

**CENTRE FOR MATHEMATICAL SCIENCES
UNIVERSITI MALAYSIA PAHANG**



DR. SITI ZANARIAH BINTI SATARI

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BIODATA:

Siti Zanariah Satari has been in the academic profession for more than ten years. She has experienced in teaching, developing syllabuss, and module writing for various mathematics subjects such as counting and probability, elementary statistics, applied statistics, storytelling and data visualization, fundamental discrete structure, discrete structure & applications, basic mathematics, calculus, industrial statistics, research methodology, data collection and analysis, and data design analysis for diploma, degree and master level students in Universiti Malaysia Pahang. She has a Ph.D in Statistics from Universiti of Malaya, and Master's degree in Mathematics (Statistics) from Universiti Teknologi Malaysia (UTM), and Bachelor's degree in Industrial Mathematics from Universiti Teknologi Malaysia (UTM). She also involved in research collaboration with different field of study such as social science and computing, as data analyst, mathematical modeler, and co supervisor. She has published six books under Penerbit UMP. She was the main author for Applied Statistics Module Version 3 (2018), Applied Statistics Module Version 2 (2017), Data Collection and Analysis Module for Engineering Postgraduate Students (2017), Applied Statistics Module New Version (2015), Applied Statistics Module (2014) and Calculus for Science & Engineering (2009), and a contributed author in Research Methodology for Social Science (2007).

EXPERT AREAS:

Applied Statistics, Data Analytics, Circular Statistics, Multiple Outliers Detection, Clustering, Regression, Error in Variables Model, and Statistical Applications in Education, Management, Environmental, Biological and Medical Studies.

RESEARCH INTEREST:

Her general interest is in Statistics and Data Analytis. For her bachelor degree, she wrote a comprehensive analysis for multiple regression method. During her master degree, she compared various multiple outliers' detection method using least squares and robust estimator (LMS & LTS). For her PhD, she focuses on the parameter estimation and outlier detection for some types of the circular model. Her main contributions have been in the areas of (i) circular statistics, (ii) circular regression model, (iii) functional relationship model for circular data, (iv) outlier detection for circular regression model and multiple linear regression model, (v) clustering algorithm for detecting multiple outliers, (vi) multiple regression method, and (vii) wind direction. She also interested in any collaboration research in any area which involved data analytics or statistical modeling.

ACADEMIC QUALIFICATIONS:

- 25th June 2015 : Ph.D in Statistics, Universiti of Malaya, Kuala Lumpur Malaysia.
Thesis Title - *Parameter Estimation and Outlier Detection for Some Types of Circular Model*
- 16th April 2005 : MSc. Mathematics, Universiti Teknologi Malaysia, Skudai Johor Malaysia.
Dissertation Title - *Comparison of Multiple Outliers Detection Using Least Squares and Robust Estimator (LMS & LTS)*

9th August 2003 : BSc. Mathematics (Industrial Mathematics), Universiti Teknologi Malaysia, Skudai
Johor Malaysia.
Final Year Project Title - *Multiple Regression Analysis*
1998 : SPM, SMKA Bandar Penawar, Kota Tinggi, Johor Malaysia.
1996 : PMR, SMK Tunku Abdul Rahman Putra, Kulai, Johor Malaysia.
1998 : UPSR, SK Felda Bukit Permai, Layang-Layang, Johor Malaysia.

WORK EXPERIENCES:

3 Sep 2019 – present : Senior Lecturer at Centre for Mathematical Sciences, UMP.
25th June 2015 – 2 Sep 2019 : Senior Lecturer at Faculty of Industrial Science & Technology, UMP.
2nd June 2008 – 24th June 2015: Lecturer at Faculty of Industrial Science & Technology, UMP.
20th Sept 2005 – 1st June 2008 : Lecturer at Faculty of Computer System & Software Engineering,
UMP.
28th March – 18th May 2005 : Attachment Teacher, SMK Layang-Layang Johor.
5th July – 4th Nov 2004 : Teaching Assistant (TA), Universiti Teknologi Malaysia, Skudai Johor.
26th Jan – 25th Feb 2004/ : Research Assistant (RA), Universiti Teknologi Malaysia, Skudai Johor.
1st April – 29th May 2004/
25th Nov – 31st Dec 2004
11th Mar – 17th May 2002 : Industrial Trainee, Research and Technology Analysis Department
(RTAD), Permodalan Nasional Berhad (PNB), Kuala Lumpur.

ADMINISTRATIVE POST:

20th Aug 2019 – 19th Aug 2021 : Head of Programme (Data Analytics), Centre for Mathematical
Sciences, UMP.
1 March 2018 – 19th Aug 2019 : Coordinator for the development of new Bachelor Degree
Programme, BApp.Sc (honours) Data Analytics.

ASSOCIATION MEMBERSHIPS:

1. Institut Statistik Malaysia (ISM No. 832): 2012 – present
2. PAKAD UMP (PAKAD NO. 188): 2015 – present

SOFTWARE EXPERT:

Microsoft Excel, Programming R and SPLUS, SAS, Minitab, SPSS, Programming C and C++, Matlab,
Maple, Python, Power BI, Tableau.

TEACHING:

Postgraduate (Master Mixed Mode) : MSM4213 Industrial Statistics
Postgraduate (Research) : PID1101/MID1101 Data Collection & Analysis (Speaker)
Undergraduate (Degree) : BSD1412 Counting and Probability, BSD1323 Storytelling and Data
Visualization, BUM2413/BCT2053 Applied Statistics, BCT1073
Fundamental Discrete Structure, BCT2083 Discrete Structure &
Applications, BCT1052 Calculus.
Undergraduate (Diploma): DCT1043 Foundation of Mathematics, DCT1053 Calculus,
DCT2063 Elementary Statistics, DCT2083 Statistics & Probability
Preparatory Intensive English for China Students: PIE0001 Mathematics
Secondary School: Mathematics Form 4, Science Form 4

AWARDS (ACADEMIC)

1. **Certificate of Excellence for excellent performance** in the Instructional Evaluation and
exceptional commitment towards teaching and learning:
– BUM2413 Applied Statistics (SEMII2018/2019, SEMII2017/2018, SEMI2017/2018,
SEMII2015/2016, SEMII2014/2015)

2. **Certificate of Excellence for good performance** in the Instructional Evaluation and exceptional commitment towards teaching and learning:
 - BUM2413 Applied Statistics (SEMI2015/2016, SEMI2016/2017, SEMII2016/2017, SEMI2018/2019)
 - DCT2083 Probability & Statistics (SEMII2010/2011)
 - BCT2083 Discrete Structure & Applications (SEMII2010/2011, SEMI2009/2010)
 - BCT2053 Applied Statistics (SEMII2009/2010, SEMII2008/2009, SEMII2007/2008, SEMII2006/2007)
 - BCT2083 Fundamental Discrete Structure (SEMI2008/2009)
 - DCT1043 Foundations of Mathematics (SEMI2008/2009, SEMI2006/2007)
3. **Teaching Certificate -Teaching in Higher Education: Principle and practices**, 1/1/2008.

