

Curriculum Vitae



BINYAMIN BIN YUSOFF

SENIOR LECTURER

MATHEMATICAL SCIENCES

FACULTY OF OCEAN ENGINEERING TECHNOLOGY AND INFORMATICS
UNIVERSITI MALAYSIA TERENGGANU

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📁 H-Index: 6 📄 Citations: 95

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[July 2023]

Academic Qualifications

(Qualifications), (Discipline), (University), (Year)

- BSc, Computational Mathematics, Universiti Malaysia Terengganu, Malaysia, 2007
- MSc, Mathematical Sciences, Universiti Malaysia Terengganu, Malaysia, 2010
- PhD, Applied Mathematics (Financial Decision Analysis), University of Barcelona, Spain, 2017
- Postdoc, Mathematics, INSPERM, Universiti Putra Malaysia, October 2022 – September 2023

Area of Expertise

(Main Area) Mathematical Sciences

(Sub Area) Computational Mathematics, Operational Research

(Area Specialization) Fuzzy Set Theory, Decision Theory, Aggregation Operators, Optimization Modelling, Applied Mathematics in Finance and Economics

Professional Bodies/Academic Society

(Name of Society), (Discipline), (Level), (Position), (Duration)

- Malaysia Mathematical Science Society (PERSAMA), Mathematics, National, Exco, Lifetime
- Management Science/Operations Research Society of Malaysia (MSORSM), OR/MS, National, Member, Lifetime
- Akademi Sains Islam Malaysia (ASASI), National, Member, Lifetime

Subject Taught

(Subject), (Semester), (Year)

- MTK3201 – Linear Algebra, Sem 2, Year 1
- MTK3101 – Advanced Calculus, Sem 2, Year 1
- MTK4700/MTK4700A – Optimization, Sem 1, Year 3
- MKE4805/MKW4043 - Optimization in Finance, Sem 2, Year 2, 3
- MKE3505 - Investment Mathematics, Sem 2, Year 2

Postgraduate Supervision

(Organization), (Level), (Name of Student), (Title of Thesis), (Role), (Year)

- UMT, Doctor of Philosophy, Dian Pratama (P5081), Circular Intuitionistic Fuzzy Set and Its Application, Supervisor, 2021 – present
- UMT, Doctor of Philosophy, Khaleel Yahia Ibrahim Awajan (P4854), Computational Mathematics, Co-Supervisor, 2021 – present
- UMT, Master Research, Ahmad Zulhazim Bin Mohd Zainun (P4652), Financial Mathematics, Co-Supervisor, 2020 – present
- UMT, Master Research, Nur Najwa Nadhirah Binti Che Rosli (P4203), An Expansion of Linguistic Aggregation Weighted Selective Aggregated Majority for Heterogeneous Group Decision with Uncertainty Analysis, Main Supervisor, 2019 – present
- UMT, MSc Mathematics (Coursework), Cheong Wan Hui (P5187), A Modified VIKOR-DANP Model for Shariah Compliant Tech-Stocks Selection in Bursa Malaysia, Supervisor, 2022 – 2023 (Completed)
- UMT, Master Research, Siti Nuraini Binti Rahim (P4006), Bipolar Neutrosophic Dematel-MABAC for Sustainable Energy, Main Supervisor, 2019 – 2022 (Completed)
- UMT, Doctor of Philosophy, Wan Rosanisah Binti Wan Mohd (GSK2628), An integration of AHP and VIKOR based on Pythagorean Fuzzy Sets, Co-Supervisor, 2018 – 2022 (Completed)
- Universiti Sultan Zainal Abidin (UNISZA), Doctor of Philosophy, Nor Azmi Abu Bakar (SL2654), Generalizing Fuzzy Series Type-1 Using Multiple Series Alpha-Cut, Co-Supervisor, 2018 – 2023 (Completed)

Undergraduate Supervision

(Organization), (Name of Student), (Title of Thesis), (Role), (Year)

