Name : NORYANTI MUHAMMAD

Organisation : Universiti Malaysia Pahang Al-Sultan Abdullah (UMPSA)

Position & Address :

1. Associate Professor Ts. Dr.
   Centre for Mathematical Sciences,
   Universiti Malaysia Pahang Al-Sultan Abdullah
   Lebuh Persiaran Tun Khalil Yaakob
   26300, Kuantan
   Pahang, Malaysia

2. Director
   Data Management & Analytics Centre (DMAC),
   Universiti Malaysia Pahang Al-Sultan Abdullah
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   Pahang, Malaysia

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EDUCATION

1. PhD in Mathematical Sciences (October 2012 – March 2016),
   Durham University, United Kingdom.
   Thesis: Predictive Inference with Copulas for Bivariate Data.

2. MSc. Mathematics (Mathematics) (2005 - 2007)
   Universiti Teknologi Malaysia, Skudai, Malaysia.
   Dissertation: Censored Survival Analysis using Naive EM Algorithm.

3. BSc. (Hons.) (Statistics) (2002 - 2004)
   Final Year Project: Multiple Regression Analysis

4. Diploma in Statistics
   Universiti Teknologi Mara, Shah Alam, Selangor, Malaysia.

WORK EXPERIENCES

1. Director (Jan 2024-present)
   Data Management & Analytics Centre,
   Universiti Malaysia Pahang Al-Sultan Abdullah

2. Director (Apr 2022- Dec 2023)
   Centre of Excellence for Artificial Intelligence & Data Science,
   Universiti Malaysia Pahang Al-Sultan Abdullah

3. Associate Professor (November 2023-Current)
   Centre for Mathematical Sciences
   Universiti Malaysia Pahang Al-Sultan Abdullah

4. Director (Sept 2021- Mar 2022)
   Centre of Excellence for Data Science & Artificial Intelligence,
   Universiti Malaysia Pahang Al-Sultan Abdullah

5. Senior Lecturer (Sept 2019 – November 2023)
   Centre for Mathematical Sciences
   Universiti Malaysia Pahang Al-Sultan Abdullah

6. Senior Lecturer (May 2016 – Sept 2019)
   Faculty of Industrial Science & Technology
   Universiti Malaysia Pahang Al-Sultan Abdullah

7. Lecturer (Dec 2008 – May 2016)
   Faculty of Industrial Sciences & Technology
   Universiti Malaysia Pahang Al-Sultan Abdullah

8. Lecturer (Aug 2007 – Dec 2008)
   Faculty of Mechanical Engineering
   Universiti Malaysia Pahang Al-Sultan Abdullah

9. Teaching Assistant (TA) (Nov 2005 – Apr 2006)
   Universiti Teknologi Malaysia, Skudai, Johor, Malaysia.

10. Lecturer (Dec 2004 – Apr 2005)
    Universiti Teknologi MARA, Machang, Kelantan, Malaysia

LIST OF RESEARCH

1. 2024 - Leveraging Transformer Models and GPT-4 for Enhanced Sentiment Analysis In Malaysia Halal Product Markets (member) (RDU242704 and UIC241505)

2. 2024 - Development of Smart Water Surge Warning System (member) (RDU240703)

3. 2023 - Predictive Modelling of Cardiovascular Diseases Considering Dependence Structure using Generalised Linear Model and Machine Learning (member) (RDU230376)

4. 2023 - Fishing Location Determination System (FSI) By IoT-Based Bathymetric Measurement by Drone Platform (member) (RDU233603)

5. 2023 - Parameterization of River Water Flow Using Images and Video-Based Techniques (member) (RDU230308-Active)

6. 2023 - Risksmart_Learning System's Training Module for Petrochemical Industries in Gebeng and

Kemaman: A Collaboration with BASF and Kaneka Sdn. Bhd. (member) (CDU230133)

7. 2022 - Predictive Statistical Modelling on Enhancing Students' Performance Using Hybrid Artificial Neural Network and Structural Equation Modelling (Principal Investigator) (RDU223419- Active)

8. 2022 - Predicting Heart Disease Using A Hybrid Metaheuristic-Based Training Of Echo State Network (Principal Investigator) (RDU220395 and UIC221519 - Active)

9. 2022 - Interval Estimation of The Concentration Parameter and Missing Value Imputation in The Von Mises Distribution (member) (RDU220369-Active)

10. 2022 - Predictive Analytics of Influential Economic Indicators Towards Malaysian Ringgit Valuation by Using Regression Algorithm (member) (RDU220343-Active)