AWARDS & ACHIEVEMENTS (SERVICE):

1. Anugerah Perkhidmatan Cemerlang Tahun 2016.
2. Keputusan Keseluruhan Aras IV (Gred A Komponen Generik dan Fungsional) Peperiksaan Penilaian Tahap Kecekapan (TK3) bagi Pensyarah Universiti DS45 UMP, 5 February 2010.
3. Sijil Perkhidmatan Cemerlang 2008. UMP.
4. Pengesahan Dalam Perkhidmatan DS45, 20 September 2006.

AWARDS (RESEARCH):

1. Silver Medal. Creation, Innovation, Technology & Research Exposition (CITREX) 2019 (12-13 February 2019). Multi-track towards Excellence in Academician's Career Pathways. Nor Alisa Mohd Damanhuri, Nasratun Masngut, **Siti Zanariah Satari**, Rozieana Khairuddin, Roslinazairimah Zakaria, and Mohd Rusllim Mohamed. National.
2. Silver Medal. Creation, Innovation, Technology & Research Exposition (CITREX) 2018 (7-8 February 2018). A New Integrated Assessment and Reporting Mechanism for Extra Curricular Activities (xCGPA). **Siti Zanariah Satari**, Rozieana Khairuddin, Nor Alisa Mohd Damanhuri, Roslinazairimah Zakaria, Wan Fatma Azura Wan Mahamood, Hanizam Abdul Kassim, Adzhar Kamaludin and Mohd Rusllim Mohamed. National.
3. Bronze Medal. Invention & Innovation Awards 2016, Malaysia Technology Expo 2016. Forecasting Gold Price using Hybrid of Backward ARIMA-GARCH for Malaysia Market. Siti Roslindar Yaziz, Roslinazairimah Zakaria, Noor Azlinna Azizan, Maizah Hura Ahmad, **Siti Zanariah Satari**. 18-20/2/2016.
4. Cendikia Bitara Award 2015 – Patent granted Category: Method of Estimating Fuel Consumption Cost. Noraziah Ahmad, Ahmed N. Abd alla, Mohd Amer M. Azhar, **Siti Zanariah Satari**, Mohd Affendy Omarkin, Roslina Mohd Sidek.
5. Cendikia Bitara Award 2015 – Merit Award Publication (Journal Category): A New Efficient Approximation for Concentration Parameter of Circular Data. **S.Z. Satari**, A.G. Hussin, and Y.Z. Zubairi. (2015). *Chiang Mai J. Sci.*, 42(2): 528-537. (ISI with IF=0.371)
6. Gold Medal. Creation, Innovation, Technology & Research Exposition (CITREX) 2015 (9-10 March 2015). Forecasting Malaysia Gold Price Using Hybrid ARIMA With Symmetric GARCH Modelling. Siti Roslindar Yaziz, Noor Azlinna Azizan, **Siti Zanariah Satari**, Roslinazairimah Zakaria, Maizah Hura Ahmad. National.
7. Certificate. International Exposition of Research and Invention Institutions of Higher Learning 2009 (PECIPTA). Fuel Consumption Cost Estimator (FCCE). Noraziah Ahmad, Mohd Amer M. Azhar, Mohd Affendy Omarkin, Norrozila Sulaiman, Ahmed N. Abd alla, Roslina Mohd Sidek, **Siti Zanariah Satari**. 8-10 October 2009. KL Convention Centre. International.
8. PENERIMA HADIAH SANJUNGAN 2008 Malam Anugerah Cendikia Bitara 2008, UMP KATEGORI PENERBITAN (JURNAL): Fuel Consumption Cost Estimator (FCCE), A. Noraziah, M.A. Amer, A.N. Abd Alla and **S. Zanariah**, Research Journal of Applied Sciences 3 (7): 496-499, 2008, ISSN:1815-932X, Medwell Journals, 2008.

PATENTS/COPYRIGHTS:

1. **Copyright: Exhibit UMP-1, 11 May 2015.** Forecasting Malaysia Gold Price Using Hybrid ARIMA with Symmetric GARCH Modeling (Backward ARIMA-GARCH in Forecasting Gold Price for Malaysia Market). Siti Roslindar Yaziz, Roslinazairimah Zakaria, Noor Azlinna Azizan, Maizah Hura Ahmad, **Siti Zanariah Satari**.
2. **Patent:** P.T/TMI/PT07.13/APP/2106/DVD. Method of Estimating Fuel Consumption Cost. Noraziah Ahmad, Ahmed N. Abd alla, Mohd Amer M. Azhar, **Siti Zanariah Satari**, Mohd Affendy Omardin, Roslina Mohd Sidek. Duration: 16 September 2009 – 16 September 2029.

THESES:

1. **S.Z. Satari.** (2015). *Parameter Estimation and Outlier Detection for Some Types of Circular Model*, Unpublished Doctoral Thesis, University of Malaya.
2. **S.Z. Satari.** (2004). *Comparison of Multiple Outliers Detection Using Least Squares and Robust Estimator (LMS & LTS)*, Unpublished Master Dissertation, Universiti Teknologi Malaysia.
3. **S.Z. Satari.** (2003). *Multiple Regression Analysis*, Unpublished Undergraduate Final Year Project, Universiti Teknologi Malaysia.

PUBLISHED PAPERS IN RESEARCH:

1. Di N.F.M., **Satari S.Z.**, and Zakaria R. (2019). *Outlier Detection In Circular Regression Model Using Minimum Spanning Tree Method*. J. Phys. Conf. Ser. **1366** 012102.
2. Sharifah Sakinah Syed Abd Mutalib, **Satari S.Z.**, and Wan Nursyahidah Wan Yusoff. (2019). A New Robust Estimator to Detect Outliers for Multivariate Data. J. Phys. Conf. Ser. **1366** 012104.
3. **Satari S.Z.**, Di N.F.M., and Zakaria R. (2019). *Single-linkage Method to Detect Multiple Outliers with Different Outlier Scenarios in Circular Regression Model*. AIP Conference Proceedings **2059**, 020003.
4. **Satari S.Z.**, Di N.F.M., and Zakaria R. (2017). *The Multiple Outliers Detection Using Agglomerative Hierarchical Methods In Circular Regression Model*. Journal of Physics: Conference Series **890** 012152.
5. Di N.F.M., **Satari S.Z.**, and Zakaria R. (2017). *Detection of Different Outlier Scenarios In Circular Regression Model Using Single-Linkage Method*. Journal of Physics: Conference Series **890** 012127.
6. Zakaria R., Radi, N.F.A., and **Satari S.Z.** (2017). *Extraction Method Of Extreme Rainfall Data*. Journal Of Physics: Conference Series **890** 012154.
7. Radi N.F.A., Zakaria R., and **Satari S.Z.** (2017) *Generating Monthly Rainfall Amount Using Multivariate Skewt Copula*. Journal of Physics: Conference Series **890** 012133.
8. Di N.F.M. and **Satari S.Z.** (2017). *The Effect of Different Distance Measures in Detecting Outliers using Clustering-based Algorithm for Circular Regression Model*. AIP Conference Proceedings 1842, 030016.
9. Azman M.A.-Z., Zakaria R., **Satari S.Z.**, and Radi, N.F.A. *Entropy of Stable Seasonal Rainfall Distribution in Kelantan* (2017). AIP Conference Proceedings 1842, 020002.
10. Radi N.F.A., Zakaria R., **Satari S.Z.**, and Azman M.A.-Z. (2017). *Spatial Dependence and Asymptotic Independence of Extreme Rainfall*. AIP Conference Proceedings 1842, 020003.
11. **Satari S.Z.**, Zubairi Y.Z., Hussin A.G., and Hassan S.F. (2015). Some Statistical Characteristic of Malaysian Wind Direction Recorded at Maximum Wind Speed: 1999-2008. *Sains Malaysiana* 44(10): 1521–1530. **(ISI with IF=0.446)**
12. **Satari S.Z.**, Hussin A.G., and Zubairi Y.Z. (2015). A New Efficient Approximation for Concentration Parameter of Circular Data. *Chiang Mai J. Sci.*, 42(2): 528-537. **(ISI with IF=0.371)**
13. **Satari S.Z.**, Hussin A.G., Zubairi Y.Z., and Hassan S.F. (2014). A new functional relationship model for circular variables. *Pakistan Journal of Science*, 30(3): 397-410. **(ISI with IF=0.140)**
14. Hassan S.F., Zubairi Y.Z., Hussin A.G., and **Satari S.Z.** (2014). Some confidence intervals for large concentration parameter in von Mises distribution. *Pakistan Journal of Science*, 30(2), 273-284. **(ISI with IF=0.140)**

