mining	S19
STAA 552: Generalized Regression Models	Sm18

** run courses in a virtual and asynchronous format, with lectures pre-recorded by another instructor.

(Teaching Assistant)

STAT 521: Stochastic Processes	F20
DSCI 445: Statistical Machine Learning	F20
STAT 530: Mathematical Statistics	S20
STAA 554: Mixed Models	S20
STAA 553: Experimental Design	S20

STAA 578: Machine Learning	S19
STAA 566: Data Visualization Methods	F18
STAA 577: Statistical Learning and Data Mining	S18
STAA 565: Quantitative Reasoning	S18
STAA 552: Generalized Regression Models	F17
STAA 551: Regression Models and Applications	F17, S18
Master of Applied Statistics Bootcamp	Sm17
STAT 430: Probability and Mathematical Statistics II	S17
STAT 312: Statistics for Behavioral Sciences II	S17
STAT 420: Probability and Mathematical Statistics I	F16
STAT 311: Statistics for Behavioral Sciences I	F16

SOFTWARE

R Package ‘FTSgof’ available at <https://cran.rstudio.com/web/packages/FTSgof/>

R Package ‘wwntests’ available at <https://cran.r-project.org/web/packages/wwntests/>

PROFESSIONAL SERVICE & MEMBERSHIP

Grant Proposal Review Panel

National Science Foundation, Division of Mathematical Sciences. 2023, 2025

Journal Advisory Board

Early Career Advisory Board in Journal of Multivariate Analysis 2024-2025

Journal Referee

Annals of Applied Probability
Bernoulli
Biometrics
Computational Statistics and Data Analysis
Metrika
Journal of Computational and Graphical Statistics
Journal of Multivariate Analysis
Journal of Royal Statistical Society: Series B
Journal of Time Series Analysis
Scandinavian Journal of Statistics
Test

Services at West Virginia University

School Research Evaluation Committee, member 2025
New PhD Program Design Committee, member 2023
Department Faculty Evaluation Committee, member AY2022–24
M.S. Degree Committee, member

- Daniel Stets, 2024
- Kellee Payne, 2022

Undergraduate capstone advisor

- Carter Leadmon, AY2025-26
- Alex Miller, AY2024-25
- Ryan Boyd, AY2024-25

Other Services

Session chair: “New Applications of Nonparametric Methods” at JSM	2024
Monitor: ASA’s Continuing Education Program at JSM	2020
Volunteer: The 14th Graybill Conference at CSU	2017

Professional Membership

Member: ASA

COMPUTER SKILLS

Proficient in R, Matlab
Experienced Python, C, VBA, SQL

Last updated: December 30, 2025