11. 2022 - Integrated Security Management System for KANEKA (member) (RDU222409 and UIC220829- Active)

12. 2022 - Stochastic Modelling of The Spreading Fake News and Information Through Online and Social Media (member) (RDU222704 and UIC221517 - Active)

13. 2022 - Formulation of A Robust Principal Component Analysis Algorithm in Machine Learning for Healthcare Application (member) (RDU222708 and UIC221521- Active)

14. 2022 - Stochastic Modelling of The Covid-19 Outbreak Under Non-Pharmaceutical Intervention (NPI) Enforcement (member) (RDU223008-Active)

15. 2021 - Formulation of Forecasting Model for Tourism Industry in Malaysia (member) (RDU210346 – Active)

16. 2021 - Development of A Predictive Algorithm for Heart Disease Using an Ensemble of Logit Model and Nearest Neighbour Tree Method Based on Smartwatch Data (member) (RDU210328 – Active)

17. 2021 - Kajian Semula Had Al-Kifayah Negeri Pahang 2021 (UIC210821 – Active)

18. 2019 - Formulation of Predictive Inference Modelling of Cardiac Markers to Diagnose Heart Function. (Principal Investigator) (RDU1901190 –FRGS active).

19. 2019 – Application of Statistical Classifiers in Modelling and Prediction of Cardiovascular Diseases (CVDs) using Newly Devising Score System. (Principal Investigator) (PGRS190350 – completed).

20. 2019 - Risk Based Inspection Gui (member) (UIC191004 – active).

21. 2019 - A Robust Model of Network Topology for Survival Analysis Considering Censored Data. (member) (RDU1903124 – active)

22. 2017 – Nonparametric Predictive Inference for Diagnostic Accuracy. (Principal Investigator) (RDU170359 – completed)

23. 2017 - Robustifying Hotelling T^2 Statistic for Monitoring the Stability of Currency Exchange Rate During Global Financial Crisis. (member) (RDU1703268 - completed)

24. 2016 – Nanoparametric Prediction Inference for Diagnostic Accuracy. (Principal Investigator)

(RDU161118 - completed)

25. 2016 – Predictive Inference with Copulas for Bivariate Data (PhD Research)

26. 2009 - A Comparative Study on Box-Jenkins and GARCH Models in Forecasting Crude Oil Prices, (member), Vot RDU 090307.

27. 2008 - The Impact of Student's Behaviour Toward Mathematics on Their Performance in Mathematics Courses, (Leader- Siti Fatimah Ahmad Zabidi), Vot RDU 080106.

28. 2007 - Censored Survival Data Analysis using EM Algorithm, Master Dissertation.

29. 2005 - Multiple Regression Analysis, Final Year Project (Degree).

REVIEWER
1. Intelligent Automation & Soft Computing (IF 3.401).
2. Neuroscience Research (IF 2.904).
3. Journal of Water Resources Management, Springer Netherlands (h-index 74, Q1).
4. Journal of Modern Applied Statistical Methods (JMASM) (h-index 19, Q3).
5. Malaysian Journal of Fundamentals and Applied Sciences (MJFAS) (h-index 9, Q4).
6. ZULFAQAR International Journal of Defence Science, Engineering & Technology (IJDSET).
7. International Journal of Computing Science and Mathematics (IJCSM).
8. Journal of Mathematics and Computing Science, 2020.
9. Journal of Quality and Measurement and Analysis.
10. Statistics, Optimization & Information Computing Journal.
11. International Seminar on Mathematics in Industry (ISMI 2017).
12. International Joint Conference 2017 (IJC 2017).
13. International Conference of Applied & Industrial Mathematics and Statistics (ICoAIMS 2017).
14. The 5th International Conference on Quantitative Sciences and its Applications (ICOQSIA 2018).
15. The 4th International Conference on the Applications of Science and Mathematics 2018 (SCIENMATHIC2018).
16. The International Conference on Science, Engineering & Technology (i-SET 2018) and The International Conference on Business Management & Social Sciences (i-BUSS 2018)
17. Simposium Kebangsaan Sains Matematik ke 26 (SKSM26) (2019).
18. The 4th International Conference on Computing, Mathematics and Statistics 2019.
19. International Joint Conference 2019 (IJC 2019).
20. 2nd International Conference of Applied & Industrial Mathematics and Statistics (ICoAIMS 2019).
21. The 4th Innovation and Analytic Conference and Exhibition 2019 (IACE 2019).
22. The 5th International Conference on Soft Computing in Data Science 2019 (SCDS2019).
23. 6th International Conference on Structure, Engineering & Environment (SEE), 2020.
24. 3rd Regional Academic Symposium on Science & Technology 2020 (3rd Regional ASST 2020)
25. Journal's reviewer in conjunction with the 3rd International Conference on Information and Communication Technology 2021 (ICICTM 2021).
26. Simposium Kebangsaan Sains Matematik ke 28 (SKSM28) (2021).
27. International Conference on the Application of Science and Mathematics 2021 (SCIEMATHIC 2021).
28. The 11th International Conference on Geotechnique, Construction Materials and Environment 2021 (GEOMATE 2021).
29. 4th Regional Academic Symposium on Science & Technology 2022 (4th Regional ASST 2022)