15. Mohamed, Rozlina and **Satari, Siti Zanariah** (2009). Resource Discovery Mechanisms for Peer-to-peer Systems. *Second International Conference on Computer and Electrical Engineering, Vol 2, Proceedings IEEE*, 100-104, ISSN:978-0-7695-3925-6. **(Indexed by ISI)**.
16. Noraziah, M.A. Amer, A.N. Abd Alla and **S. Zanariah** (2008). Fuel Consumption Cost Estimator (FCCE). *Research Journal of Applied Sciences*, 3 (7): 496-499, ISSN:1815-932X. Medwell Journals. **(Indexed by SCOPUS)**.
17. Fakharudin, A.S, Embong, A., Hamid, R.A., Hamza, M.A.M., Ajid, K.A., Ali, N.M., **Satari, S.Z.**, Sulaiman, J. and Zain, W.S. W. Md. (2007). Optimisation of fermentation process using data mining techniques for small-medium industry. International Conference on Intelligent and Advanced Systems, ICIAS 2007, Article number 4658389: 273-275. **(Indexed by SCOPUS)**.

PUBLISHED PAPERS IN TEACHING AND LEARNING:

1. **Satari S.Z.**, Damanhuri N.A.M., Khairuddin R., and Zakaria R. (2019) Descriptive Analysis of Extra-Curricular Program Outcome Attainment: A Case Study of Universiti Malaysia Pahang. *ASM Sc. J.*, 12, Special Issue 5 for ICoAIMS2019, 91-97.
2. Zakaria R., **Satari S.Z.**, Damanhuri N.A.M., and Khairuddin R. (2019). *Descriptive Analysis of Student's CGPA: A case study of Universiti Malaysia Pahang*. IOP Conference Series: Materials Science and Engineering **469** (1) 012100. Best Award Paper in IBUSS2018.
3. MNM Kahar, AM Safri, **SZ Satari**, MF Zolkipli. (2007). Password Usage: An Analysis in Academic Institution. National Conference of Software Engineering & Computer System.
4. **Satari S.Z.**, Khairuddin R., Damanhuri N.A.M., and Zakaria R. An Integrated Assessment and Reporting Mechanism for Extra Curricular Activities at University Level. Paper accepted for publication in book chapter (IPPTN USM GHEF Book 2019).

PUBLISHED BOOKS/MODULES:

1. Applied Statistics Module Version 3. **Siti Zanariah Satari**, Noryanti Muhammad, Siti Roslindar Yaziz, Norhafizah Moslim, Roslinazairimah Zakaria and Farahanim Misni. 2018. Penerbit UMP.
2. Applied Statistics Module Version 2. **Siti Zanariah Satari**, Noryanti Muhammad, Siti Roslindar Yaziz, Norhafizah Moslim, Roslinazairimah Zakaria and Farahanim Misni. 2017. Penerbit UMP.
3. Data Collection and Analysis Module for Engineering Postgraduate Students. **Siti Zanariah Satari**. 2017. Penerbit UMP.
4. Applied Statistics Module New Version. **Siti Zanariah Satari**, Chuan Zun Liang, Farahanim Misni, Norhafizah Moslim, Noryanti Muhammad, Roslinazairimah Zakaria, and Siti Roslindar Yaziz. 2015. Penerbit UMP.
5. Applied Statistics Module. Norhafizah Moslim, Farahanim Misni, Noryanti Muhammad, Roslinazairimah Zakaria, Siti Roslindar Yaziz, and **Siti Zanariah Satari**. 2014. Penerbit UMP.
6. Calculus for Science & Engineering. **Siti Zanariah Satari**, Mohd Nizam Mohmad Kahar, and Norazaliza Mohd Jamil. 2009. Penerbit UMP.
7. Research Methodology for Social Science. Mohd Ghani Awang, Suriya Kumar S., and **Siti Zanariah Satari**. 2007. Penerbit UMP.

UNPUBLISHED MODULES:

1. Discrete Structure & Applications Module for Computer Science Students. **Siti Zanariah Satari**, Norazaliza Mohd Jamil, and Nor Hafizah Moslim. 2011. FIST UMP.
2. Fundamental Discrete Structure Module for Computer Science Students. Norazaliza Mohd Jamil, **Siti Zanariah Satari**, and Nor Hafizah Moslim. 2011. FIST UMP.

MANUSCRIPTS IN PREPARATION:

1. **S.Z. Satari**, Di N.F.M., A.G. Hussin, and Y.Z. Zubairi. Comparative Study of Clustering Based Outliers Detection Methods in Circular Regression Model.
2. **Satari S.Z.**, Khairuddin R., Damanhuri N.A.M., and Zakaria R. An Integrated Assessment and Reporting Mechanism for Extra Curricular Activities at University Level. Paper presented in 6th

- global Higher Education Forum 2018 (GHEF6.0), 8-10 October 2018, Le Meridean Putrajaya. Full paper submitted for publication.
3. Damanhuri N.A.M., **Satari S.Z.**, Khairuddin R., and Zakaria R. Developing Multitrack towards Excellence UMP Academician's Career Path. Paper presented in 6th global Higher Education Forum 2018 (GHEF6.0), 8-10 October 2018, Le Meridean Putrajaya. Full paper submitted for publication.
 4. Di N.F.M., **Satari S.Z.**, and Zakaria R. Outlier Detection at v and u Spaces in Circular Regression Model using Single-linkage Algorithm. Paper presented in The 4th ISM International Statistical Conference (*ISM-IV*), 1-2 August 2018. Full paper submitted for publication.
 5. Sharifah Sakinah Syed Abd Mutalib, **Siti Zanariah Satari** and Wan Nur Syahidah Wan Yusoff. A Review on Outlier Detection Method for Multivariate Data. Paper presented in The 4th ISM International Statistical Conference (*ISM-IV*), 1-2 August 2018. Full paper submitted for publication.
 6. Muhammad Az-zuhri Azman, Roslinazairimah Zakaria and **Siti Zanariah Satari**. Simulation Study of Adjusted Spatial Weighting Method to Estimate Missing Rainfall Data. Paper presented in National Symposium on Mathematical Sciences (SKSM 2018), 28-29 November 2018. Full paper submitted for publication in ASM Sci. J.Special Issue.

