



PERSONAL INFORMATION

Name : Ku Muhammad Na'im bin Ku Khalif
Citizenship : Malaysian
Date of birth : 8 September 1986
Place of birth : Johor Bharu, Johor, Malaysia
Marital status : Married
Home address : 36, Jalan KS 4/12, KotaSAS, 25200 Kuantan, Pahang, Malaysia
Affiliation address : Centre for Mathematical Sciences, Universiti Malaysia Pahang,
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EDUCATION BACKGROUND

PhD in Computational Intelligence, University of Portsmouth at Faculty of Technology, School of Computing, Computational Intelligence Group, Portsmouth, United Kingdom: November 2016

Research Thesis: *Generalised Hybrid Fuzzy Multi Criteria Decision Making Based on Intuitive Multiple Centroid Defuzzification*

Master of Data Science, Universiti Malaya at Faculty of Computer Science & Information Technology, Kuala Lumpur, Malaysia: October 2020 – ongoing.

Master of Quantitative Sciences (Operational Management), Universiti Teknologi MARA at Faculty of Computer and Mathematical Sciences, Selangor, Malaysia: May 2011

Research Project: *Expression of Uncertainty of Measurement for Digital Caliper in Technical and Calibration Section, SIRIM QAS International Sdn. Bhd*




B. Sc (Hons) Management Mathematics, Universiti Teknologi MARA at Faculty of Computer and Mathematical Sciences, Shah Alam, Selangor, Malaysia: October 2009

Research Project: *The Analysis of Expenditure Trend in SIRIM Berhad Using Mathematical Modelling*

PROFESSIONAL MEMBERSHIP

1. Journal of Management Information System Computer Science and Applications (JoMISCSA): 2020 – present, International Editorial Board Member.
2. International Journal of Fuzzy Systems: 2019 – present, Reviewer (Lifetime Membership).
3. Atlantis Press - International Journal of Computational Intelligence Systems: 2017 – present, Reviewer (Lifetime Membership).
4. IOS Press - Journal of Intelligent and Fuzzy Systems: 2017 – present, Reviewer (Lifetime Membership).
5. IEEE Transactions on Fuzzy Systems: 2017 – present, Reviewer (Lifetime Membership).
6. PLOS ONE: 2017 – present, Reviewer, (Lifetime Membership).
7. Institute for Systems and Technologies of Information, Control and Communication (INSTICC): 2015 – present, Member.
8. International on Multi Criteria Decision Making Society (MCDM Society): 2015 – present, Member.

WORKING EXPERIENCE

Working Place		Year	Subjects Taught
Centre for Mathematical Sciences, Universiti Malaysia Pahang, Gambang, Kuantan, Pahang, Malaysia		2017 – present	Bachelor: Applied Statistics Master: Programming & Simulation Data Mining
Centre for Foundation Studies in Science, Universiti Malaya, Wilayah Persekutuan, Kuala Lumpur, Malaysia		2017	Foundation: Calculus
Faculty of Computer and Mathematical Sciences, Universiti Teknologi MARA, Alor Gajah, Melaka, Malaysia		2011 – 2013	Diploma: Calculus 2 Business Mathematics Business Statistics Pre Diploma: Intensive Mathematics

CERTIFICATES

1. RapidMiner Machine Learning Master Certification

https://api.eu.badgr.io/public/assertions/eeYdLmW3Q-Cw2mICJ6cNyA?identity_email



2. Data Science Ethics

https://www.coursera.org/account/accomplishments/verify/Q9KK2VHJNZPC?utm_source=ln&utm_medium=certificate&utm_content=cert_image&utm_campaign=pdf_header_button&utm_product=course

CONSULTATIONS

Board of Study

Program: Pengajian Asasi Perniagaan

Affiliation: Faculty of Business Innovation and Technology, Kolej Universiti Islam Melaka (KUIM), Melaka, Malaysia.

Experts, Verifiers and Reviewers for PhD student's thesis.

Name: Shaiful Bakhtiar bin Rodzman

Student ID: 2016622462

Thesis Title: Malay Document Retrieval Framework.

Research Field: Computer Science

Affiliation: Faculty of Computer and Mathematical Sciences, Universiti Teknologi MARA, Shah Alam, Selangor, Malaysia.