30. International Conference of Applied & Industrial Mathematics and Statistics (ICoAIMS 2022).

INVITED SPEAKER

- RBI Inspection Planning based on API 581, Trainer (2024)
- Invited Speakers, Seminar Kebangsaan Institut Statistik Malaysia Kali Ke 18 (SKISMXVIII 2024)
- Trainer, Bengkel Literasi Data Bagi Business Data Steward (BDS) Suruhanjaya Syarikat Malaysia - Projek Hala Tuju 6 – Data Management, 2023
- Trainers, API580/581 Risk Based Inspection (RBI) Training KANEKA (MALAYSIA) SDN BHD, 2022.
- The 5th ISM International Statistical Conference 2021, UTM, Johor.
- Invited Speakers, Simposium Kebangsaan Sains Matematik ke 26 (SKSM26) 2018, UMS, Sabah.
- Trainers, Risk Based Inspection (RBI) Training at Emery Oleochemicals, 2018

EXTERNAL EXAMINERS

1. Program Master by Research. Universiti Malaysia Sabah (2021)
2. Pakar Rujuk Penggubal Maklumat Kursus (MK) Program Ijazah Sarjana Muda Perguruan (PISMP) Bidang Matematik Institut VSD Guru Tahun 2021. Institut Pendidikan Guru (IPG)

SCIENTIFIC COMMITTEE/ NATIONAL ADVISORY BOARD
1. 7th International Forum on Industrial Design (IFID 2019)
2. 4th International Conference on Multi-Disciplinary Research Studies and Education (ICMDRSE-2021)

PROFESSIONAL MEMBERS

1. Professional Technologies (Ts.) - PT24070044
2. Graduated Technologies - GT24050558
3. Institute Mathematical Sciences (IMS) - 25236
4. Royal Statistical Society (RSS) – Fellow 209694
5. International Academy of Science and Engineering for Development (IASED) - 51050197
6. Persatuan Sains dan Mathematik (PERSAMA) – NS2020-2
7. Institute Statistical Malaysia (ISM) – 1139
8. Institute of Electrical and Electronics Engineers (IEEE) - 98180064

SUPERVISIONS

1. Main Supervisor, Amirah Hazwani Binti Roslin, Nonparametric Predictive Inference (NPI) for Predicting Forest Fires with Copula (PhD 2023 – Current, Active)

2. Main Supervisor, Nur Hidayah Binti Azmidi, Predicting Heart Disease Using A Hybrid Metaheuristic-Based Training of Echo State Network. (MSc 2023 – Current, Active)

3. Main Supervisor, Sharainie Binti Sahrin, Predictive Statistical Modelling on Enhancing Students' Performance using Hybrid Artificial Neural Network and Structural Equation Modelling (PhD 2021 – Current, Active)

4. Main Supervisor, Nur Zahirah Binti Md Noor, Predictive Modelling of Cardiovascular Diseases Considering Copula and Machine Learning Method (PhD 2021 – Current, Active)

5. Main Supervisor, Mirza Rizwan Sajid, Modelling of Cardiovascular Diseases (CVDs) and Development

of Predictive Heart Risk Score. (PhD 2017 – 2021, Graduated).

6. Main Supervisor, Gamil Abdulraqeb Abdullah Saeed, Development a Parametric Model for Grouped and Ungrouped Line Transect Data. (PhD 2016 – 2021, Graduated).