CONFERENCE PRESENTATIONS:

1. **Satari S.Z.**, Damanhuri N.A.M., Khairuddin R., and Zakaria R. Descriptive Analysis of Extra-Curricular Program Outcome Attainment: A Case Study of Universiti Malaysia Pahang. 2nd International Conference on Applied & Industrial Sciences & Technology (ICOAIMS2019), The Zenith Hotel Kuantan, 23-24 July 2019, Oral Presenter.
2. **Satari S.Z.**, Khairuddin R., Damanhuri N.A.M., and Zakaria R. *An Integrated Assessment and Reporting Mechanism for Extra Curricular Activities at University Level*. 6th global Higher Education Forum 2018 (GHEF6.0), Le Meridean Putrajaya, 8-10 October 2018, Oral Presenter.
3. **Satari S.Z.**, Di N.F.M., and Zakaria R. *Single-linkage Method to Detect Multiple Outliers with Different Outlier Scenarios in Circular Regression Model*. International Conference on Science, Engineering & Technology (i-SET 2018), University of Muhammadiyah, Aceh Indonesia, 2-3 May 2018, Oral Presenter.
4. **Satari S.Z.**, Di N.F.M., and Zakaria R. *The multiple outliers detection using agglomerative hierarchical methods in circular regression model*. 1st International Conference on Applied & Industrial Sciences & Technology (ICOAIMS2017), Vistana Kuantan City Centre, 8-10 August 2017. Oral Presenter.
5. **Satari S.Z.**, Khairuddin R., Damanhuri N.A.M., Zakaria R., Kamaludin A., and Mohamed M.R. *A New Integrated Assessment and Reporting Mechanism for Extra Curricular Activities*. iCGPA International Conference (iIC 2017), Hotel Istana Kuala Lumpur, 17-18 July 2017. Poster Presentation.
6. **Satari S.Z.**, Zubairi Y.Z., and Hussin A.G. *Statistical Analysis of Malaysian Wind Direction Data Recorded at Maximum Wind Speed for Two Monsoon Seasons*. 3rd ISM International Statistical Conference 2016, UM Malaysia, 9-11 August 2016. Oral Presenter.
7. **Satari S.Z.**, Zubairi Y.Z., and Hussin A.G. *Multiple outliers detection in circular regression models using clustering algorithm*. 2nd ISM International Statistical Conference 2014, Kuantan Malaysia, 12-14 August 2014. Oral Presenter.
8. **Satari S.Z.**, Hussin A.G., and Zubairi Y.Z. *Confidence interval for error concentration parameter of circular regression model*. International conference on applied analysis and mathematical modelling ICAAMM2013, Istanbul Turkey, 2-5 June 2013. Oral Presenter.
9. **Satari S.Z.**, Hussin A.G., and Zubairi Y.Z. *On estimation of concentration parameter for circular regression model*. 12th Islamic Countries Conference on Statistical Sciences ICCS, Doha Qatar 19-22 December 2012. Oral Presenter.
10. **Satari S.Z.**, Hussin A.G., and Zubairi Y.Z. *Power Series Expansion of Mean Resultant Length in Circular Distribution*. 1st ISM International Statistical Conference 2012, Johor Baharu Malaysia, 4-6 September 2012. Oral Presenter.

11. **Satari S.Z.** and R. Adnan. *The Multiple Outliers Detection Procedure using Clustering and Multihalver*. 12th National Mathematical Science Symposium, UIAM, 23-24 December 2004. Oral Presenter.
12. **Satari S.Z.** and R. Adnan. *The Multiple Outliers Detection Procedure using Clustering and Multihalver*. Symposium on Science and Mathematics 2004, UTM, 14-15 December 2004. Oral Presenter.

SUPERVISIONS (ONGOING):

1. Nur Faraidah Binti Muhammad Di (PSS15002). Clustering-Based Procedures for Identifying Multiple Outliers in Circular Model with Application to Wind Direction Data. PhD (Statistics) candidate. 5/11/2015 - present. **Main supervisor.**
2. Sharifah Sakinah Bt Syed Abd Mutalib (PSS18002). Robust Clustering Outlier Detection Algorithm for Multivariate Data. PhD (Statistics) candidate. 21/2/2018 - present. **Main supervisor.**
3. Nursyahirah Binti Zulkipli. Clustering-Based Procedures for Identifying Multiple Outliers in a Univariate Circular Biological Data. PhD (Statistics). (PSS19002). 16/10/2019 - present. **Main supervisor.**

SUPERVISIONS (COMPLETED):

1. Noor Fadhilah Binti Ahmad Radi (PSS13001). A Spatial Frequency Analysis of Extreme Rainfall Modelling. 1/12/2015 -28/3/2018. PhD (Statistics). **Co supervisor.**
2. Azmi Raif Nur Abd Wahab. Housing Loan Approval System Using Backward Propagation. Projek Sarjana Muda SEM II 2010/2011. **Co supervisor.**
3. Tay Chze Huat. Housing Loan Approval System Using Regression Method. Projek Sarjana Muda SEM II 2010/2011. **Co supervisor.**
4. Ku Boon Yen. Optimal Solution System For Transportation Problem. Projek Sarjana Muda SEM II 2008/2009. **Co supervisor.**
5. Mohd Amer Mohd Azhar. Fuel Consumption Cost Estimator. Projek Sarjana Muda SEM I 2008/2009. **Co supervisor.**
6. Mohd Usaid Johan Aruphataraju. Newspaper Sale Prediction System. Projek Sarjana Muda SEM II 2007/2008. **Co supervisor.**
7. Nabilah Khairiyah Shahabudin. Mobile Checking Item Application. Projek Sarjana Muda SEM II 2007/2008. **Co supervisor.**

RESEARCH GRANTS (PI):

1. Formulation of Clustering-Based Procedure for Identifying Multiple Outliers in Univariate Circular Biomedical Data. FRGS. RDU1901168, 01/09/2019 - 31/08/2021, RM24850. **ONGOING.** Applied Science.
2. Clustering-Based Procedures For Identifying Multiple Outliers In Univariate Circular Data For Biological Data. UMP Research Grant. RDU190363, 25/06/2019 - 24/06/2021, RM70100. **ONGOING.** Applied Science.
3. A New Integrated Assessment And Reporting Mechanism For Extra Curricular Activities. Teaching and Learning UMP Research Grant. RDU1703272, 30/06/2017-29/06/2019, RM24999. **COMPLETED & CLOSED.** Applied Science.
4. Development of Clustering-Based Procedures for Detection Multiple Outliers In Circular Model With Wind Direction Data Application. FRGS. RDU160117, 1/8/2016-31/7/2018, RM65500. **COMPLETED & CLOSED.** Applied Science.

