



## CURRICULUM VITAE



### **Associate Professor Dr. Mohd Amran Mohd Radzi**

Head,  
Department of Electrical and Electronic Engineering,  
Faculty of Engineering, Universiti Putra Malaysia,  
43400 UPM Serdang, Selangor

T: +603-89466322/6012-3219603

F: +603-89466327

E-mail: amranmr@upm.edu.my

### **Education**

1. PhD (Power Electronics), 2010, University of Malaya.
2. M.Sc. (Electrical Power Engineering), 2002, Universiti Putra Malaysia.
3. B.Eng. (Electrical and Electronics), 2000, Universiti Putra Malaysia.

### **Areas of Interest**

1. Power Electronics
2. Power Quality
3. Renewable Energy

### **Professional Qualification/Membership/Affiliation**

1. Chartered Engineer (CEng), United Kingdom
2. Member, Institution of Engineering and Technology (IET)
3. Senior Member, Institution of Electrical and Electronics Engineers (IEEE)
  - 3.1 Member of IEEE Power Engineering Society
  - 3.2 Member of IEEE Power Electronics Society
  - 3.3 Member of IEEE Industrial Electronics Society
  - 3.4 Member of IEEE Industrial Applications Society
4. Graduate Member, Institution of Engineers, Malaysia (IEM)

### **Appointments**

<b>Position</b>	<b>Duration</b>
1. Head, Department of Electrical and Electronic Engineering, Faculty of Engineering, UPM	October 2016 to date
2. Associate Professor, Department of Electrical and Electronic Engineering, Faculty of Engineering, UPM	March 2014 to date
3. Researcher, Centre for Advanced Power and Energy Research (CAPER), Faculty of Engineering, UPM	October 2012 to date
4. Coordinator, Master of Engineering in Electrical Power (Without Thesis)	January 2015 to January 2016
5. Visiting Researcher for "JSPS Invitation Program for East Asian Young Researchers", The Institute of Advanced Energy, Kyoto University	September – October 2011
6. Senior Lecturer, Department of Electrical and Electronic Engineering, Faculty of Engineering, UPM	September 2010 - February 2014
7. Coordinator, Power Electronics Laboratory	February 2010 – October 2016
8. Coordinator, Development Committee, Department of Electrical and Electronic Engineering	March 2011 – August 2014.
9. Coordinator, Electrical Laboratory I	August 2003 – August 2005
10. Lecturer, Department of Electrical and Electronic Engineering, Faculty of Engineering, UPM	June 2003 - August 2010
11. Counsellor, IEEE Student Branch Counselor, Universiti Putra Malaysia	December 2001 - December

