Honghao ZHAO

Title : Associate Professor

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Dept/Field: Decision Sciences

Academic Qualification

2009.10 - 2014.07 **Ph.D.:** City University of Hong Kong, Hong Kong; Systems Engineering & Engineering Management
Master: NA

2005.09 - 2009.07 **BS:** Tsinghua University, Beijing; Industrial Engineering

Working Experience

2020.07 - Present Associate Professor, School of Business
Macau University of Science and Technology

2015.09 - 2020.06 Assistant Professor, School of Business
Macau University of Science and Technology

2013.11 - 2015.04 Research Assistant
City University of Hong Kong

Teaching Activities

Data Mining, Big data, Advanced Research Methods in Management Science, etc..

Research Interest

Data Mining, Machine Learning, Statistical Process Control, Environmental Management, Carbon Emission Estimation, Financial Risk Monitoring, Financial Index Forecasting.

Selected Journal Papers

Luo, X.C., **Zhao, H.H.*** (2025). Spatial and Temporal Evolution of the Decoupling State and Drivers of Economic Growth and CO_2 Emissions in RCEP Member Countries. Energy Strategy Reviews, 59, 101709. (SCIE, IF(2024)=9.9, Q1, Ranking: 13.2%)

Luo, X.C., Liu, C.K., **Zhao, H.H.*** (2024). Modeling and Spatio-Temporal Analysis on CO_2 Emissions in the Guangdong-Hong Kong-Macao Greater Bay Area and Surrounding Cities Based on Neural Network and Autoencoder, Sustainable Cities and Society, Vol.103, 105254. (SCIE, IF(2022)=11.7, Q1, Ranking: 1.5%)

Luo, X.C., Liu, C.K., **Zhao, H.H.*** (2023). Driving factors and emission reduction scenarios analysis of CO_2 emissions in Guangdong-Hong Kong-Macao Greater Bay Area and surrounding cities based on LMDI and system dynamics, Science of the Total Environment, Vol. 870, 161966. (SCIE, IF(2021)=10.754, Q1, Ranking: 9.3%, **Highly Cited Paper**)

Zhao, H.H.*, Tang, H.J., Pang, C., Jiang, H.M. (2023). A Markov Chain Model for Approximating the Run Length Distributions of Poisson EWMA Charts under Linear Drifts, Mathematics, Vol. 10, 4786. (SCIE, IF(2021)= 2.592, Q1, Ranking: 6.3%)

Luo, X.C., **Zhao, H.H.*** (2021). Promotion Strategy of Policy against Food Waste (PAFW): The Perspective on Evolutionary Game between Local Government and Large Supermarkets, Complexity, Article Number: 6567902. (SCIE, IF(2020)=2.833, Q2, ranking: 28.7%)

Zhao, H.H.*, Luo, X.C., Ma, R., Lu, Xi. (2021). An Extended Regularized K-Means Clustering Approach for High-Dimensional Customer Segmentation with Correlated Variables, IEEE Access, 9: 48405-48412. (SCIE, IF(2019)=3.745, Q1, ranking: 22.4%)

Fu, Y., Yao, J.J., **Zhao, H.H.***, Zhao, G., Wan, Z.S. (2018). Forecast for Artificial Muscle Tremor Behavior Based on Dynamic Additional Grey Catastrophe Prediction. Applied Sciences-BASEL, 8(2): Article Number: 315. (SCIE, IF(2017)=1.689, Q3, ranking: 52.4%)

Ma, R., **Zhao, H.H.***, Zhou, L.G.. (2017). Predicting status of Chinese listed companies based on features selected by penalized regression. Journal of Systems Science and Systems Engineering, 26:475-486. (SCIE, IF(2016)=0.915, Q4, ranking: 75.3%)

Fan J.Y., Shu, L.J., **Zhao, H.H.**, Yeung H.F. (2017). Monitoring multivariate process variability via eigenvalues. Computers & Industrial Engineering, 113: 269-281. (SCIE, IF(2016)=2.623, Q1, ranking: 19.32%)

Zhao, H.H.*, Shu, L.J., and Tsui, K.-L. (2015). An Adaptive CUSUM Chart for Monitoring Poisson Rates with Increasing Population Sizes. European Journal of Industrial Engineering. 9: 692-715. (SCIE, IF(2014)=0.736, Q3, ranking: 70.93%)

Zhao, H.H.*, Shu, L.J., and Tsui, K.-L. (2015). A Window-Limited Generalized Likelihood Ratio Test for Monitoring Poisson Processes with Linear Drifts. Journal of Statistical Computation and Simulation. 85: 2975-2988. (SCIE, IF(2014)=0.635, Q3, ranking: 70.9%)

Jiang, W., Shu, L.J., **Zhao, H.H.**, and Tsui, K.-L. (2013), CUSUM Procedures for Health Care Surveillance. Quality and Reliability Engineering International, 29: 883– 897. (SCIE, IF(2012)=0.680, Q3, ranking: 51.67%)

Major Conference Papers

Zhao, H.H., Shu, L.J., Jiang, W., and Tsui, K.-L. A Comparison of Detection Probability of CUSUM Procedures under Increasing Population Sizes. Biomedical Engineering and Biotechnology (iCBEB), 2012, Macau.

Research Projects

2025-2028   Interbrain Neural Similarity Enhances the Efficacy of Food Sensory Marketing: Bottom-Up Modulation Mechanisms and Application Approaches. Funded by the Science and Technology Development Fund (FDCT). 1,323,000 mop. Project Member.

2024   Carbon Emissions Estimation and Spatio-Temporal Analysis on CO_2 Emissions and Driving Factors in the Guangdong-Hong Kong-Macao Greater Bay Area and Surrounding Cities Based on Deep Learning Autoencoder. Funded by the Macao Foundation. 200,000 mop. **Principal Investigator**.

2020-2022   Research and Application of Cross border Logistics Traceability Management System for Goods Based on Memory Blockchain Technology (2020A0505090004). Funded by the Department of Science and Technology of Guangdong Province. 1,000,000 RMB. Project

Member.

2019-2020   The Prediction of Repayment Behavior in P2P Lending Based on Optimized XGBoost Methods through Genetic Algorithm. Funded by Faculty Research Grants of Macau University of Science and Technology. 30,000 mop. **Principal Investigator**.

2017-2018   The Prediction of Statuses of Chinese Listed Companies Based on Data Mining Methods with Regularization Approaches. Faculty Research Grants of Macau University of Science and Technology. 30,000 mop. **Principal Investigator**.

Teaching Awards

2023/2024   The Teaching Achievement Award, **First Prize**, awarded achievement "An Assurance of Learning (AoL) System at the School of Business, MUST".

2019/2020   The Teaching Achievement Award, **Second Prize**, awarded achievement "Outcome-based Trinity Supply Chain Management Course Teaching Plan".

Other Professional Activities and Service.

"AACSB" Accreditation "Task Force" group member
Chairman of the Department Research Committee (DRC)
Director of the Master of Science in Business Analytics
Reviewer for international journals, such as Applied Energy, Journal of Cleaner Production, Computers & Industrial Engineering, Journal of Statistical Computation and Simulation, etc..