

MIHYUN KIM

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ACADEMIC POSITIONS

University of Waterloo, Waterloo, ON, Canada Sep 2021 - Present
Postdoctoral Fellow, Department of Statistics and Actuarial Science
Supervisor: Greg Rice

EDUCATION

Colorado State University, Fort Collins, CO, USA Aug 2016 - Aug 2021
Dissertation: Heavy tail analysis for functional and internet anomaly data
PhD, Statistics
Advisor: Piotr Kokoszka

Yonsei University, Seoul, S. Korea 2012
Masters of Mathematics

Yonsei University, Seoul, S. Korea 2009
Bachelor of Mathematics, Civil engineering

RESEARCH INTEREST

Functional data analysis, heavy tail analysis, time series, extreme value theory, extremal dependence, statistical machine learning, applications to health research.

PUBLICATIONS

Published

1. **Kim, M.**, Kokoszka, P. (2021+). Extremal dependence measure for functional data. *Journal of Multivariate Analysis*, *accepted*.
2. Nigg C., Nigg C., **Kim M.**, Sharp, J., Burg, X., Cunningham-Sabo, L. (2021+). Evaluating the association of epoch-length with meeting physical activity guidelines in children. *The 8th International Society for Physical Activity and Health Congress*, *accepted*.

3. **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.
4. **Kim, M.**, Kokoszka, P. (2019). Hill estimator of projections of functional data on principal components. *Statistics*, **53**, 699–720.
5. **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.**, Kokoszka, P. (2021+). Hill-type estimators applied to error contaminated data: large sample normality and confidence intervals. *submitted*.

In preparation

- White noise testing for functional time series.
- Value at Risk of functional principal component scores.
- Examination of physical activity outcomes for Northern Colorado fourth graders participating in the Fuel for Fun intervention.

PRESENTATIONS

Contributed

- "Extremal dependence measure for functional data". *Joint Statistical Meetings*, virtual, 2020
- "Asymptotic normality of the Hill estimator for error contaminated data". *Joint Statistical Meetings*, Denver, CO, 2019
- "Asymptotic normality of the Hill estimator for error contaminated data". *Extreme Value Analysis*, Zagreb, Croatia, 2019
- "Consistency of the Hill estimator for time series observed with measurement errors". *Colorado Wyoming Chapter of the ASA's Spring Meeting*, Boulder, CO, 2019

AWARD

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

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

*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

SERVICE & PROFESSIONAL MEMBERSHIP

Service

ASA's Continuing Education Program at JSM monitor	2020
The 14th Graybill Conference at CSU volunteer	2017

Reviewer

Journal of Multivariate Analysis

Professional Membership

Member: ASA

COMPUTER SKILLS

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