7. Main Supervisor, Nurfateha Binti Mohd Yamikazam, Online Learning in Higher Institution of Education During COVID-19: Enhancing POLISAS Students' Performance in Calculus Through Conceptual Knowledge. (MSc Mixed Mode 2020 – 2021, Graduated)

8. Co-Supervisor, Mohd Syafiq Asyraf Bin Suhaimi, Development of A Predictive Algorithm for Heart Disease using An Ensemble of Logit Model and Nearest Neighbour Tree Method Based on Smartwatch Data (MSc 2021 – Current, Active)

9. Co-Supervisor, Nurulhaida Binti Zakaria, New Formulation of A Robust Principal Component Analysis Algorithm in Machine Learning. (PhD 2021 – Current, Active)

10. Co-Supervisor, Siti Nur Avivah, The Comparison of PCA and 2DPCA to Identify the Image of Beef, Pork, and Adulterated Meat Based on The Probabilistic Neural Network (PNN) Classification. (MSc 2021-current).

11. Co-Supervisor, Mohd Khairul Hafiz Bin Khairuldin, Risk Based Inspection (RBI) : A Semi Quantitative Approach for Inspection Planning Using AP1581 Methodology. (MSc 2020-Current).

12. Co-Supervisor, Muhammad Fahmi Bin Ahmad Zuber, Stochastic Modelling Of The Transmission Dynamic Of Covid 19 Outbreak In Malaysia: From Data To Intervention. (PhD 2020- Current).

13. Co-Supervisor, Sarah Alyaa Binti Mohd Khaidi. Development of Forecasting Model for New Tourism Product Demand in Malaysia. (MSc 2018 – 2021, Completed).

14. Co-supervisor, Nur Hidayah Said, Analysis of Rainfall Patern in Pahang using Frequencies Analysis. SEM I 2009/2010. (Degree Final Year Project, Completed)

15. Co-supervisor, Gan Sin Yi, Mathematical Modelling to Predict surface Roughness in Milling Process. SEM I 2008/2009. (Degree Final Year Project, Completed)

CONSULTATIONS
1. KANEKA (M) Sdn Bhd– Risk-based inspection (RBI) for pressure equipment. (Completed)
2. EMERY Oleochemicals (M) Sdn Bhd – Risk-based inspection (RBI) for pressure equipment. (Completed)
3. Pusat Zakat Pahang - Kajian Semula Had Al-Kifayah Negeri Pahang 2021 (Completed)
4. HTAA, KKM - Predictive Model of Heart Risk Score. (On-going)
5. Projek Asnaf (Completed)
6. Training of Trainers – UMP Mathematical Olympiad Training. (Completed)
7. Math Bootcamp (Completed)
8. KANEKA (M) Sdn Bhd- Integrated Security Management System for Kaneka (On-going)
9. Favoriot Sdn Bhd – Improve Smartwatch Algorithm and Employee monitoring/Tourism Planner (On-going)
10. Prodata, FGV - Analytical Dashboard and Storage Data optimization (On-going)
11. Sycarda Sdn Bhd-Recommendation Engines (in process)
12. Sycarda Sdn Bhd-SYCARDA Data Sell Platform (in process)
13. Affin Bank Berhad – Segmentation Customer Modelling (in process)

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1. GUI of Predictive Inference of Forest Fire Spots (PIFFS) (Submitted-2024) (Leader)
2. Predictive Inference of Forest Fire Spots with Dependence Structure- LY2024C02210 (Leader)
3. Non-Laboratory Health Risk Score (NLHRS) - LY2021W00499 (leader)
4. The Transmission Dynamic of the COVID 19 Outbreak: A Predictive Dashboard - LY2021W00276 (members)
5. Predictive Model for Pandemic Outbreaks in Response to COVID-19 – LY2021000041 (members)
6. Excel Spreadsheet of Risk Based Inspection API 581 Third Edition – LY2020006760 (members)
7. Excel Spreadsheet of Damage Mechanism Risk Based Inspection Based on API 581 Second Edition – LY2021000042 (members)

RESEARCH AWARDS

1. **Silver Medal**, Creation, Innovation, Technology & Research Exposition 2024 (CITReX 2024). *Nonparametric Predictive Inference (NPI) Forest Fire Dashboard.* (Project Leader)

2. **Silver Medal**, Creation, Innovation, Technology & Research Exposition 2024 (CITReX 2024). *RISKSmart Learning System.* (Project Members)

3. **Silver Medal**, Creation, Innovation, Technology & Research Exposition 2023 (CITReX 2023). *Unveiling Covid-19 Insights: Estimating Epidemiological Parameters with A Markov Chain Monte Carlo GUI.* (Project Members)

4. **Bronze Medal**, Creation, Innovation, Technology & Research Exposition 2023 (CITReX 2023). *Web-Based for Diabetes and Cardiovascular Disease Risk Prediction Using Automated Machine Learning.* (Project Members)

