

Date: 05/10/2024

Abdullah Suleiman Al-Jawarneh



PERSONAL INFORMATION

Title: Faculty member

Academic Rank: Assistant Professor

Date & Place of Birth: 01/04/1986. Irbid, Jordan

Nationality: Jordanian

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ACADEMIC QUALIFICATIONS

Degree	Major	Duration (From-To)	University	Country
Ph.D.	Statistics	2018 – 2021	Universiti Sains Malaysia (USM)	Malaysia
Master's	Statistics	2010 – 2012	Universiti Sains Malaysia (USM)	Malaysia
Bachelor's	Mathematics and Statistics	2004 – 2008	Yarmouk University	Jordan

دائرة الموارد البشرية
Human Resources Department

TEACHING EXPERIENCE

Duration	Rank	Institution	Department/Faculty	Country
2021 - 2024	Assistant professor	Jerash University	Faculty of Science	Jordan
2012-2019	Lecturer	Najran University	Faculty of Science	Saudi Arabia
2008-2012	Secondary School Teacher	Ministry of Education of Jordan	Secondary School	Jordan

UNIVERSITY COMMITTEE

- Curriculum Committee
- Quality Assurance and Qualification Placement Committee in the Department
- Developing the Measurement of Academic Programs Effectiveness Committee
- Integrating E-Learning Committee
- Supervision and Inspection Committee
- Academic Advising Committee
- Quality Assurance and Qualification Placement Committee
- Graduate Studies Committee

PUBLICATIONS

- **Al-Jawarneh, A. S.**, Alsayed, A. R., Ayyoub, H. N., Ismail, M. T., Sek, S. K., Ariç, K. H., & Manzi, G. (2024). Enhancing Model Selection by Obtaining Optimal Tuning Parameters in Elastic-Net Quantile Regression, Application to Crude Oil Prices. *Journal of Risk and Financial Management*, 17(8), 323. (Scopus)
- Ahmad M. Awajan A. M., Al-Hasanat B., Elkaroui E., AL e'damat A., Al-Gounmeein R. S., **Al-Jawarneh A. S.**, Ayyoub H. N., & AlFarajat E. (2024). Time Series Forecasting of New Cases for COVID-19 Pandemic in Jordan Using Enhanced Hybrid EMD-ARIMA. *J. Stat. Appl. Pro.* 13 (1), 261-271. doi:10.18576/jsap/130118. (Scopus)
- Ambark, A. S., Ismail, M. T., **Al-Jawarneh, A. S.**, & Karim, S. A. A. (2023). Elastic net penalized Quantile Regression Model and Empirical Mode Decomposition for Improving the Accuracy of the Model Selection. *IEEE Access*. doi: 10.1109/ACCESS.2023.3257032. (ISI and Scopus).

- **Al-Jawarneh, A. S., & Ismail, M. T. (2022).** The Adaptive LASSO Regression and Empirical Mode Decomposition Algorithm for Enhancing Modelling Accuracy *Communications in Statistics - Simulation and Computation*. 1-13. doi:10.1080/03610918.2022.2032154. (**ISI and Scopus**).
- **Al-Jawarneh, A. S., Ismail, M. T., Awajan, A. M., & Alsayed, A. R. (2022).** Improving accuracy models using elastic net regression approach based on empirical mode decomposition. *Communications in Statistics-Simulation and Computation*, 51(7), 4006-4025. doi: 10.1080/03610918.2020.1728319. (**ISI and Scopus**).
- **Al-Jawarneh, A. S., Ismail, M. T., & Awajan, A. M. (2021)** . Elastic net regression and empirical mode decomposition for enhancing the accuracy of the model selection. *International Journal of Mathematical, Engineering and Management Sciences*, 6(2), 564 - 583. (**ISI and Scopus**).
- **Al-Jawarneh, A. S., & Ismail, M. T. (2021).** Elastic-net regression based on empirical mode decomposition for multivariate predictors. *Pertanika Journal of Science and Technology*, 29(1), 199-215. (**ISI and Scopus**).
- **Al-Jawarneh, A. S., & Sek, S. K. (2012).** The impact of external shocks on business cycle fluctuation in several developed Asian countries. *Applied Mathematical Sciences*, 6(65), 3209-3223. (**Scopus**).
- **Sek, S. K., Al-Jawarneh, A. S., & Har, W. M. (2012, January).** Investigating the Dynamic of Business Cycle Fluctuations in Developed Asian Economies. In *International Conference on Operations Research and Statistics (ORS)*. Proceedings (p. 90). Global Science and Technology.