RESEARCH GRANTS (MEMBER):

1. Formulation of The Sustainable Educational Development Model (SEDM) to Evaluate Workforce Contribution Based On Migrant Labours in Malaysia. FRGS UMP. RDU1901175. 01/09/2019 - 31/08/2021, RM75300. **ONGOING.** Social Science.
2. Kajian Tinjauan Perubahan Cuti Umum (Jumaat-Sabtu) Negeri Pahang 2019M/1440H. Industrial Grant UMP. UIC190706. 01/06/2019 - 01/06/2020, RM25500. **ONGOING.** Social Science.

3. New imputation method in handling the missing data in Error-in-Variable models. FRGS UM. 01/09/2019 - 31/08/2021, RM86000. **ONGOING**. Applied Science.
4. Developing New procedure on Spatial-Temporal of Max-Stable Model for Extreme Rainfall Data Modelling to Improve of Flood Risk Management. FRGS UM. 01/09/2019 - 31/08/2022, RM 104980. **ONGOING**. Applied Science.
5. An Integrated Team-Based Learning Methodology for Effective Learning in Computer Science Course. Teaching and Learning UMP Research Grant. RDU1803180. 30/12/2018 - 29/12/2020, RM25000, **ONGOING**. Applied Science.
6. Academic Talent Management System (ATMS) Rubric to Identify Multitrack Inclination for Academic Staff in Universiti Malaysia Pahang. Teaching and Learning UMP Research Grant. RDU1703275, 30/06/2017 - 29/12/2019, RM24700. **ONGOING**.
7. Rainfall Profile for Kuantan District. UMP Internal Research Grant. RDU1703208, 30/06/2017-29/06/2019, RM10000. **CLOSED**. Applied Science.
8. Web-Based Highland Agricultural Disease Diagnostic System. UMP Internal Research Grant. RDU090381, 01/5/2009-30/4/2010, RM27000. **CLOSED**. Applied Science.
9. The Development Of Study Skills Tools in Evaluating Student's Study Orientation And It's Relationship Towards Academic Performance. UMP Internal Research Grant. RDU070319, 04/01/2007-31/03/2008, RM14000. **CLOSED**. Social Science.
10. Optimisation of Fermentation Process in Small/Cottage Industry by Data Mining Techniques. UMP Internal Research Grant. RDU 070310, 04/01/2007-30/03/2009, RM50000. **CLOSED**. Applied Science.
11. Applying Data Mining Technique to classify Breast Cancer by Smooth Support Vector Machine. UMP Internal Research Grant. RDU 070362, 03/09/2007-09/02/2008, RM20000. **CLOSED**. Applied Science.
12. Tertiary Level ESL Learners Vocabulary Learning: The Effects of Vocabulary Activities among UMP Students. UMP Internal Research Grant. RDU100374, 01/09/2010-31/08/2012, RM8436. **CLOSED**. Social Science.

PROFESSIONAL SERVICES:

1. Subject matter expert untuk kursus penyelidikan IPS: Data Collection and analysis (Engineering), Sem I 2010/2020. Face to Face Session via zoom application (5 December 2019)
2. Reviewer for 9 proceeding papers of the 2nd International Conference on Applied & Industrial Sciences & Technology (ICOAIMS2019).
3. Reviewer for 1 paper in Journal of Engineering UKM. 2019.
4. Reviewer for 2 papers in The 4th International Conference on Computing, Mathematics and Statistics 2019.
5. Judge for PSM Postgraduate Poster Presentation 2019.
6. Chairperson. 2nd International Conference on Applied & Industrial Sciences & Technology (ICOAIMS2019), The Zenith Hotel Kuantan, 23-24 July 2019.
7. Subject matter expert untuk kursus penyelidikan IPS: Data Collection and analysis (Engineering), Sem 1 2019/2020, Semester 2 2017/2018 dan sem 1 2018/2019, Face to Face Session via zoom application (15 may 2018, 5 December 2018)
8. Panel Program Applied & Industrial mathematics Postgraduate Poster Symposium, December 2018.
9. Mock Viva Panel. Humaira' Binti Abdul (PSS14002). 4/1/2018,.
10. AJK Penggubal Soalan Modul dan Fasilitator Bagi Kursus Penyelidikan Secara Massive Open Online Courses (MOOCs) IPS UMP, 23/11/2017-2018.
11. Open Course Ware development for Statistics and Probability, UMP, 2017.
12. Open Course Ware development for Discrete Mathematics and Applications, UMP, 2017.
13. Examiner for Proposal Defence (Mohammad Gamil), 5/9/2017.
14. Evaluator for 1 Internal Grant RDU (Azlyna Senawi), 5/7/2017.
15. Reviewer for 7 proceeding papers of the 1st International Conference on Applied & Industrial Sciences & Technology (ICOAIMS2017).

16. Reviewer for 1 proceeding paper of the International Joint Conference 2017 (IJC 2017).
17. Khidmat Nasihat Statistik berkenaan analisis data laporan Nilai Prestasi Tahunan (LNPT) UMP 2016 Kepada Jabatan Pendaftar UMP, 31/5/2017.
18. Ahli Kumpulan Pakar Bagi Penyediaan Dashboard dan Laporan bagi Pelan Strategik UMP 2016-2020.
19. Penceramah Program "Statistics is Awesome" Fasa 1 (19/35/2017) dan Fasa 2 (5/5/2017).
20. Wakil JK Teknikal ICGPA UMP ke Lawatan Benchmarking Amalan Penilaian Program Bukan Akademik UNITEN dan Politeknik Banting, 26/1/2017.
21. Speaker of Data Collection and Analysis Module for Institute of Postgraduate Studies UMP. 2016-2017.
22. Editor, Applied Statistics Module Version 2. 2017. Penerbit UMP.
23. Reviewer for ISM-III Conference Proceeding. 2016.
24. Wakil FIST, Sessi temubual dengan penyelidik UPM bagi kajian pelaksanaan penjarangan konstruktif bagi mengupayakan pendidikan berasaskan hasil (OBE), UMP, 29/12/2016.
25. Research consultation with PTMK - data dengue Selangor
26. Research consultation with PTMK - data telephone bill UMP & green data UMP
27. Pensyarah sambilan bagi program sepenuh masa FKP untuk staf MARA, BUM2413 Applied Statistics SEM II 20152016.
28. Prepare all materials and slides for Workshop on Constructing Objective & Essay Test Items for FIST 2016.
29. Speaker and Instructor, Data Analysis Workshop UMP, 5/10/2016.
30. Editor, Applied Statistics Module New Version. 2015. Penerbit UMP.
31. Coordinator Open Course Ware for Applied Statistics, UMP, 2015.
32. Instructor, Knowledge Sharing on Introduction to Basic Spreadsheet using Excel, UMP, 9/10/2015.
33. Fasilitator on SLT, Bengkel Pemurnian Teaching Plan Matematik FSTI, UMP, 12/2/2015.
34. Panel Program seminar Pelajar DCS FSKKP, UMP bagi subjek Elementary Statistics, 14/3/2010.
35. Reviewer, Anugerah PERSAMA 2009 (Kategori Buku Karya Asli).
36. Reviewer, International Conference of Software Engineering & Computer Systems, 2009.
37. Fasilitator Klinik Penyediaan Dokumen LOKI FSTI UMP, 14/10/2009.
38. Instructor and Fasilitator, IMS Training For Lectures, FSTI UMP, 15/7/2009.
39. Penilai praktikum 4 orang pensyarah, Kursus P&P kumpulan 4 UMP, Mac 2008.
40. Co Session Chair, National Conference on Software Engineering & Computer Science 2007 (Nacsces'07), Legend Resort Cherating, 20-21/8/2007.
41. Penyelia Latihan Industri SEM I 2006/2007 FSKKP UMP, 22/5-6/10 2006.