5. **Silver Medal**, International Invention, Innovation & Technology Exhibition (ITEX), Malaysia (13-15 Dec 2021) with the project entitled *"Pandemic Preparedness Simulation Tool"* (Project Members)

6. **Silver Award** in Creation, Innovation, Technology & Research Exposition 2021 (CITReX 2021). *Development A Predictive Heart Risk Score: A Predictive Mobile App.* (Project Leader)

7. **Gold Award** in Creation, Innovation, Technology & Research Exposition 2021 (CITReX 2021). *The Transmission Dynamic of The Covid 19 Outbreak: A Predictive Dashboard.*

8. Augerah PERSAMA 2021, **Hadiah Utama Kategori Rekacipta** *'Predictive Model for Pandemic Outbreaks: In response to Covid 19'.*

9. **Best Paper Award,** 17th Kuala Lumpur International Communication Education Language & Social Science Conference and 13th Kuala Lumpur International Islamic Studies & Civilisations Conference 2021. Nurfateha Mohd Yamikazam & Noryanti Muhammad. An Inferential Study on Online Learning During Covid-19 in Calculus Through Conceptual Knowledge. *Journal of Education and Social Sciences*, Vol. 17, Issue 1, (June) ISSN 2289-9855.

10. **Gold Awards** in Malaysia Technology Expo (MTE Special Edition-2020) COVID-19 International Innovation Awards. *Predictive Model for Pandemic Outbreaks: In Response to COVID-19.*

11. **Bronze Medal** in Creation, Innovation, Technology & Research Exposition 2020 (CITReX 2020). *New Tourism Product Forecasting: An integration of Bass and Grey.*

12. **Silver Award** in in Creation, Innovation, Technology & Research Exposition 2019 (CITReX 2019). *Risk Based Inspection (RBI) Spreadsheet: API 581 Third Edition.*

13. **Silver Medal** in Creation, Innovation, Technology & Research Exposition 2011 (CITReX 2011). *Forecasting Crude Oil Prices Using Time Series Modelling.*

BOOKS, MODULES, EDITORIALS

1. Essential Engineering Mathematics Module (submitted). (2021) UMP Publisher.

2. Copula modelling and its application (edited book)- (published) (2023). UTM Publisher.

3. Statistical Tables and Formulae 2.0, Nor Hafiza.h Moslim, Farahanim Misni, **Noryanti Muhammad,** Nor Azila Che Musa, Noor Fadhilah Ahmad Radi, Roslinazairimah Zakaria, Siti Roslindar Yaziz, 2018, UMP publisher. ISBN 978-967-0120-71-3.

4. 1st International Conference on Applied & Industrial Mathematics and Statistics 2017 (ICoAIMS 2017) (2017) IOP Publisher.

5. Applied Statistics Module, Nor Hafizah Moslim, Roslinazairimah Zakaria, Farahhanim Misni, Siti Roslindar Yaziz, **Noryanti Muhammad** and Siti Zanariah Sateri, 2013, UMP publisher. ISBN 978-967-0120-94-2.

6. Statistical Tables, Nor Hafizah Moslim, Farahanim Misni, **Noryanti Muhammad,** Nor Azila Che Musa, Noor Fadhilah Ahmad Radi, Roslinazairimah Zakaria, Siti Roslindar Yaziz, 2013, UMP publisher. ISBN978-967-0120-71-3.

7. Research Design & Data Analysis in Social Science, Mohd Ghani Awang, Suriya Kumar S., **Noryanti Muhammad**, 2012, UMP publisher. ISBN 978 967 0210 34 8.

LIST OF PUBLICATIONS

Accepted
1. Predicting Forest Fire Spots using Nonparametric Predictive Inference with Parametric Copula: Malaysia Case Study
2. Predictive Modelling on Household in Malaysia Using Machine Learning Approaches

Published

1. **Muhammad, N.**, Amin, M. N. M., & Adnan, R. A. (2025). Predictive Modelling on Competitor Analysis Performance by using Generalised Linear Models and Machine Learning Approach. Journal of Advanced Research in Applied Sciences and Engineering Technology, 45(1), 51-59.

2. Anuar, S.N.A., **Muhammad, N.** and Firdaus, M.I., (2024), June. Identifying Potential Customer Using Graph Social Media Analytics. In Science and Information Conference (pp. 92-103). Cham: Springer Nature Switzerland.