International Editorial Board

Journal: Journal of Management Information System, Computer Science, and Applications

Publisher: Institute for Research and Community Services

Universitas Trunojoyo Madura (UTM)

Graha Utama Building 1st Floor

Jl. Raya Telang, Kamal - Bangkalan 69162

Indonesia

Data Science Module Developer

Program: Future Innovator's School (FIS) Data Science Subject

Affiliation: Universiti Kebangsaan Malaysia (UKM) & Malaysia Digital Economy Corporation (MDEC)

Courses: Module 2: Basic Programming for Data Science

Module 6: Data Mining

Research Collaborator

Project: RAQIB (Smart Watch) Heart Disease Modelling using Machine Learning

Affiliation: Favoriot Sdn. Bhd.

CONTRIBUTION

Introduction to Machine Learning using Python – Speaker
Centre for Mathematical Sciences, Universiti Malaysia Pahang, Pahang, Malaysia.

SOFTWARE

Python, RStudio, RapidMiner, KNIME Analytics Platform, Waikato for Knowledge Analysis (WEKA), IBM Statistical Package for the Social Sciences (SPSS) Modeler, Statistical Analysis System (SAS), Microsoft Visual C++, Statistical Package for the Social Sciences (SPSS), Minitab, EViews, Matlab, Maple.

GRANTS

1. (FRGS/1/2019/STG06/UMP/02/9)
Formulation of hybrid fuzzy multi-criteria decision making model to risk assessment in oil and gas industry using hesitant uncertain linguistic z-numbers.
Project Leader. 01/09/2019 – 31/08/2021. RM61,200.
2. (RDU190306 UMP).
Hesitant linguistic z-numbers for group decision making.
Project Leader. 15/03/2019-14/03/2021. RM23,000.
3. (RDU181106 UMP).
Linguistic Z-TOPSIS similarity approach for company performance in Malaysia.
Project Leader. 15/04/2018 - 14/04/2019. RM5,500.
4. (PGRS2003168 UMP)
An Integrated of Z-Numbers and Hesitant Fuzzy Sets for Fuzzy Decision Making in Clustering Analysis for Subjective Well-Being of Working Youth in Malaysia.
Project Leader. 10/12/2020 – 9/12/2023. RM 4,500.
5. (FRGS/1/2018/STG06/UMT/01/1).
A combined DEMATEL method with Neutrosophic numbers for decision making.
Member. 01/01/2019 - 31/12/2020. RM 114,760.
6. (FRGS/1/2018/STG06/UM/02/14).
A novel Grey-Based performance analysis model for weekly fuel prices mechanism via non-homogeneous Malaysians preferences elicitation.
Member. 01/01/2019 - 31/12/2020. RM 62,680.
7. (FRGS/1/2018/STG06/UMP/02/10).
A study on the decision making support in scheduling and vehicle routing problems via Trade-Off ranking method.
Member. 01/01/2019 - 31/12/2020. RM61,700.

8. (RDU190308 UMP).
Determination of Nonabelian Tensor Products of Nontrivial Actions for Finite Cyclic 2-Groups.
Member. 15/03/2019 - 14/03/2021. RM22,800.
9. (UIC200810 UMP)
Module Developer for Future Innovator's School (FIS) Data Science Subject.
Member. 1/7/2020 – 30/6/2022. RM48,000

PUBLICATIONS

Book

Noor H.M., Saleh A.M., **Khalif K.M.N.K.**, Irpan H.M. (2012) Potensi zakat perniagaan di Wilayah Persekutuan 2011 – 2020,” Pusat Pungutan Zakat, Majlis Agama Islam Wilayah Persekutuan (PPZ-MAIWP), Wilayah Persekutuan, Malaysia, 2011, ISBN 978-983-44948-3-4.

Book Chapters

Khalif K.M.N.K., Gegov A. (2017) Implementing Adaptive Vectorial Centroid in Bayesian Logistic Regression for Interval Type-2 Fuzzy Sets. In: Merelo J. et al. (eds) Computational Intelligence. IJCCI 2015. Studies in Computational Intelligence, vol 669. Springer, Cham

Khalif K.M.N.K., Bakar A.S.A., Gegov A. (2019) Z-Numbers Based TOPSIS Similarity Methodology for Company Performance Assessment in Malaysia. In: Meier A., Portmann E., Terán L. (eds) Applying Fuzzy Logic for the Digital Economy and Society. Fuzzy Management Methods. Springer, Cham

Bakar A.S.A., **Khalif K.M.N.K.**, Yaakob A.M., Gegov A., Amin A.Z.M. (2019) Grey Number Based Methodology for Non-homogeneous Preference Elicitation in Fuzzy Risk Analysis Management. In: Meier A., Portmann E., Terán L. (eds) Applying Fuzzy Logic for the Digital Economy and Society. Fuzzy Management Methods. Springer, Cham.