12. Tutor, Department of Electrical and Electronic Engineering, Faculty of Engineering, UPM

## Publications

### Journals (Latest 5 years from total of 92)

1. N.I. Ahmada, M.Z.A. Ab-Kadir, M. Izadi, N. Azis, **M.A.M. Radzi**, N.H. Zaini, and M.S.M. Nasir, "Lightning protection on photovoltaic systems: A review on current and recommended practices," *Renewable and Sustainable Energy Reviews*, in press. (2016 IF = 8.050, Q1)
2. M.R. Mehrjou, N. Mariun, N. Misron, **M.A.M. Radzi**, and S. Musa, "Broken rotor bar detection in LS-PMSM based on startup current analysis using wavelet entropy features," *Applied Sciences*, vol. 7, no. 8, August 2017. (2016 IF = 1.679, Q3)
3. S. Musa, **M.A.M. Radzi**, H. Hizam, N.I.A. Wahab, Y. Hoon and M.A.A. M Zainuri, "Modified synchronous reference frame based shunt active power filter with fuzzy logic control pulse width modulation inverter," *Energies*, vol. 10, no. 6, pp. 1-16, June 2017. (2016 IF = 2.262, Q2)
4. Z.P. Goh, **M.A.M. Radzi**, H. Hizam, and N.I.A. Wahab, "Investigation of severity of voltage flicker caused by second harmonic," *IET Science, Measurement & Technology*, vol. 11, no. 3, pp. 363 – 370, May 2017. (2016 IF = 1.263, Q3)
5. N.F.A. Rahman, **M.A.M. Radzi**, A.C. Soh, N. Mariun, and N.A. Rahim, "Significant insights into the operation of dc-link voltage control of a shunt active power filter using different control algorithms - a comparative study," *Turkish Journal of Electrical Engineering and Computer Sciences*, vol. 25, no. 3, pp. 2033-2043, 2017. (2016 IF = 0.578, Q4)
6. M.H.M. Sidek, N. Azis, W.Z.W. Hasan, M.Z.A.A. Kadir, S. Shafie, and **M.A.M. Radzi**, "Automated Positioning Dual-Axis Solar Tracking System with Precision Elevation and Azimuth Angle Control," *Energy*, vol. 124, pp. 160-170, 1 April 2017. (2016 IF = 4.520, Q1)
7. Y. Hoon, **M.A.M. Radzi**, M.K. Hassan, and N.F. Mailah, "A Self-Tuning Filter-Based Adaptive Linear Neuron Approach for Operation of Three-Level Inverter-Based Shunt Active Power Filters under Non-Ideal Source Voltage Conditions," *Energies*, vol. 10, no. 5, pp. 1-28, March 2017. (2016 IF = 2.262, Q2)
8. Y. Hoon, **M.A.M. Radzi**, M.K. Hassan, and N.F. Mailah, "Neutral-point Voltage Deviation Control for Three-level Inverter-based Shunt Active Power Filter with Fuzzy-based Dwell Time Allocation," *IET Power Electronics*, vol. 10, no. 4, pp. 429-441, 31 March 2017. (2016 IF = 3.547, Q1)
9. Y. Hoon, **M.A.M. Radzi**, M.K. Hassan, and N.F. Mailah, "A Refined Self-Tuning Filter-Based Instantaneous Power Theory Algorithm for Indirect Current Controlled Three-Level Inverter-Based Shunt Active Power Filters under Non-sinusoidal Source Voltage Conditions," *Energies*, vol. 10, no. 3, pp. 1-20, March 2017. (2016 IF = 2.262, Q2)
10. M.R. Mehrjou, N. Mariun, N. Misron, and **M.A.M. Radzi**, "Analysis of statistical features based on start-up current envelope for broken rotor bar fault detection in line start permanent magnet synchronous motor," *Electrical Engineering*, vol. 99, no. 1, pp. 187–201, March 2017. (2016 IF = 0.569, Q4)
11. S. Musa and **M.A.M. Radzi**, "Synchronous Reference Frame Fundamental Method in Shunt Active Power Filter for Mitigation of Current Harmonics," *Pertanika Journal of Science & Technology (JST)*, vol. 25 (S), pp. 249-256, January 2017. (Scopus)
12. **M.A.M. Radzi**, Z.P. Goh, and H. Hizam, "Voltage Flicker Estimation Based on Pair of Inter-harmonics Analysis Method," *Pertanika Journal of Science & Technology (JST)*, vol. 25 (S), pp. 1-10, February 2017. (Scopus)
13. N.F. Mailah, Y. Hoon, and **M.A.M. Radzi**, "DC-link Capacitor Voltage Regulation with Effort-reduction Fuzzy Logic Control for Three-level Inverter-based Shunt Active Power Filter," *Pertanika Journal of Science & Technology (JST)*, vol. 25 (S), pp. 11-20, February 2017. (Scopus)
14. M.L. Sabo, N. Mariun, H. Hizam, **M.A.M. Radzi**, and Azmi Zakaria, "Spatial matching of large-scale grid-connected photovoltaic power generation with utility demand in Peninsular Malaysia," *Applied Energy*, vol. 191, pp. 663-688, 2017. (2016 IF = 7.182, Q1)
15. Z.P. Goh, **M.A.M. Radzi**, H. Hizam, and N.I.A. Wahab, "Critical Voltage Flicker Detection based on Pair of Inter-harmonics Analysis Method," *International Journal of Simulation: Systems, Science and Technology*, vol. 17, no. 41, pp. 39.1-39.6, 2016. (Scopus)
16. Y. Hoon, **M.A.M. Radzi**, M.K. Hassan, and N.F. Mailah, "A Simple Neutral-Point Voltage Deviation Minimization Method for Three-Level Inverter-Based Shunt Active Power Filter," *International Journal of Simulation: Systems, Science and Technology*, vol. 17, no. 41, pp. 33.1-33.6, 2016. (Scopus)