- Wan Nurul Elisa Binti Zamri, Forecasting Gold Price During Covid-19 Using Arima Model, Main Supervisor, 2021/2022
- Nuramira Raihana Binti Rushdan, Fuzzy Approach In Measuring Multidimensional Poverty In Kelantan, Malaysia, Main Supervisor, 2021/2022
- Muhammad Irfan Faiz Bin Mohd Azizan, Forecasting Crude Oil Wti Price Using Arima Model, Main Supervisor, 2021/2022

- UMT, Noriziani Binti Nasaruddin, Comparison of Islamic and Conventional Financing Models in Malaysia by Using differential Equations, Main Supervisor, 2020/2021
- UMT, Amira Azrina Binti Jalani, Forecasting Gold Price using ARIMA Model, Main Supervisor, 2020/2021
- UMT, Nor Maisara Binti Nor Salim, Forecasting of Demand in Malaysian Palm Oil Industry Using Ordered Weighted Moving Average (OWMA), Main Supervisor, 2020/2021
- UMT, Siti Nur Aina Afzan Binti Mohamad Jamil, Evaluation of Residential Real Estate in Kuala Lumpur using TODIM Method, Main Supervisor, 2020/2021
- UMT, Mohamed Daniel Yusof, Portfolio Allocation Using TODIM Method, Main Supervisor, 2019/2020
- UMT, Nurlina Khalida Zainal Akmar, Heavy Moving Averages and Their Application in Forecasting Exchange Rate, Main Supervisor, 2019/2020
- UMT, Aisyah Hanim Zamani, A Consensus Facilitation Model Based on Experts for Investment Strategy Selection, Main Supervisor, 2019/2020
- UMT, Puteri A'ida Auji Farzana, MACBETH Method in Portfolio Selection, Main Supervisor, 2019/2020
- UMT, Nursaiidah Asmuri, A Mixed Model of Discounted Cash-Flow and LAMA Operator for Company Strategic Valuation, Main Supervisor, 2019/2020
- UMT, Fatin Noor Najihah Abd Mutalip, Consistent Fuzzy Preference Relation in Financial Merger Strategy, Main Supervisor, 2019/2020
- UMT, Lim Xin Hui, Exchange Rate Forecasting by Using Fuzzy Time Series Markov Chain, Main Supervisor, 2019/2020
- UMT, Nur Adani Farisha Yuzaili, A Portfolio Selection Using the Integrated Model of Fuzzy AHP-MOORA, Main Supervisor, 2019/2020
- UMT, Lee Qiu Nan, Fuzzy Time Series Markov Chain for Forecasting Stock Market Price, Main Supervisor, 2019/2020
- Nur Narzihah Binti Hamzah, Intuitionistic Fuzzy ELECTRE III method for Portfolio Selection problem, Main Supervisor, 2017/2018
- Chong Shad Min, Minimax Regret Using OWA Operator in Robust Multi-objective Portfolio Optimization, Main Supervisor, 2017/2018
- Zarith Sofea binti Othman, Financial Portfolio Analysis Based on Interval Type-2 Fuzzy Logic Model, Main Supervisor, 2017/2018
- Ainul Nabilah Binti Mohd Zaid, Ordered Weighted Averaging Operator for Portfolio Selection Problem, Main Supervisor, 2017/2018

Appointment List

(Organization), (Post), (From Year), (Until Year)

- Penasihat Olimpik Matematik Kebangsaan (OMK-PERSAMA), 2023 – Present
- UMT, FTKKI, Coordinator for Promotion (Master by Coursework Programmes), 2022 – present
- Ketua Penyelaras Olimpik Matematik Kebangsaan (OMK-PERSAMA), 2020 – 2022
- UMT, FTKKI, Coordinator for Alumni and Graduate Employability, 2020 – 2021
- UMT, FTKKI, Coordinator of the Academic Management and Student Affairs, 2019 – 2021
- UMT, Penyelaras Jawatankuasa Pengurusan Siswazah Fakulti Teknologi Kejuruteraan Kelautan Dan Informatik, August 2019-2020.