CONSULTATIONS:

1. Project Leader and Speaker of 2 Days Data Analysis Workshop for FSKKP Postgraduate Students, 8-9/12/2017. RM1200. UCT170323.

ADMINISTRATIONS:

1. Publication Committee in SKSM2020.
2. Penyelaras Bengkel Python bagi kursus-kursus BSD. 21March 2019, MSC Gambang
3. Registration Committee in the 2nd International Conference on Applied & Industrial Sciences & Technology (ICOAIMS2019).
4. Ahli Jawatankuasa Teknikal e-portfolio peringkat UMP, 2 Mei 2018 – 1 Mei 2020
5. Coordinator for the development of new Bachelor Degree Programme, BApp.Sc (honours) Data Science and Analytics. 1 March 2018- 28 February 2020.
6. Ahli Task Force (Skop Analisis Data) Lonjakan Strategik 5 Keunggulan Jenama UMP, 28/8/2017-2018.
7. Ahli kumpulan inovasi dan kreatif 2018, Jabatan Hal ehwal Pelajar & alumni (JHEPA)
8. Publication Committee in the 1st International Conference on Applied & Industrial Sciences & Technology (ICOAIMS2017), 8-10/8/2017.

9. AJK Teknikal Kajian Perbandingan CGPA Kemasukan ke UMP Dengan Pencapaian Pelajar, 2/5/2017-1/5/2018.
10. Felo Pusat Inovasi & Daya Saing Akademik (CAIC) UMP, 18/4/2017-17/4/2019.
11. PIC Technical Service & Consultation for Applied & Industrial Mathematics Research Cluster, FIST UMP, 25/2/2017-24/2/2019.
12. AJK Pembangunan Program Baharu Sarjana (Komputasi Industri), FIST UMP, 1/1/2017-31/12/2018.
13. AJK Pra-Siswazah Akademik Program Sains, FIST UMP, 1/1/2017-31/12/2018. As representative of Statistics Panel
14. AJK Teknikal iCGPA UMP, 2016--1 May 2018.
15. AJK Proceeding and Publication ICOAIMS 2017, 1/4/2016-1/10/2017.
16. AJK AQMS FSTI (PIC/Audit Prosedur Pentaksiran Penilaian Kerja Kursus), 2015-2016.
17. Face to Face Market Survey Bagi Program Baharu Sarjana Sains (Matematik Gunaan Industri) FSTI UMP di sekitar Gambang, Kuantan, Gebeng, Pekan dan Kemaman, 12/10-31/12/2015.
18. Ahli Pasukan Open Courseware (OCW) UMP, 26/6/2015-present.
19. Penyelaras Peperiksaan & IMS FSTI UMP, 1/4/2015-30/3/2017.
20. AJK Gerak Kerja MQA-01 Bagi Program Baharu Sarjana Sains (Matematik Gunaan Industri) FSTI UMP, 1/1/2015-31/12/2016.
21. AJK Pembangunan Program Baharu Sarjana Sains (Matematik Gunaan Industri) FSTI UMP, 1/1/2015-31/12/2016.
22. AJK Program Sains FSTI UMP, 1/1/2015-31/12/2016.
23. AJK Inovasi Pengajaran & Pembelajaran UMP, 15/8/2010-11/9/2011.
24. AJK Penyediaan brosur FSTI Pameran Akademik FSTI Program Karnival Akademik UMP, Sep 2009.
25. AJK Mesyuarat Pemantapan Pengajaran Dan Pembelajaran (Pentaksiran & Skema Pemarkahan), FSTI UMP, 11-12/7/2009.
26. AJK Peperiksaan & Penilaian, FSTI UMP, 21/4/2009 - 6/2009.
27. AJK Penapisan Kertas Soalan Peperiksaan, FSTI UMP, SEMESTER II SESI 2008/2009.
28. AJK Pembangunan Program Baru Sarjana Muda Matematik Industri, FSTI UMP, 13/11/2008 – 12/11/2010.
29. Penyelaras Pengurusan Pengajaran & Pembelajaran FSTI UMP, 3/11/2008 – 11/9/2011.
30. AJK Pelaksana Bengkel Penyelarasan, analisis dan pemurnian kursus sains UMP, Nov-Dis 2008.
31. Timbalan Bendahari Persidangan Antarabangsa Kejuruteraan Perisian & Sistem Komputer 2009 (ICSES'09) anjuran FSKKP UMP, Sep-Dis 2008.
32. Ahli JK e-learning UMP (Wakil FSTI), 4/8/2008.
33. JK Peperiksaan FSKKP UMP, 1/6/2007- 1/6/2008.
34. JK Penerbitan FSKKP UMP, 1/6/2007- 1/6/2008.
35. Timbalan Pengerusi, JK Latihan Industri FSKKP UMP, 1/6/2007- 1/6/2008.
36. AJK kecil kewangan & tajaan, Persidangan Kebangsaan Kejuruteraan Perisian & Sistem Komputer 2007 (NaCSES'07) anjuran FSKKP UMP, Jan-Ogos 2007.
37. Ketua Panel Bidang Kepakaran Matematik FSKKP, UMP, SEM I dan II 2006/2007.
38. AJK Program Baru (Program Sains Komputer (Ijazah) dan pembangunan kurikulum Program Ijazah Sains Komputer (Grafik)) FSKKP UMP, 21/3-31/12 2006 & 9/1/2007-8/1/2008.
39. AJK Penilaian semula Program di FSKKP UMP bagi subjek Matematik, 21/3-31/12 2006 & 9/1/2007-8/1/2008.
40. AJK Pemantauan Aset FSKKP UMP, 27/5-26/12 2006.