17. T. Ramalu, **M.A.M. Radzi**, M.A.A.M. Zainuri, N.I.A. Wahab, and R.Z.A Rahman, "Dual-Fuzzy MPPT in Photovoltaic-DC Analysis for Dual-load Operation with SEPIC Converter," *International Journal of Simulation: Systems, Science and Technology*, vol. 17, no. 41, pp. 46.1-46.6, 2016. (Scopus)
18. S. Hajighorbani, **M.A.M. Radzi**, M.Z.A.A. Kadir, and S. Shafie, "DC-DC converter for photovoltaic powered battery charger," *World Journal of Engineering*, vol. 3, no. 6, pp. 516 – 523, 2016. (Scopus)
19. E. Mohsin, N.F. Mailah, **M.A.M. Radzi**, S. Shafie, S. Hajighorbani, and A.Q. Turki, "Comparison of developed FLC and P&O MPPT algorithms for improving PV system performance at variable irradiation conditions," *World Journal of Engineering*, vol. 3, no. 6, pp. 494 – 499, 2016. (Scopus)
20. S.K. Mohammed, N. Mariun, N.I.A. Wahab, **M.A.M. Radzi**, and S.M. Lurwan, "The Effects of Insolation Variation For Grid-connected Dispersed Photovoltaic Distributed Generations," *International Journal of Control Theory and Applications*, vol. 9, no. 31, pp. 63-70, 2016.
21. L.M. Sabo, N. Mariun, H. Hizam, **M.A.M. Radzi**, and A. Zakaria, "Estimation of solar radiation from digital elevation model in area of rough topography," *World Journal of Engineering*, vol. 13, no. 5, pp. 453-460, 2016. (Scopus)
22. Z.P. Goh, **M.A.M. Radzi**, Y.V. Thien, H. Hizam, and N.I.A. Wahab, "Hybrid FFT-ADALINE algorithm with fast estimation of harmonics in power system," *IET Signal Processing*, vol. 10, no. 8, pp. 855-864, October 2016. (2016 IF = 1.298, Q3)
23. M.L. Sabo, N. Mariun, H. Hizam, **M.A.M. Radzi**, and A. Zakaria, "Spatial energy predictions from large-scale photovoltaic power plants located in optimal sites and connected to a smart grid in Peninsular Malaysia", *Renewable and Sustainable Energy Reviews*, vol. 66, pp. 79-94, December 2016. (2016 IF = 8.050, Q1)
24. M.A.A.M. Zainuri, **M.A.M. Radzi**, A.C. Soh, N. Mariun, and N.A. Rahim, "Improved ADALINE Harmonics Extraction Algorithm for Boosting Performance of Photovoltaic Shunt Active Power Filter under Dynamic Operations," *Journal of Electrical Engineering & Technology*, vol. 11, no. 6, pp. 1714-1728, November 2016. (2016 IF = 0.525, Q4)
25. R. Khanaki, **M.A.M. Radzi**, S. Hajighorbani, and M.H. Marhaban, "Evaluation of Improved MPPT-Based ANN Controller for PV Standalone System," *Journal of Engineering and Applied Sciences*, vol.11, no. 9, pp. 1972-1980, 2016. (Scopus)