- UMT, PPIMG (School), Coordinator/Advisor for Student Club, Himpunan Mahasiswa Matematik (HIMMAT), 2018 - 2019
- UMT, Pengurus Pasukan Tenpin Boling UMT, 2017-2019

Awards & Recognitions

(Award/Recognition), (Awarding Institution), (Level), (Year)

- *Cum Laude* Thesis Award (PhD Thesis), University of Barcelona, University, 2017
- Pendidik Terbaik Bidang Sains Matematik, FTKKI, Faculty, 2020
- Anugerah Perkhidmatan Cemerlang, Universiti Malaysia Terengganu, University, 2020
- Pingat Perak, Pertandingan Amalan Inovasi Penyelidikan (AIPY), Karnival Inovasi@UMT, Peringkat Kebangsaan, 2022
- Pingat Emas, Pertandingan Amalan Inovasi Pengajaran & Pembelajaran (AIPP), Karnival Inovasi@UMT, Peringkat Kebangsaan, 2022

Consultancy

(Type of Appointment), (Name of Appointment), (Appointer), (Level), (Date)

- Pakar Rujuk Penggubalan Maklumat Kursus Program (Subjek: Asas Algebra), Institut Pendidikan Guru Kampus Pulau, Pulau Pinang, National, 2020
- Penasihat Teknikal Data dan Statistik Bagi Pensijilan MS ISO/IEC 17025:2017, Pusat Perkhidmatan Penyelidikan dan Lapangan, UMT, January 2020 – December 2020

Mobility

(Program), (Type of Program), (Level), (Organization), (Date)

- *Attachment, Industrial/Academic Attachment*, International, Electric Lamb Ltd. (Financial Consultant) and SCEEM, University of Bristol, UK, 01/09/2018 - 28/02/2019
- *Postdoctoral*, Institute for Mathematical Research (INSPEM), Universiti Putra Malaysia, 03/10/2022 – 30/09/2023

Academic Leadership

Keynote/Invited Speaker:

(Program), (Organization), (Role), (Date)

- International Conference on Mathematical Sciences (ICMS5 2023), Invited Speaker, 16-17 May 2023
- Virtual Talk, Department of Mathematical & Actuarial Sciences, University Tunku Abdul Rahman (UTAR), Invited Speaker, 30 July 2021

- Fuzzy Logic Workshop, IPG Dato' Haji Razali Ismail, Batu Rakit, Terengganu, Invited Speaker, 13-15 July 2021
- Sesi Perkongsian Pengalaman: Program Sangkutan Industri, PPBI, UMT, April 2019

Other Contributions:

- Penasihat, Pertandingan Olimpiad Matematik Kebangsaan (OMK), 2023 - Present
- Guest Editor, Journal of Sustainability Sciences and Management (JSSM), 2022 - Present
- Associate Editor, Journal of Mathematical Sciences and Informatics (JMSI), 2021 – Present
- Scientific Committee, 4th International Conference on Applied & Industrial Mathematics & Statistics 2023 (ICoAIMS), 22-24 August 2023
- AJK Penerbitan, IUP2022, 29-30 November 2022
- Ketua Sekretariat, UMTAS 2021, 23-25 Nov 2021
- AJK Program & Jemputan, IPCOETI 2021, 21-22 June 2021
- Ketua Penyelaras, Pertandingan Olimpiad Matematik Kebangsaan (OMK), 2020 – 2022
- Penyelaras Negeri, Pertandingan Olimpiad Matematik Kebangsaan (OMK), 2019
- Reviewers (Journal):
Scientific Reports, International Transactions in Operational Research, International Journal of Fuzzy Systems, IEEE Access, Informatica, Computing & Informatics, Decision Analytics Journal, Concurrency and Computation, Malaysian Journal of Mathematical Sciences Journal of Science and Technology, Malaysian Journal of Industrial and Applied Mathematics, UMT Journal Undergraduate Research, Journal of Computational Innovation and Analytics, Journal of Sustainability Science and Management, Journal of Mathematics Sciences and Informatics
- Reviewers (Conference):
International Conference on Mathematics, Statistics and Computing Technology (ICMSCT2023), AIP Conference Proceedings, Proceedings of participants of the Uzbekistan-Malaysia international online conference (Computational Models and Technologies) CMT2020, Proceedings of IMST 2015-FIM XXIV Conference on Interdisciplinary Mathematics, Statistics and Computational Techniques (Barcelona, Spain), International Conference on Modeling and Simulation (Valencia, Spain), International Conference on Modeling and Simulation in Engineering, Economics and Management (Santiago, Chile), Symposium Kebangsaan Sains Matematik (SKSM), International Joint Conference (IJC2021) - International Conference on Mathematics, Statistics and Computing Technology (ICMSCT2021), International UMT Annual Seminar (UMTAS2021), International Postgraduate Conference on Ocean Engineering Technology and Informatics (IPCOETI2021), IUP2022, ICoAIMS2022

