

Yicheng Kang

Curriculum Vitae

Miami University
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EDUCATION

Ph.D., School of Statistics, **2013**
UNIVERSITY OF MINNESOTA TWIN CITIES Minneapolis, MN

M.S., Department of Mathematics, **2010**
UNIVERSITY OF BRITISH COLUMBIA Vancouver, Canada

B.S., School of Mathematics and Statistics **2008**
WUHAN UNIVERSITY Wuhan, China

RESEARCH AREAS

Data-driven methodologies, deep learning in quality monitoring, image intelligence, jump regression, industrial statistics, quality analytics, economic and financial statistics.

ACADEMIC EXPERIENCE

- 07/2022– Present Assistant Professor, Department of Information Systems & Analytics, Farmer School of Business, MIAMI UNIVERSITY.
- 07/2017–06/2022 Assistant Professor, Program of Business Analytics, Department of Mathematical Sciences, BENTLEY UNIVERSITY.
- 09/2013–08/2014 Postdoc, Department of Biostatistics, College of Public Health and Health Professions, THE UNIVERSITY OF FLORIDA.

INDUSTRY EXPERIENCE

- 08/2014–06/2017 Statistician, Model Risk and Development, JPMORGAN CHASE & Co., New York, NY.
- Developed value-at-risk models for residential/commercial mortgage backed securities. Implemented diagnostic tools for mortgage default and prepayment models. Validated revenue forecasting models for various trading desks including rates derivatives, equities, and credit default swaps.

PUBLICATIONS

Peer-Reviewed Journal Articles & Book Chapters

- 2023 He, Y., **Kang, Y.**, Tsung, F., and Xiang, D., “Directional Fault Classification for Correlated High-Dimensional Data Streams Using Hidden Markov Models”, *Journal of Quality Technology*, **55**(5), 535 – 549.

- Kang, Y.**, “Statistical Process Monitoring Approaches for Image Data”, *Wiley StatsRef-Statistics Reference Online* (eds N. Balakrishnan, T. Colton, B. Everitt, W. Piegorisch, F. Ruggeri and J.L. Teugels). <https://doi.org/10.1002/9781118445112.stat08263>.
- Liu, Z., **Kang, Y.**, Lin, S., and Tuo, L., “The Impact of Accelerating 20-F Filing”, *Journal of Accounting and Public Policy*, **42**(3), 107050.
- 2022 **Kang, Y.**, Liao, S., Jiang, C., and D’Alfonso, T., “Synthetic Control Methods for Policy Analysis: Evaluating the Effect of the European Emission Trading System on Aviation Supply”, *Transportation Research Part A: Policy and Practice*, **162** (Special Issue: Air Transport Policies), 236 – 252. Air Transport Research Society Best Paper Award
- Kang, Y.**, “Statistical Quality Control Using Image Intelligence: A Sparse Learning Approach”, *Naval Research Logistics*, **69**(7), 996 – 1008.
- 2021 Xiang, D., Li, W., Tsung, F., Pu, X., and **Kang, Y.**, “Fault Classification for High-dimensional Data Streams: A Directional Diagnostic Framework Based on Multiple Hypothesis Testing”, *Naval Research Logistics*, **68**(7), 973 – 987.
- Kang, Y.**, Shi, Y., Jiao, Y., Li, W., and Xiang, D., “Fitting Jump Additive Models”, *Computational Statistics and Data Analysis*, **4**, 107266.
- Shi, Y., Huang, J., Jiao Y., **Kang, Y.**, and Zhang, H., “Generalized Newton-Raphson Algorithm for High Dimensional LASSO Regression” , *Statistics and Its Interface*, **14**(3), 339 – 350.
- Kang, Y.**, and Qiu, P., “Nonparametric Deconvolution by Fourier Transformation and Other Related Approaches”, Chapman & Hall/CRC series Handbooks of Modern Statistical Methods: Handbook of Measurement Error Models. Editors: Grace Y. Yi, Aurore Delaigle, Paul Gustafson.
- 2020 **Kang, Y.**, “Consistent Blind Image Deblurring Using Jump-Preserving Extrapolation”, *Journal of Computational and Graphical Statistics*, **29**(2), 372 – 382.
- Kang, Y.**, “Measuring Timeliness of Annual Reports Filing Using Jump Additive Models” *The Annals of Applied Statistics*, **14**(4), 1604 – 1621.
- 2019 **Kang, Y.**, Gong, X., Gao, J., and Qiu, P., “Errors-in-Variables Jump Regression Using Local Clustering”, *Statistics in Medicine*, **38**(19), 3642 – 3655.
- 2018 **Kang, Y.**, Mukherjee, P., and Qiu, P., “Efficient Blind Image Deblurring Using Non-parametric Regression and Local Pixel Clustering,” *Technometrics*, Volume **60**, 522 – 531.
- 2015 **Kang, Y.**, Gong, X., Gao, J., and Qiu, P., “Jump Detection in Generalized Errors-in-Variables Regression with an Application to Australian Health Tax Policies,” *The Annals of Applied Statistics*, Volume **9**, 883 – 900.
- Qiu, P., and **Kang, Y.**, “Blind Image Deblurring Using Jump Regression Analysis,” *Statistica Sinica*, Volume **25**, 879 – 899.
- Zhang, J., **Kang, Y.**, Yang, Y., and Qiu, P., “Statistical Monitoring of the Hand, Foot and Mouth Disease in China,” *Biometrics*, Volume **71**, 841 – 850.