Journal Papers

Khalif, K.M.N.K., Gegov, A., Bakar, A.S.A. (2017). Hybrid fuzzy MCDM model for Z-numbers using intuitive vectorial centroid. *Journal of Intelligent and Fuzzy Systems*, 33, 791-805.

Safar, N.Z.M., Ramli, A.A., Ndzi, D., **Khalif K.M.N.K.** (2019). Rain Prediction Using Fuzzy Rule Based System in North-West Malaysia. *Indonesian Journal of Electrical Engineering and Computer Science*, vol. 14, no 3.

Rodzman, S.B., Ismail, N.K., Rahman, N.A., Aljunid, S.A., Nor, Z.M., **Khalif, K.M.N.K.** (2019) Expert judgment Z-Numbers as a ranking indicator for hierarchical fuzzy logic system. *IAES International Journal of Artificial Intelligence (IJ-AI)*, Vol. 8, No. 3, September 2019, pp. 244-251.

Bakar, A.S.A., **Khalif, K.M.N.K.**, Shariff, A. A., Gegov, A., Salleh, F. M. (2020). Fuzzy Risk Analysis Under Influence of Non-Homogeneous Preferences Elicitation in Fiber Industry. *Journal of Applied Intelligence* 50. 157-168 doi. 10.1007/s10489-019-01508-2.

Satari, S.Z., **Khalif, K.M.N.K.** (2020). Review on Outliers Identification Methods for Univariate Circular Biological Data. *Advances in Science, Technology and Engineering Systems Journal (ASTESJ)*. Vol, 5, 2, page 95-103.

Conference Papers

Khalif, K.M.N.K., Gegov A. (2015) Generalised fuzzy Bayesian network with adaptive Multiple Centroid. *In proceeding on 16th World Congress of the International Fuzzy System Association, 9th Conference of the European Society for Fuzzy Logic and Technology*, page 757-764, Gijon, Spain.

Khalif, K.M.N.K., Gegov A. (2015) Bayesian logistic regression using Vectorial Centroid for interval type-2 fuzzy sets. *In proceeding on 7th International Conference on Fuzzy Computation Theory and Application, part of International Joint Conference on Computational Intelligence*, page 69-79, Lisbon, Portugal.

Bakar A.S.A., **Khalif K.M.N.K.**, Gegov A. (2015) Ranking of interval type-2 fuzzy numbers based on centroid point and spread. *In proceeding on 7th International Conference on Fuzzy Computation Theory and Application, part of International Joint Conference on Computational Intelligence*, page 131-140, Lisbon, Portugal.

Yaakob A.M., **Khalif K.M.N.K.**, Gegov A., Rahman S.F.A. (2015) Interval type 2-fuzzy rule based system approach for selection of alternatives using TOPSIS. *In proceeding on 7th International Conference on Fuzzy Computation Theory and Application, part of International Joint Conference on Computational Intelligence*, page 112-120, Lisbon, Portugal.

Rodzman S.B., Ismail N.K., Rahman N.A., Aljunid S.A., Rahman H.A., Nor Z.M., **Khalif K.M.N.K.**, Noor A.Y.M. (2019) Experiment with Text Summarization as a Positive Hierarchical Fuzzy Logic Ranking Indicator for Domain Specific Retrieval of Malay Translated Hadith. *IEEE 9th Symposium on Computer Applications & Industrial Electronics (ISCAIE)*, pp. 299-304, Malaysia, 2019.

Khalif K.M.N.K., Gegov A., Bakar A.S.A. (2017) Z-TOPSIS approach for performance assessment using fuzzy similarity. *in proceeding on IEEE International Conference of Fuzzy Systems*, Naples, Italy.

Jamal N. J. M., **Khalif K.M.N.K.**, Mohamad M.S. (2019) The implementation of z-numbers in fuzzy clustering algorithm for wellness of chronic kidney disease patients. In proceedings of 2nd International Conference on Applied & Industrial Mathematics and Statistics (ICoAIMS), Journal of Physics: Conference Series, Pahang, Malaysia.

Aminuddin A.S.A., **Khalif K.M.N.K.**, Jamil F.C., Jaini N.I. (2019) Fuzzy analytic hierarchy process using intuitive vectorial centroid for eco-friendly car selection. *International Conference on Applied & Industrial Mathematics and Statistics (ICoAIMS)*, Journal of Physics: Conference Series, Pahang, Malaysia

Khalif K.M.N.K., Bakar A.S.A., Gegov A., Aminuddin A.S.A., Safar, N.Z.M. (2019) A Reliability Based Consistent Fuzzy Preference Relations For Risk Assessment In Oil And Gas Industry. 9th Int. Conf. on Geotechnique, Construction Materials and Environment, Tokyo, Japan.