RESEARCH

(Research Title), (Role), (Grant), (Source of Funding), (From year), (Until Year)

- Modification of ELECTRE under ELICIT Expressions using Circular Intuitionistic Fuzzy Sets, Project Leader, FRGS Research Grant, 2023 – *Application is under review*
- The Intelligence Model of Predicting Students' Mathematics Problem-solving Ability Based on Adaptive Neuro-Fuzzy Inference System (ANFIS) Formulation and Neuroscience Mechanistic, Co-researcher, FRGS, 2022 – 2025

- The Impact of Talent Management and Job Performance: An Analysis of Experiential Learning Program from UMT'S Talent, Co-researcher, Pemberian Dana Khas Bakat, Universiti Malaysia Terengganu (UMT), November 2021 - May 2022
- Novel Hesitant Fuzzy Network Methods with The Incorporation Of Z-Numbers and Social Network Analysis for Large-Scale Group Decision Making, Co-Researcher, Fundamental Research Grant Scheme (FRGS), Ministry of Higher Education Malaysia (MOHE), September 2019 - May 2022
- Expansion of Weighted Selective Aggregated Majority-OWA for Heterogeneous Group Decision with Uncertainty Analysis, Project Leader, Talent, and Publication Enhancement Research Grant (TAPE-RG), Universiti Malaysia Terengganu (UMT), 2018 – 2020
- Comprehensive Statistical Testing and Evaluation for Artifact Modelling, Co-Researcher, Matching Grant (UMT, UiTM, UTM), 2020-2022
- Decision Analysis, Uncertainty Theories and Aggregation Operators in Financial Selection Problems, PhD. Thesis (University of Barcelona), Supervisors: Dr. David Ceballos Hornero, Dr. Jose Maria Merigo Lindahl, Dr. Antonio Alegre (Tutor), 2012 – 2017
- A Fuzzy Multi-Attribute Decision Making Model for Flood Control Project Selection, MSc. Thesis (UMT), Supervisors: Dr. Lazim Abdullah, Dr. Abdul Fatah Wahab, 2007 – 2010
- Landfill Site Selection using Fuzzy Approach, Student, Final Year Project (BSc.), Supervisor: Prof. Dr. Abu Osman Md Tap, 2006 – 2007

PUBLICATIONS (in Journals)

(Title), (Publication Type), (Role), (Authors), (Date Published)