26. Y. Hoon, **M.A.M. Radzi**, M.K. Hassan, N.F. Mailah, and N.I.A. Wahab, "A Simplified Synchronous Reference Frame for Indirect Current Controlled Three-level Inverter-Based Shunt Active Power Filter," *Journal of Power Electronics*, vol. 16, no. 5, pp. 1964-1980, September 2016. (2016 IF = 1.047, Q3)
27. N.F.A. Rahman, **M.A.M. Radzi**, A.C. Soh, N. Mariun, and N.A. Rahim, "Adaptive Hybrid Fuzzy-Proportional plus Crisp-Integral Current Control Algorithm for Shunt Active Power Filter Operation," *Energies*, vol. 9, no. 9, pp. 1-18, September 2016. (2016 IF = 2.262, Q2)
28. M.A.A.M. Zainuri, **M.A.M. Radzi**, A.C. Soh, N. Mariun, and N.A. Rahim, "Simplified Adaptive Linear Neuron Harmonics Extraction Algorithm for Dynamic Performance of Shunt Active Power Filter," *International Review on Modelling and Simulations (IREMOS)*, vol. 6, no. 3, pp. 144-154, June 2016. (Scopus)
29. T. Ramalu, **M.A.M. Radzi**, M.A.A.M. Zainuri, N.I.A. Wahab, and R.Z.A. Rahman, "Photovoltaic-Based SEPIC Converter with Dual-Fuzzy Maximum Power Point Tracking for Optimal Buck and Boost Operations," *Energies*, vol. 9, no. 8, pp. 1-17, August 2016. (2016 IF = 2.262, Q2)
30. Y. Hoon, **M.A.M. Radzi**, M.K. Hassan and N.F. Mailah, "DC-Link Capacitor Voltage Regulation for Three-Phase Three-Level Inverter-Based Shunt Active Power Filter with Inverted Error Deviation Control," *Energies*, vol. 9, no. 7, pp. 1-25, July 2016. (2016 IF = 2.262, Q2)
31. M.A.A.M. Zainuri, **M.A.M. Radzi**, A.C. Soh, N. Mariun, N.A. Rahim, and S. Hajighorbani, "Fundamental Active Current Adaptive Linear Neuron for Photovoltaic Shunt Active Power Filter," *Energies*, vol. 9, no. 6, pp. 1-20, June 2016. (2016 IF = 2.262, Q2)
32. S.Z.M. Noor, A.M. Omar, **M.A.M. Radzi**, and N.N. Mahzan, "Single Stage String Inverter for Grid-connected Photovoltaic System with Modified Perturb and Observe (P&O) Fuzzy Logic Control(FLC)-based MPPT Technique," *Journal of Electrical Systems*, vol. 12, no. 2, pp. 344-356, June 2016. (Scopus)
33. M.A. Nazir, N.A. Kamsani, N. Azis, **M.A.M. Radzi**, and W.Z.W. Hasan, "Integration of ultra-capacitor and battery as hybrid energy storage with intelligent controller for efficient electric vehicle application," *International Journal of Control Theory and Applications*, vol. 9, no. 5, pp. 345-355, 2016. (Scopus)
34. R. Khanaki, **M.A.M. Radzi**, and M.H. Marhaban, "Artificial neural network based maximum power point tracking controller for photovoltaic standalone system," *International Journal of Green*