UNIVERSITY COMMITTEES

2021 – 2024	Coordinator of Academic Accreditation at the Quality Assurance Unit at the department of mathematics, Jerash University.
2021 – 2024	Coordinator of Statistical Analysis, Jerash University.
2018 – 2019	Member of Academic Accreditation at Quality Assurance Unit of Preparatory Year, Najran University.
2017 - 2019	Coordinator of Statistical Analysis at the Deanship, Najran University.

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Human Resources Department

2012 - 2019	Member of Examination Committee at Development of Basic Skills Department, Najran University
2013 - 2018	Member of Evaluating the exam paper at the Department of Basic Skills Development, Najran University.
2012 – 2017	Member of the Planning and Follow-up committee at the Quality Assurance Unit of the Deanship, Najran University.

WORKSHOPS ATTENDED

2008 (40 Hours)	New Teachers Ministry of Education of Jordan, Jordan
2009 (3 Months)	International Computer Driving License (ICDL) Ministry of Education of Jordan, Jordan
2009 (32 Hours)	English Conversation Oxford Cultural Center, Jordan
2010 (3 Days)	Research Methodology and Scientific Writing for Mathematical Sciences Universiti Sains Malaysia (USM), Malaysia
2011 (2 Days)	Time series Data Analysis Universiti Sains Malaysia (USM), Malaysia
2012 (1 Day)	End Note Universiti Sains Malaysia (USM), Malaysia
2012 (1 Day)	Information Literacy Skills (ILS) Universiti Sains Malaysia (USM), Malaysia
2012 (2 Days)	Recent trends in teaching new direction Najran University, Saudi Arabia
2012 (2 Days)	Examination and Evaluation of student's systems Najran University, Saudi Arabia
2013 (2 Days)	The integration of technology in University teaching Najran University, Saudi Arabia
2013 (2 Days)	Electronic testing systems Najran University, Saudi Arabia
2014 (2 Days)	Modern strategies in university teaching Najran University, Saudi Arabia

And More...

RESEARCH INTERESTS



My current research agenda highlights, the penalized regularization methods, namely, the smoothly clipped absolute deviation (SCAD), adaptive least absolute shrinkage and selection operator (adLASSO) regression, minimax concave penalty (MCP) and elastic net (ELNET) regression, are adopted. Those methods are combined with the first part of the Hilbert–Huang transformation, namely, the empirical mode decomposition (EMD) algorithm. The EMD algorithm is employed to decompose the nonstationary and nonlinear time series dataset into a finite set of orthogonal decomposition components, which includes a set of intrinsic mode function and residual components. These components have been used in several studies as new predictor variables to predict the behaviour of the response variable. The penalized regularization methods are statistical techniques used to regularize and select the necessary predictor variables that have substantial effects on the response variable. These methods are also utilized to produce a consistent model in terms of variable selection and asymptotically normal estimates and address the multicollinearity problem when it exists between the predictor variables. This study aims to apply the proposed SCAD-EMD, adLASSO-EMD, MCP-EMD and ELNET-EMD methods to determine the effect of the decomposition components of the original univariate/multivariate time series predictor variable(s) on the response variable. Moreover, this study tackles the multicollinearity between the decomposition components to enhance the prediction accuracy for creating a fitting model. In my research, I determined the ELNET-EMD method can identify the decomposition components that have a great significance on the response variable despite the high correlation between the decomposition components with high prediction accuracy. By contrast, the proposed adLASSO-EMD, SCAD-EMD and MCP-EMD methods can produce a consistent model with less prediction error compared with those of the traditional methods. The EMD algorithm makes the relationship between the variables reliable in terms of time and frequency domains.

LANGUAGES

English: Very Good

Arabic: Mother Tongue

REFERENCES

Dr. Mohd. Tahir Ismail, Associate Professor
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Dr. Sek Siok Kun, Associate Professor
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Dr. Ra'ed M. Al-Khatib, Associate Professor
Faculty of Information Technology and Computer Sciences, Yarmouk University, Irbid, Jordan
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