- B Yusoff, D Pratama, A Kilicman, R Hasni. (2023). Circular Q-Rung Orthopair Fuzzy Sets, Malaysian Journal of Mathematical Sciences, *Accepted*
- B Yusoff, D Pratama, A Kilicman, L Abdullah. (2023). Circular Intuitionistic Fuzzy ELECTRE III Model for Group Decision Analysis, Informatica, *Submitted*
- F Nasir, CMIC Taib, EH Ariffin, SF Padlee, MFM Akhir, MF Ahmad, B Yusoff. (2023). Significant Wave Height Modelling and Simulation of the Monsoon-influenced South China Sea Coast, Ocean Engineering
- SNF Mohamad, R Hasni, B Yusoff, N Jan, MK Jamil. (2023). On Dominating Energy in Bipolar Single-Valued Neutrosophic Graphs, Neutrosophic Sets and Systems
- SNF Mohamad, R Hasni, B Yusoff, N Jan, MK Jamil. (2021). Novel Concept of Interval-Valued Neutrosophic Incidence Graphs with Application, Neutrosophic Sets and Systems 43, 61-81
- SNF Mohamad, R Hasni, F Smarandache, B Yusoff. (2021). Novel Concept of Energy in Bipolar Single-Valued Neutrosophic Graphs with Applications, Axioms, 10(3), 172
- LX Hui and B Yusoff. (2021). Exchange Rate Forecasting Using Fuzzy Time Series-Markov Chain, UMT Journal Undergraduate Research, 3, 171-183, July 2021
- N Rahim, L Abdullah, B Yusoff. (2020). A border approximation area approach considering bipolar neutrosophic linguistic variable for sustainable energy selection, Sustainability 12 (10), 3971
- NNNC Rosli, B Yusoff, CMIC Taib, EN Madi. (2020). TODIM under Group Decision Making based on Weighted Selective Aggregated Majority-OWA Operator, International Journal of Engineering Trends and Technology (IJETT) – Editor's Issues – 2020, 2231-5381, 134

- EN Madi, B Yusoff. (2019). Modelling perception-based information (Words) for decision support system. *International Journal of Recent Technology and Engineering* 7 (5), 665-671
- WRW Mohd, L Abdullah, B Yusoff, C Taib, JM Merigo. (2019). An integrated MCDM model based on Pythagorean fuzzy sets for green supplier development program, *Malaysian Journal of Mathematical Sciences* 13, 23-37
- MIE Zulkifly, AF Wahab, B Yusoff. (2019). Approximation of Intuitionistic Fuzzy Bézier Curve Model. *Malaysian Journal of Mathematical Sciences* 13, 97-111
- EN Madi, B Yusoff. (2018). Integrating Interval Agreement Approach (IAA) with TOPSIS in Multi-Criteria Group Decision Making (MCGDM). *International Journal of Engineering and Technology* 7 (3), 163-169
- N Zamri, S Naim, L Abdullah, B Yusoff. (2018). An Introduction to Z-Numbers with Interval Type-2 Fuzzy TOPSIS, *Advanced Science Letters* 24 (2), 947-950
- B Yusoff, JM Merigó, D Ceballos, JI Peláez. (2018). Weighted-selective aggregated majority-OWA operator and its application in linguistic group decision making, *International Journal of Intelligent Systems* 33 (9), 1929-1948
- B Yusoff, JM Merigó Lindahl, D Ceballos Hornero. (2017). OWA-based aggregation operations in multi-expert MCDM model, *Economic Computation and Economic Cybernetics Studies and Research*, 51 (2), 211-230
- CMIC Taib, B Yusoff, ML Abdullah, AF Wahab. (2016). Conflicting bifuzzy multi-attribute group decision making model with application to flood control Project, *Group Decision and Negotiation* 25 (1), 157-180
- B Yusoff, I Taib, L Abdullah. (2011). A new similarity measure on intuitionistic fuzzy sets, *International Journal of Mathematical and Computational Sciences* 5 (6), 819-823

PUBLICATIONS (in Chapter in Books/Proceedings)

(Title), (Publication Type), (Role), (Authors), (Date Published)