- Energy*, vol. 13, no. 3, pp. 283-291, 2016. (2016 IF = 1.454, Q3)
35. Y. Hoon, **M.A.M. Radzi**, M.K. Hassan and N.F. Mailah, "Enhanced Instantaneous Power Theory with Average Algorithm for Indirect Current Controlled Three-Level Inverter-Based Shunt Active Power Filter under Dynamic State Conditions," *Mathematical Problems in Engineering*, vol. 2016, pp. 1-12, 2016. (2016 IF = 1.454, Q3)
  36. M.A.A.M. Zainuri, **M.A.M. Radzi**, A.C. Soh, N. Mariun, and N.A. Rahim, "DC-link capacitor voltage control for single-phase shunt active power filter with step size error cancellation in self-charging algorithm," *IET Power Electronics*, vol. 9, no. 2, pp. 323–335, February 2016. (2016 IF = 3.547, Q1)
  37. M.R. Maghami, H. Hizam, C. Gomes, **M.A.M. Radzi**, M.I. Rezaadad, and S. Hajighorbani, "Power loss due to soiling on solar panel: A review," *Renewable and Sustainable Energy Reviews*, vol. 59, pp. 1307-1316, June 2016. (2016 IF = 8.050, Q1)
  38. S. Hajighorbani, **M.A.M. Radzi**, M.Z.A.A. Kadir, S. Shafie, and M.A.A.M. Zainuri, "Implementing a novel hybrid maximum power point tracking technique in DSP via Simulink/MATLAB under partially shaded conditions," *Energies*, vol. 9, no. 2, pp. 1-25, February 2016. (2016 IF = 2.262, Q2)
  39. V. Velu, N. Mariun, **M.A.M. Radzi**, and N.F. Mailah, "Realization of Single Phase to Three Phase Matrix Converter using SVPWM Algorithm," *Automatika*, vol. 57, no. 1, pp. 129–140, 2016. (2016 IF = 0.380, Q4)
  40. V. Velu, N. Mariun, **M.A.M. Radzi**, and N.F. Mailah, "Equalization technique for balancing the modulation ratio characteristics of the single-phase-to-three-phase matrix converter," *Scientific Programming*, vol. 2016, pp. 1-10, 2016. (2016 IF = 0.224, Q4)
  41. S.E.G. Mohamed, J. Jasni, **M.A.M. Radzi**, and H. Hizam, "Power transistor-assisted Sen Transformer: a novel approach to power flow control," *Electric Power Systems Research*, vol. 133, pp. 228–240, April 2016. (2016 IF = 2.688, Q2)
  42. S. Hajighorbani, **M.A.M. Radzi**, M.Z.A.A. Kadir, and S. Shafie, "Dual search maximum power point (DSMPP) algorithm based on mathematical analysis under shaded conditions," *Energies*, vol. 8, no. 10, pp. 12116-12146, October 2015. (2015 IF = 2.077, Q2)
  43. G.Z. Peng, **M.A.M. Radzi**, H. Hizam, and N.I.A. Wahab, "A Simple Predictive Method of Critical Flicker Detection for Human Healthy Precaution," *Mathematical Problems in Engineering*, vol. 2015, pp. 1-10, 2015. (2015 IF = 0.644, Q3)
  44. S.K. Mohammed, N. Mariun, **M.A.M. Radzi**, and N.I.A. Wahab, "Improvement of non-detection zone of DC-Link voltage islanding detection," *Journal of Electrical Systems - Special Issue on International Conference on Advanced Mechanics, Power and Energy 2015 (AMPE2015)*, pp. 81-88, 2015 (Scopus).
  45. A. Sider, A. Amiri, M.K. Hassan, **M.A.M. Radzi**, and S.F. Toha, "Mathematical design and analysis of anti-lock brake system for electric vehicle based on brake-by-wire technology," *International Journal of Electric and Hybrid Vehicles*, vol. 7, no. 4, pp. 303-322, 2015. (Scopus)
  46. A.S. Gasim Mohamed, J. Jasni, **M.A.M. Radzi**, and H. Hizam, "Enhancement of environment-friendly power grids' flexibility to successfully host RESs and EVs," *ARPJ Journal of Engineering and Applied Sciences*, vol. 10, no. 21, pp. 9842-9848, November 2015. (Scopus)
  47. S.K. Mohammed, N. Mariun, **M.A.M. Radzi**, N.I.A. Wahab and S.M. Lurwan, "Islanding detection using inverter dc-link voltage," *ARPJ Journal of Engineering and Applied Sciences*, vol. 10, no. 21, pp. 9842-9848, November 2015. (Scopus)
  48. H. Sabry, W.Z.W. Hasan, M.Z.A.A. Kadir, **M.A.M. Radzi**, and S. Shafie, "High efficiency integrated solar home automation system based on dc load matching technique," *ARPJ Journal of Engineering and Applied Sciences*, vol. 10, no. 15, pp. 9932-9936, August 2015. (Scopus)
  49. N.F.A.A. Rahman, **M.A.M. Radzi**, N. Mariun, A.C. Soh, and N.A. Rahim, "Dual Function of Unified Adaptive Linear Neurons Based Fundamental Component Extraction Algorithm for Shunt Active Power Filter Operation," *International Review of Electrical Engineering (I.R.E.E.)*, vol. 10, no. 4, pp. 544-552, July-August 2015. (Scopus)
  50. S. Toosi, N. Mison, T. Hanamoto, I. Aris, **M.A.M. Radzi**, and H. Yamada, "The Study of Operation Modes and Control Strategies of a Multidirectional MC for Battery Based System," *Mathematical Problems in Engineering*, vol. 2015, pp. 1-14, 2015. (2015 IF = 0.644, Q3)
  51. N. Mariun, **M.A.M. Radzi**, N.F. Mailah, and V. Velu, "Topologies Adopted in the Design and Development of the Single Phase to Three Phase Direct Ac-Ac Matrix Converters for Poly Phase Loads," *International Journal of Electrical and Electronics Engineering*, vol. 4, no. 4, pp. 27-34, Jun – Jul 2015.
  52. M. Fadaeenejad, **M.A.M. Radzi**, M. Fadaeenejad, M. Zarif, and Z. Gandomi, "Optimization and comparison analysis for application of PV panels in three villages," *Energy Science &*