Khalif K.M.N.K., Gegov A., Bakar A.S.A., Safar N.Z.M. (2020) Interval Type-2 Fuzzy Multi Criteria Decision Making Based on Intuitive Multiple Centroid. In: Ghazali R., Nawi N., Deris M., Abawajy J. (eds) *Recent Advances on Soft Computing and Data Mining. SCDM 2020. Advances in Intelligent Systems and Computing*, vol 978. Springer, Cham.

Mohd Safar N.Z., Ndzi D., Mahdin H., **Khalif K.M.N.K.** (2020) Rainfall Intensity Forecast Using Ensemble Artificial Neural Network and Data Fusion for Tropical Climate. In: Ghazali R., Nawi N., Deris M., Abawajy J. (eds) Recent Advances on Soft Computing and Data Mining. SCDM 2020. Advances in Intelligent Systems and Computing, vol 978. Springer, Cham.

SUPERVISION

Doctoral Degree (PhD)

1. Noor Jamalina binti Jamal
A Novel Integrated CFPR-ANP and Fuzzy Similarity TOPSIS using Hesitant Uncertain Linguistic Z-Numbers for Group Decision Making.
Supervisor, 2018/2019.
2. Nik Muhammad Farhan Hakim bin Nik Badrul Alam
Formulation of Hybrid Fuzzy Multi Criteria Decision Making Model to Risk Assessment in Oil and Gas Industry using Hesitant Uncertain Linguistic Z-Numbers.
Supervisor, 2020/2021
3. Usarov Kimiljon
Mathematical Modelling of Database in Business Intelligence.
Co-supervisor, 2018/2019.
4. Ayman Moh'd Atieh Hussein
Applications of Mathematical Statistics Models and Data Analysis in Predicting the Impact of Population Growth in Jordan on Environment Pollution and Population Structure.
Co-supervisor, 2019/2020

Master Degree (MSc)

1. Bahirah Bashah
Master of Science (Industrial Mathematics) – Mixed Mode
Classification of Cervical Cancer using Random Forest
Supervisor, 2020/2021

AWARD

1. Best Paper:
Khalif K.M.N.K., Gegov A., Bakar A.S.A., Safar N.Z.M. (2020) Interval Type-2 Fuzzy Multi Criteria Decision Making Based on Intuitive Multiple Centroid. In: Ghazali R., Nawi N., Deris M., Abawajy J. (eds) Recent Advances on Soft Computing and Data Mining. SCDM 2020. Advances in Intelligent Systems and Computing, vol 978. Springer, Cham.

ADMINISTRATIVE DUTIES

1. Coordinator – Data Mining (MSM4244) course, Master Degree, Universiti Malaysia Pahang, SEM I 2019/2020, SEM II 2018/2019, SEM I 2020/2021.
2. Coordinator – Applied Statistics (BUM2413) course, Degree, Universiti Malaysia Pahang, SEM II 2019/2020.
3. Committee – Bachelor of Science (Applied) Data Analytics, Universiti Malaysia Pahang. (2018 – present)
4. Committee – Applied & Industrial Mathematics (AIMS), Statistics and Data Analytics Cluster, Centre for Mathematical Sciences, Universiti Malaysia Pahang. (2019 – present)
5. Technical Committee - Centre for Mathematical Sciences, Universiti Malaysia Pahang. (2019 – present)
6. Global Classroom Representative – Centre for Mathematical Sciences, Universiti Malaysia Pahang. (2018)
7. Vice Chairman – Kumpulan Inovasi dan Kreatif (KIK), Faculty of Industrial Science and Technology, Universiti Malaysia Pahang (2018-2019).
8. Committee – Risk Management and Incident Investigation, Occupational Safety and Health Management Office (OSHMO), Centre for Mathematical Science, Universiti Malaysia Pahang. (2020 – 2021)

REFEREES

1. **Dr. Alexander Gegov**
Research Supervisor (PhD)
Reader in Computational Intelligence, Faculty of Technology
University of Portsmouth, United Kingdom
alexander.gegov@port.ac.uk
2. **Prof. Dr. Mohd Lazim bin Abdullah**
Management Science Research Group
Faculty of Ocean Engineering Technology and Informatics
Universiti Malaysia Terengganu, Malaysia
lazim_m@umt.edu.my
3. **Dr. Mohd Rizal bin Mohd Isa**
Senior Lecturer
Computer Science Department, Faculty of Defence Science and Technology
Universiti Pertahanan Nasional Malaysia, Malaysia
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