3. Zakaria, N.N., Daud, H., Sokkalingam, R., Othman, M., Abdul Kadir, E., Mohd Aris, M.N., **Muhammad,**

N. and Maharani, W., 2024. Markov chain quasi-Monte Carlo method for forecasting fire hotspots in Sarawak, Malaysia. Environmental Science and Pollution Research, pp.1-12.

4. Khalif, K. M. N. K., **Muhammad, N.**, Aziz, M. K. B. M., Irawan, M. I., Iqbal, M., & Setiawan, M. N. (2024). Advancing machine learning for identifying cardiovascular disease via granular computing. *IAES International Journal of Artificial Intelligence*, *13*(2), 2433-2440.

5. Ramli, N. A., Suhaimi, M. S. A., & **Muhammad, N.** (2024). A Review on Predictive Model for Heart Disease using Wearable Devices Datasets. Applied Mathematics and Computational Intelligence (AMCI), 13(2).

6. Bala, A., Rashid, R. Z. J. A., Ismail, I., Oliva, D., **Muhammad, N.**, Sait, S. M., ... & Memon, K. A. (2024). Artificial intelligence and edge computing for machine maintenance-review. Artificial Intelligence Review, 57(5), 119.

7. Zuber, M. F. A., Rosli, N., & **Muhammad, N.** (2024, March). Estimation of the epidemiological parameter for the COVID-19 outbreak. In AIP Conference Proceedings (Vol. 2895, No. 1). AIP Publishing.

8. Sahrin, S., & **Muhammad, N.** (2024, March). Identifying factors that influence students' performance through multiple linear model. In AIP Conference Proceedings (Vol. 2895, No. 1). AIP Publishing.

9. Zakaria, N., Yusoff, W. N. S. W., & **Muhammad, N.** (2024, March). A comparative study of classical and robust principal component analysis in historical multivariate data. In AIP Conference Proceedings (Vol. 2895, No. 1). AIP Publishing.

10. Noor, N. Z. M., **Muhammad, N.**, & Sajid, M. R. (2024, March). Identifying risk factors of cardiovascular diseases through generalized linear model. In AIP Conference Proceedings (Vol. 2895, No. 1). AIP Publishing.

11. Khairuldin, M. K. H., Rosli, N., Razak, I. U. I. A., & **Muhammad, N**. (2024, March). Application of risk-based inspection using API 581 methodology to a pressure vessel in petrochemical plant. In AIP Conference Proceedings (Vol. 2895, No. 1). AIP Publishing.

12. Suhaimi, M. S. A., Ramli, N. A., & **Muhammad, N.** (2024, March). Heart disease prediction using ensemble of k-nearest neighbour, random forest and logistic regression method. In AIP Conference Proceedings (Vol. 2895, No. 1). AIP Publishing.

13. Kadir, E. A., Alomainy, A., Daud, H., Maharani, W., **Muhammad, N.**, & Syafitri, N. (2023). Multi Sensor Network System for Early Detection and Prediction of Forest Fires in Southeast Asia. In 2023 33rd International Telecommunication Networks and Applications Conference (pp. 190-195). IEEE.

14. Modelling, drying kinetics, and antioxidant properties of Bentong ginger based on different drying techniques. Subramaniam, S.D., Azman, N.A.B.M., Abdul Mudalip, S.K.B., ...Basrawi, F., **Muhammad, N.**B. Journal of Food Process Engineering., 2023, 46(2),

15. Parametrization of the Stochastic SIRD Model for COVID-19 Outbreak Using Markov Chain Monte Carlo Method Fahmi, M., Rosli, N., **Muhammad, N**. AIP Conference Proceedings, 2023, 2746(1),

16. Husnin, S.A.M., Mohd Jamil, N., Basit, K.S.A., **Muhammad, N.** (2023). Campus Reopening During The Covid-19: Ode-SIRD ModeL. Journal of Engineering Science and Technology, 18(3), 1650-1669.

17. **Muhammad, N.**, & Sajid, M. R. (2023, February). Formulation of risk prediction model for cardiovascular

diseases using conventional logistic regression analysis. In AIP Conference Proceedings (Vol. 2500, No. 1). AIP Publishing.

18. Iqbal, M., Setiawan, M. N., Irawan, M. I., Khalif, K. M. N. K., **Muhammad, N.**, & Aziz, M. K. B. M. (2022). Cardiovascular disease detection from high utility rare rule mining. Artificial Intelligence in Medicine, 131, 102347.