- D Pratama, B Yusoff, L Abdullah. (2023). Some Operations on Circular Intuitionistic Fuzzy Sets, *Symposium Kebangsaan Sains Matematik 29 (SKSM 29)*, AIP Conference Proceedings (*In press*)
- NA Abu Bakar, B Yusoff, AF Wahab, M Mamat. (2023). Pythagorean Fuzzy Bezier Modelling for Treating Uncertainty in Spatial Data Sets, *UMT Annual Symposium (UMTAS 2022)*, AIP Conference Proceedings (*In press*)
- NNNC Rosli, B Yusoff. (2023). Generalized TODIM Method and Its Application in Material Selection Process, *1st International Postgraduate Conference on Ocean Engineering Technology and Informatics (IPCOETI)*, AIP Conference Proceedings 2484, 030007
- NNNC Rosli, B Yusoff, AF Wahab, EN Madi. (2021). Group decision making-based TODIM under Linguistic Aggregation Majority Additive operator, *Symposium Kebangsaan Sains Matematik 28 (SKSM 28)*, *J. Phys.: Conf. Ser.* 1988 012028
- NA Abu Bakar, B Yusoff, AF Wahab, M Mamat. (2021). Modeling Fuzzy B-spline Interpolation Series using α -cut operation for spatial earth surface problem, *Symposium Kebangsaan Sains Matematik 28 (SKSM 28)*, *J. Phys.: Conf. Ser.* 1988 012011
- B Yusoff, JM Merigó, DC Hornero. (2015). Generalized OWA-TOPSIS model based on the concept of majority opinion for group decision making, *International Forum for Interdisciplinary Mathematics*, 124-139

- B Yusoff, JM Merigó, DC Hornero. (2015). Analysis on extensions of multi-expert decision making model with respect to OWA-based aggregation processes, International Forum for Interdisciplinary Mathematics, 179-196
- B Yusoff, JMM Lindahl. (2015). Heavy weighted geometric aggregation operators in analytic hierarchy process-group decision making, 2015 IEEE International Conference on Fuzzy Systems (FUZZ-IEEE), 1-6
- B Yusoff, JMM Lindahl. (2015). Heavy Aggregation Operators in Multiplicative Preference Relation Model under Group Decision Making, ISCAMI 2015, 47
- B Yusoff, JMM Lindahl. (2014). Analytical hierarchy process under group decision making with some induced aggregation operators, International Conference on Information Processing and Management of Uncertainty in Knowledge-Based Systems
- B Yusoff, I Taib, L Abdullah. (2010). Fuzzy Multiple Attribute Decision Making under Conflicting Condition, 2nd International Conference on Advanced Computer Control, 409-414
- B Yusoff, I Taib, L Abdullah. (2009). Entropy method based on Conflicting Bifuzzy Set, Chapter in Book, Simposium Kebangsaan Sains Matematik (UiTM Shah Alam).

Examiner/Assessor/Jury

(Organization), (Level), (Candidate), (Thesis Title), (Role), (Date)

- Assessor for Projek Sarjana Kerja Kursus (IMG5099), 31/03/2022
- Universiti Utara Malaysia, Master Research, Nur Hazera Md Radzi (826423), The Integration of Fuzzy Delphi and Fuzzy TOPSIS for Pharmaceutical Waste Disposal Treatment Selection in the Context of Green Practice, 10/02/2022
- Jury, Pertandingan Amalan Inovasi Pelajar, Program Karnival Inovasi@UMT 2021, 23/12/2021
- Universiti Malaysia Terengganu, PhD Research, Mohammad Ahmad Yassen Alorud, Examiner for Candidature Assessment (CA), 21/10/2020
- Universiti Malaysia Terengganu, PhD Research, Mohd Syafiq Bin Bidin, Examiner for Candidature Assessment (CA), 21/10/2020
- Universiti Malaysia Terengganu, PhD Research, Muhamad Na'eim Bin Abdul Rahman, Examiner for Candidature Assessment (CA), 14/09/2020
- Universiti Malaysia Terengganu, PhD Research, Nor Liyana Amalina Mohd Kamal, Examiner for Candidature Assessment (CA), 29/07/2019
- Universiti Malaysia Terengganu, PhD Research, Maziah Mahmud, Examiner for Candidature Assessment (CA), 29/07/2019
- Universiti Malaysia Terengganu, PhD Research, Nur Hidayah Mohd Razali, Examiner for Candidature Assessment (CA), 29/07/2019
- Universiti Malaysia Terengganu, Master Research, Zati Hanani Binti Ismail, Autonomous Mobile Robot Controller Based on Fuzzy Logic Control Algorithm, Internal Examiner, 02/06/2019.
- Assessor for Projek Kolokium Siswazah (Bidang Matematik), 08/08/2020
- Assessor for Student Research Day@UMT 2019, 20/05/2019