2014 **Kang, Y.**, and Qiu, P., “Jump Detection in Blurred Regression Surfaces,” *Technometrics*, Volume **56**, 539 – 550.

Conference Papers

2018 Liu, Z., Lin, S., **Kang, Y.**, “The Effect of Shortened Reporting Lag on the Usefulness of Form 20-F”, American Accounting Association, International Accounting Section Midyear Meeting of American Accounting Association.

PROFESSIONAL SERVICE

Technometrics Prize Committee: 2021 – 2024.

Co-organizer and Chair: topic-contributed session on *recent research in high-dimensional and complex data analysis* at the 2021 Joint Statistical Meetings.

Reviewer of the following journals: Biometrics, Biometrical Journal, Journal of Business and Economic Statistics, Journal of Machine Learning Research, Journal of Statistical Computation and Simulation, Quality and Reliability Engineering International, Quality Engineering, Technometrics, Statistical Inference for Stochastic Processes, Statistics in Medicine, Transportation Research Part A.

UNIVERSITY & DEPARTMENT SERVICE

Miami University

- Farmer School of Business Committee on the Selection of Commencement and Anderson Series Speakers: 2023 – 2025.
- ISA Departmental Seminar Series Committee Chair: 2023 – 2024.
- ISA Departmental Seminar Series Committee: 2022 – 2023.

Bentley University

- Departmental Search Committee for New Hires: 2019.
- University Graduate Curriculum Committee: 2020 – 2022.
- University Nominations Committee: 2020 – 2022.

TEACHING EXPERIENCE

Miami University

- *Applied Regression Analysis* (ISA 291): Fall 2022
- *Data Mining for Business* (ISA 491/591): Spring 2023, Fall 2023

Bentley University

- *Optimization and Simulation for Business Decisions* (MA 610): Fall 2021
- *Intermediate Statistical Modeling for Business* (ST 635) [MSBA Core]: Fall 2017, Spring 2018, Spring 2019, Fall 2019, Spring 2020, Fall 2020

- *Quantitative Analysis for Business* (ST 625) [MSBA Core]: Fall 2019, Spring 2021.
- *Mathematical Statistics* (MA 352) [Data Analytics, undergraduate]: Spring 2019, Spring 2022.

SOFTWARE

Kang, Y., R Package *DRIP*, Version 1.8 (09/2023) The Comprehensive R Archive Network, <https://cran.r-project.org/web/packages/DRIP/index.html>. This is a collection of functions for image processing and discontinuous regression analysis.

FUNDING, FELLOWSHIPS & AWARDS

2022	Miami University Advanced Research Teams Grant, \$14,200.
2021	Air Transport Research Society Best Paper Award.
2019-2021	External Funding, E Ink Corporation, \$15,000.
2018-2021	Research Summer Grant, BENTLEY UNIVERSITY
2012	Alumni Fellowship, UNIVERSITY OF MINNESOTA TWIN CITIES.
2008	International Student Entrance Scholarship, UNIVERSITY OF BRITISH COLUMBIA.
2008	Undergraduate Fellowship, WUHAN UNIVERSITY.
2004	Entrance Fellowship, WUHAN UNIVERSITY.