19. Mirza, R. S., Khan, A. A., Albar, H. M., **Muhammad, N.**, Sami, W., Bukhari, S. A. C., & Wajahat, I. (2022). Exploration of Black Boxes of Supervised Machine Learning Models: A Demonstration on Development of Predictive Heart Risk Score. Computational Intelligence and Neuroscience: CIN, 2022.

20. Mohd Jamil, N., Rosli, N., & **Muhammad, N**. (2022). Simulation of COVID-19 outbreaks via Graphical User Interface (GUI). Journal of Public Health Research, 11(1), jphr-2021.

21. Sajid, M. R., Almehmadi, B. A., Sami, W., Alzahrani, M. K., **Muhammad, N**., Chesneau, C., ... & Shahbaz, A. (2021). Development of Nonlaboratory-Based Risk Prediction Models for Cardiovascular Diseases Using Conventional and Machine Learning Approaches. International Journal of Environmental Research and Public Health, 18(23), 12586.

22. Fahmi, M., Zuber, A., Rosli, N., & **Muhammad, N**. (2021). The Transmission Dynamic of the COVID 19 Outbreak: A Predictive Dashboard. Sains Malaysiana, 50(11), 3439-3453.

23. Jamil, N. M., Rosli, N., & **Muhammad, N**. (2021). Simulation of COVID-19 outbreaks via Graphical User Interface (GUI). Journal of Public Health Research.

24. Saidi, A. Y. N., Ramli, N. A., **Muhammad, N.**, & Awalin, L. J. (2021, July). Power outage prediction by using logistic regression and decision tree. In Journal of Physics: Conference Series (Vol. 1988, No. 1, p. 012039). IOP Publishing.

25. Sajid, M. R., **Muhammad, N**., Shahbaz, A., & Zakaria, R. (2021). A statistical study on the prevalence of physical inactivity among cardiovascular diseases patients: The predictive role of demographic and socioeconomic factors. Research Journal of Pharmacy and Technology, 14(7), 3679-3684.

26. Nurfateha binti Mohd Yamikazam and **Noryanti binti Muhammad** (2021). An Inferential Study on Online Learning During Covid-19 in Calculus Through Conceptual Knowledge. *Journal of Education and Social Sciences, Vol. 17, June 2021, Issue 1, 26-34.*

27. *Sajid, M. R., **Muhammad, N.**, Zakaria, R., Shahbaz, A., Bukhari, S. A. C., Kadry, S., & Suresh, A. (2021). Nonclinical Features in Predictive Modeling of Cardiovascular Diseases: A Machine Learning Approach. Interdisciplinary Sciences: Computational Life Sciences, 1-11.*

28. Wahab, M. N. A., Norshafariza Mamat & ***Muhammad, N.*** (2021). Kajian Profil Pencapaian Matematik Pelajar-Pelajar Sekolah Rendah Luar Bandar Dengan Prestasi Hati–HRV. *International Journal of Humanities Technology and Civilization*, 91-108.

29. Abu, N., Khaidi, S. M., & **Muhammad, N**. (2020). New tourism product forecasting–application of Bass Diffusion Model and Grey Forecasting Model. *Data Analytics and Applied Mathematics (DAAM), 1*(01), 37-43.

30. Sajid, M. R., **Muhammad, N.**, Zakaria, R., & Bukhari, S. A. C. (2020). Modifiable risk factors and overall cardiovascular mortality: Moderation of urbanization. *Journal of Public Health Research, 9*(4).

31. Sajid, M. R., **Muhammad, N.**, Zakaria, R., & Shahbaz, A. (2020, October). Validation of modified dietary habits instrument in cardiovascular diseases study. In *AIP Conference Proceedings* (Vol. 2266, No. 1, p. 090013). AIP Publishing LLC.

32. Kunna, M. A., Kadir, T. A. A., Remli, M. A., Ali, N. B. M., Moorthy, K., & **Muhammad, N**. (2020). An Enhanced Segment Particle Swarm Optimization Algorithm for Kinetic Parameters Estimation of the Main Metabolic Model of Escherichia Coli. *Processes*, 8(8), 963.

33. Sajid, M. R., **Muhammad, N.**, Zakaria, R., Shahbaz, A., & Nauman, A. (2020). Associated Factors of cardiovascular diseases in Pakistan: Assessment of Path analyses using warp partial least squares estimation. *Pakistan Journal of Statistics and Operation Research*, 265-277.

34. **Muhammad, N.**, Sajid, M. R., Zakaria, R., & Shahbaz, A. (2019). The mediating role of metabolic syndrome in cardiovascular diseases. In AIP Conference Proceedings (Vol. 2138, No. 1, p. 050020). AIP Publishing LLC.