COMMUNITY SERVICES:

1. AJK Math Booth Camp (Mathemania) at Kuantan Library, 1 August 2019.
2. Trainer for Olympiad Math 2019 (2 schools in Kuantan/Pekan).
3. AJK Program Menjelang Syawal bersama Golongan Asnaf Kuantan, 17 Mei 2019.
4. Mentor kem Saintis Muda, 2-7 September 2018
5. Pembantu Pengawas Olimpiad Matematik Kebangsaan (OMK) 2017, UMP, 12/8/2017

6. Penceramah dan Fasilitator Program Pemantapan Pembelajaran Matematik dan Matematik Tambahan bagi SMK Seri Pekan, 12/4/2017.
7. Fasilitator Program "Statistics is Awesome" Fasa 1 (19/5/2017) dan Fasa 2 (26/4/2017).
8. AJK Sudoku Batle 2017. 22/3/2017.
9. Peserta program Khidmat Komuniti program menjelang syawal bersama OKU PDK Titian Murni, 23/6/2016.
10. AJK Sudoku Batle 2016. 9/3/2016.
11. Pemeriksa Kertas Soalan Peperiksaan Matematik Matrikulasi Malaysia. 9-14/11/2015, 11-16/11/2011, 21-24/4/2011, 26-31/10/2010 & 20-25/10/2009.
12. Pengawas Olimpiad Matematik Kebangsaan 2015 (OMK15), 11/7/2015.
13. Certificate of Appreciation towards nature conservation in Malaysia by WWF. 2010.
14. AJK Pendaftaran, Olimpiad Matematik Kebangsaan 2009 (OMK09), 26/6/2010.
15. Petugas Booth FSTI, Program Karnival Akademik UMP, 30/9/2009.
16. AJK Pendaftaran, Olimpiad Matematik Kebangsaan 2009 (OMK09), 20/6/2009.
17. Petugas Booth FSTI, Expo Konvo UMP 2008.
18. Petugas Booth FSTI, Expo Konvo UMP 2007, 30/11 – 2/12 2007.
19. Lawatan Kerja Promosi ke SMK Layang-Layang Johor, SM Teknik Jasin, dan Kolej Matrikulasi Johor, 21-24/9/2015.

WORKSHOPS, TRAINING & SHORT COURSES:

1. Kursus Industry 4.0 Reskilling Programme. 16-17 Dec 2019, UMP Gambang.
2. Bengkel Penubuhan Youth Talent Development Center (YTDC). Lanjut Beach Resort Rompin, 22-24 November 2019.
3. Industrial Talk: Data Science By Izhar Abyres. 14 Nov 2019. UMP Gambang.
4. Industrial Talk: Machine Learning And Deep Learning. 13 Nov 2019. UMP Gambang.
5. Industrial Visit To Cybersecurity. 12 Nov 2019. Cyberjaya.
6. Bengkel Pelarasan Kursus Servis UMP, 14 Oct 2019. UMP Pekan.
7. Bengkel Post Mortem ICOAIMS2019 dan SKSM. 18 Sep 2018. Vistana Kuantan.
8. Big Data Week Seminar, 12 Sep 2019. Klcc.
9. Workshop Python II By Dr Muhammad – Basic Python, 22 August 2019, Msc Gambang.
10. R Workshop, 21 August 2019, Msc Gambang.
11. Problem Solving Tot, 19 August 2019, Msc Gambang.
12. Bengkel Tvet Via Microcredential. 7-8 August 2018. Grand Darul Makmur Kuantan.
13. Bengkel Training of Trainer UMP Mathematical Olympiad Training, 22 Jun 2019, Astaka UMP Gambang.
14. Bengkel Penerbitan Buku Adcap. 30 May 2019. UMP Pekan.
15. SAS Faculty Development Programme- Building Data Science Curriculum, 2-4 April 2019, Uitm Shah Alam
16. MQA-01 Workshop With Internal Auditor. 22 March 2019. UMP Gambang.
17. Workshop Python I By Dr Azwan Fskkp, 21march 2019, Msc Gambang
18. Workshop With Neu Zenith & Vestigo, 18 March 2019, Msc Gambang
19. Bengkel Khas Adcap, 22 Feb 2019. UMP Gambang.
20. Minitab Essential I Workshop, 12 February 2019. Makmal Komputer FIST UMP Gambang.
21. Bengkel Penyediaan Dokumen MQA-01 dan MSA bagi Program Baharu Sarjana Muda sains Gunaan (Kepujian) Sains Data, Vistana Hotel Kuantan, 19 – 20/12/2018.
22. Bengkel i-lead & e-portfolio UMP, Residence Inn Cherating, 14-16/12/2018.
23. Bengkel Pemurnian kursus servis FTEK, Vistana Hotel Kuantan, 9/11/2018.
24. Mesyuarat Ahli Lembaga pengajian (BOS) dan Panel Penasihat Industri (IAP) untuk program pengajian di FSTI, Hotel Impiana KLCC, KL, 20/10/2018.
25. Kursus Intensif Program Educator 4.0, UMP, 29 -30/8/2018.
26. Bengkel Pembangunan Model e-portfolio, Mangala Resort, 8/8/2018.
27. SAS Training, Faculty Enablement Program, SAS Institute Kuala Lumpur, 5-6/7/2018.
28. Bengkel Amanat Menteri, NBOS & Trisemseter , UMP Pekan, 31/1/2018.