35. Gamil A.A. Saeed, **Noryanti Muhammad** and Wan Nur Syahidah Wan Yusoff.(2019). Kernel Estimation in Line Transect Sampling for Parametric Model. ASM Sc. J., Vol. 12, Special Issue 5, 2019 for ICoAIMS2019

36. Yusoff, N., **Muhammad, N.**, & Liang, C. (2019). A Network Topology Approach in Survival Analysis. In Journal of Physics: Conference Series (Vol. 1358, No. 1, p. 012074). IOP Publishing.

37. Sajid, M. R., **Muhammad, N.**, & Zakaria, R. (2019). Construct Validation in Secondary Data: A Guideline for Medical Data Mining. In Journal of Physics: Conference Series (Vol. 1366, No. 1, p. 012115). IOP Publishing.

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51. S.F. Ahmad Zabidi, N. Md. Sarif, **N. Muhammad** & R. Khairuddin (2009) "A Preliminary Study of Attitudes Towards Mathematics Among the Students at Universiti Malaysia Pahang" International Conference on Teaching & Learning in Higher Education 2009, The Legend Hotel, Kuala Lumpur, 23 – 25 November 2009.

52. Ab. Rashid M.F.F., Gan S.Y., and **Muhammad N.Y.** (2009) Mathematical Modelling to Predict Surface Roughness in CNC Milling, *Proceedings of World Academy of Science, Engineering and Technology*, Volume 41, ISSN: 2070-3740.

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54. Zarina Mohd Khalid & **Noryanti Muhammad** (2008). MLE & Naïve EM Algorithm in the Estimation of Censored Survival Model Parameters: A Comparative Study. UTM Research Monograph.

55. **Muhammad, N.** and Zarina Mohd Khalid, Censored Survival Data Analysis Using Naïve EM Algorithm, *Prosiding Simposium Kebangsaan Sains Matematik ke-16 ,*3-5 Jun 2008.

POSTER PRESENTATION

1. Presented a poster at Durham Risk Day 2014 at Joachim Room, St Hild and St Bede College, (12 Nov 2014). (Title-Semi-parametric predictive inference for bivariate data: robustness against copula misspecification)

2. Presented a talk at Research Students' Conference in Probability, Statistics and Social Statistics (RSC 2014) at Nottingham (28 April - 01 May 2014). (Title - NPI with parametric copula).

3. Presented a talk at Northern Postgraduate Mini-Conference in Statistics 2014, Newcastle University (22-23 June 2014). (Title - NPI with nonparametric copula).

4. Presented a poster at Royal Statistical Society International Conference 2014 (RSS 2014) in City Hall, Sheffield (1-4 September 2014). (Title - NPI with copula)

5. Presented poster at Research Students' Conference in Probability, Statistics and Social Statistics (RSC 2013) at Lancaster (24-28 March 2013).

6. Presented poster at Royal Statistical Society International Conference 2013 (RSS 2013) in University of Northumbria, Newcastle (2-5 September 2013).

TEACHING EXPERIENCE

University Course (Institute Postgraduate Studies)
☐ UIS 1123 Inferential Statistics

Postgraduate (Master of Science - Industrial Mathematics)
☐ MSU 4113 Research Methodology
☐ MSU 4254 Statistical Modelling
☐ MSM5910 Dissertation I
☐ MSM5920 Dissertation II

Undergraduate (Degree)
- BSD3722 Data Science Project I
- BSD3724 Data Science Project II
- BSD4673 Risk Analysis
- BSD2712 Research Methodology
- BSD3443 Statistical Modelling and Simulation
- BSD 2423 Mathematical Statistics
- QMT 216 Introduction to Statistics (UiTM)
- BMM 1313 Computer Programming (C++)
- BMM 1123 Engineering Mathematics 2 (ODE)
- BMM 1113 Engineering Mathematics 1 (Vector Calculus)
- BMM 2122 Engineering Mathematics 4 (Applied Statistics)
- BPF 3313 Applied Statistics
- BCT2053 Applied Statistics
- BUM 2413 Applied Statistics

Undergraduate (Diploma)
- QMT 181 Introduction to Statistics (UiTM)
- DMM 1312 Computer Programming (C++)
- DMM 2122 Engineering Statistics
- DMM 1142 Engineering Mathematics 2 (Calculus)
- DCT1043 Foundation of Mathematics/Basic Mathematics
- DUM 2413 Statistics and Probability

Preparatory Intensive English for China Students

☐ PIE0001 Mathematics