29. Bengkel Penambahbaikan Module MOOC IPS, UMP, 3/1/2018.
30. Experimental Design Using Design Expert Workshop, FKKSA UMP, 20/12/2017.
20. Bengkel Penambahbaikan Modul IPS MOOCs, UMP, 19/12/2017.
21. Peserta 5th Malaysia Statistics Conference 2017, Sasana Kijang Bank Negara Malaysia, 29/11/2017.
22. Bengkel ATMS, UMP, 15/11/2017.
23. Bengkel MOOC IPS, UMP, 26/10/2017
24. Lawatan dan Perbincangan MOU bersama Jabatan Perangkaan Negeri Pahang, 13/10/2017.
25. Bengkel Memuktamadkan Rubriks dan Simulasi Laluan Kerjaya Pelbagai Pensyarah, Ancasa Hotel Pekan, 25-26/8/2017.
26. Bengkel Pembangunan Sistem XCGPPA bersam PTMK, UMP, 22/8/2017.
27. Lawatan dan Perbincangan Kolaborasi antara AIMS dan SMD Research Cluster, 14/7/2017.
28. Bengkel pembangunan Dashboard Power BI bersama UTM, UMP, 20/6/2017.
29. Bengkel Pemurnian Dokumen MQA-01 Program Sarjana (Komputasi Industri) FIST UMP bersama BOS, MSC UMP, 17/5/2017.
30. Bengkel Latihan Open Learning bersama IPS, UMP, 16/5/2017.
31. Bengkel Keperluan Business Project (BI) & Data Management UMP, UMP Pekan, 2-3/5/2017 & 31/5/2017.
32. Industrial Talk for Master Program, MSC UMP, 5/4/2017.
33. Bengkel Penetapan KPI 2017 FIST, MS Garden Hotel Kuantan, 4/4/2017.
34. Bengkel Pemurnian Dasar Pembangunan Aktiviti Pelajar & Attribut iCGPA, De Rhu Resort Balok, 24-26/2017.
35. Bengkel Program MSc Industrial Computing dengan Industri (MAI), UMP, 2/12/2016.
36. Data Analysis Workshop UMP, 5/10/2016.
37. Bengkel Semakan Constructive Allignment dan COPO, UMP, 18/8/2016.
38. Workshop on Time Series Modelling with Financial Applications, UM, 8/8/2016.
39. Industrial meeting with MAI, MII, and MBSB in KL for MSc Industrial Computing, 25-27/7/2016.
40. Bengkel Penulisan Modul di bawah IPS UMP, Vistana Hotel, 18/6/2016.
41. Bengkel Teaching Plan Msc Industrial Computing, UMP, 30-31/5/2016.
42. Industrial Meeting DB-UMP, Dimension Bid KL, 30/5/2016.
43. Bengkel Penetapan KPI 2016 FSTI, MS Garden Hotel Kuantan, 21/5/2016.
44. Mesyuarat Lembaga Pengajian bagi Program Baharu Sarjana Sains (Matematik Gunaan Industri), Chathayana Hotel Kuantan, 20/5/2016.
45. Bengkel Penulisan Modul di bawah IPS UMP, UMP, 6/5/2016.
46. Workshop on Constructing Objective & Essay Test Items for FIST, UMP, 2/3/2016.
47. Bengkel Pemurnian Kertas Kerja MSc, UMP, 19/2/2016.
48. Industrial Visit to Dimension Bid, Kemaman, 15/2/2016.
49. Dimension Bid-UMP Aspiration Workshop, Dimension Bid KL, 28/1/2016.
50. Bengkel Pembangunan Kursus Open Courseware (OCW) UMP, Suria Cherating Beach Resort, 18-20/12/2016.
51. Bengkel Handholding of Implementers Purata Nilai Gred Kumulatif (PNGK) Bersepadu (Integrated CPGA), AKEPT, 26-27/10/2015.
52. Workshop on COPO, Bloom's Taxonomy & Rubriks for FSTI, UMP, 9/10/2015.
53. Kolokium Pengajaran, UMP, 18/8/2015.
54. One-Day Training on Digital Content Copyright, UMP, 11/8/2015.
55. Bengkel Penulisan dan Penyediaan Geran Penyelidikan Siri 1/2015, Lake Kenyir Resort, Taman Negara Terengganu, 30-31/7/2015.
56. Publication for Academic Excellence (Advance), UMP, 29/7/2015.
57. Bengkel Penetapan KPI- Akademik, Pentadbiran, Teknikal FSTI 2015, Residence Inn Cherating Kuantan, 29-30/5/2015.
58. Seminar Penyelidikan Statistik, Mathematics Support Centre UMP, 24/4/2015.
59. MQA-01 & Pembangunan Kurikulum Workshop, Hotel Vistana Kuantan, 13-14/3/2015.
60. Bengkel Penstrukturan Akademik FSTI 2015, Sri Manja Boutique Hotel, 6-7/3/2015.

61. Bengkel Sharing Knowledge Mathematics (Discrete Panel), UMP, 28/1/2015 & 5/2/2015.
62. Bengkel Penulisan dan Penilaian Kertas Cadangan Geran Penyelidikan UMP, Hotel Vistana Kuantan, 27/1/2015.
63. Seminar Kebangsaan ISM ke-6 2012, Hotel Singgahsana PJ, 8/3/2012.
64. Latex Workshop, UMP, 20/11/2011.
65. Bengkel Portfolio Pengajaran FSTI, UMP, 13-14/7/2011.
66. Bengkel Transformasi Pengurusan & Hala Tuju FSTI 2011, Hotel Legend Cherating Kuantan, 21-23/1/2011.
67. Kursus Magnet Diri; Cipta Pengaruh Luar Biasa dan Berjaya, UMP, 27/4/2010.
68. Bengkel MQA Matematik Industri, UMP, 9/1/2010.
69. Kursus Penilaian Tahap Kecekapan (TK3) bagi Pensyarah Universiti DS45, UMP, 14-22/12/2009.
70. Second International Conference on E-Learning 2009 (ICEL09), Uitm Shah Alam, 1-2/12/2009.
71. International Exposition of Research and Invention Institutions of Higher Learning 2009, KLCC, 8-10/10/2009.
72. Structural Equation Modeling (SEM) Using SAS, SAS Training Centre KL, 19-20/5/2009.
73. Seminar OSHA, UMP, 14/5/2009.
74. Kursus National Edu Tour: Teaching & Research With Matlab & Simulink, UMP, 6/5/2009.
75. Kursus Kaedah Penyelidikan, Ancasa Hotel & Spa KL, 12-18/4/2009.
76. Mesyuarat Sesi Dialog Pemantapan Kertas Kerja Penubuhan Program Baru Sains Gunaan Matematik bersama Expert Panel dari Industri, Badan professional & Pakar Akademik, Concorde Inn KLIA, 20-22/2/2009.
77. Konvensyen Falak Negeri Pahang, KIPSAS, 22-23/12/2008.
78. Bengkel Penyelarasan, Analisis dan Pemurnian Kursus Sains UMP, Hotel Grand Continental Kuantan, 4/12/2008.
79. Bengkel e-Learning, UMP, 25/11/2008.
80. Kursus Kemahiran Fasilitator Bagi Staf Akademik UMP, Hotel Ms Garden , Kuantan, 18&19/11/2008.
81. Seminar Kesedaran Undang-Undang 2008, UMP, 27/5/2008.
82. Bengkel Kemahiran Kepimpinan, Hotel Vistana Kuantan, 5&6/5/2008.
83. Data Mining With Practical Exercises and Applications using WEKA, Royale Bintang KL, 25-26/2/2008.
84. Kursus Penulisan Dan Penerbitan Buku Ilmiah by KL Bookhouse Publishing, Grand Continental Hotel, Langkawi, 12-15/12/2007.
85. Bengkel PA dan Motivasi & Kaunseling Pelajar By ASDC, MS Garden Hotel Kuantan, 10-11/12/2007.
86. Kursus Peningkatan Profesionalisme Staf Akademik (Workshop How to Make Facilitation Works For You as a Great Lecturer) By ASDC, Hotel Quality Kuala Lumpur, 27-29/5/2007.
87. Workshop on 'Teaching Mathematics with Matlab' By Statworks, UMP, 11/4/2007.
88. 2 Days Training for Software SPLUS 7.0 By Statworks, UMP, 17-18/1/ 2007.
89. Seminar Kebangsaan Sains Kuantitatif 2006, Langkawi, 19-21/12/2006.
90. Kursus Pengajaran & Pembelajaran P&P (Modul 1-4), Februari-October 2006.
91. National Symposium on Ipeducation, Training And Research, Kuala Lumpur, 4-5/7/2006.
92. Kursus Induksi Khusus & Umum Bagi Kumpulan Pengurusan dan Profesional UMP, 9-11/5/2006 & 13-25/5/2006.
93. MSC: The Home for Every Technopreneur Seminar, KUKTEM, 25/1/2006.