- Engineering*, vol. 3, no. 2, pp. 145-152, March 2015.
53. M.E. Ya'acob, H. Hizam, M.B. Adam, A.H.M.A. Rahim, **M.A.M. Radzi**, Y. Hashimoto, and M.R. Yusoff, Decreasing of Grid-Tied PV Power Output due to Thick Haze Phenomena in Malaysia, *Journal of Energy and Power Engineering*, vol. 9, pp. 399-404, 2015.
  54. S.Z.M. Noor, A.M. Omar, and **M.A.M. Radzi**, "Single-Phase Single Stage String Inverter for Grid Connected Photovoltaic System," *Applied Mechanics and Materials*, vol. 785, pp. 177-181, 2015.
  55. S.K. Mohammed, N. Mariun, **M.A.M. Radzi**, N.I.A. Wahab, "Impact of Inverter Controller on Efficiency and Islanding of Photovoltaic Distributed Generation," *Applied Mechanics and Materials*, vol. 785, pp. 167-171, 2015.
  56. A.H. Sabry, W.Z.W. Hasan, M.Z.A.A. Kadir, **M.A.M. Radzi**, and S. Shafie, "Alternative Solar-Battery Charge Controller to Improve System Efficiency," *Applied Mechanics and Materials*, vol. 785, pp. 156-161, 2015.
  57. A.H. Sabry, W.Z.W. Hasan, M.Z.A.A. Kadir, **M.A.M. Radzi**, and S. Shafie, "DC Loads Matching Technique as an Alternative to AC Inverter in Residential Solar System Application Evaluation and Comparison," *Applied Mechanics and Materials*, vol. 785, pp. 225-230, 2015.
  58. N.F. Othman, M.E. Ya'acob, A.S. Abdul-Rahim, M.S. Othman, **M.A.M. Radzi**, H. Hizam, Y.D. Wang, A.M. Ya'acob, H.Z.E. Jaafar, "Embracing new agriculture commodity through integration of Java Tea as high Value Herbal crops in solar PV farms," *Journal of Cleaner Production*, vol. 91, pp. 71-77, 15 March 2015. (2015 IF = 4.959, Q1)
  59. M.E. Ya'acob, H. Hizam, M. Bakri A., **M.A.M. Radzi**, T. Khatib, and A.H.M.A. Rahim, "Performance Test Conditions for Direct Temperature Elements of Multiple PV Array configurations in Malaysia," *Energy Procedia*, vol. 61, pp. 2387 – 2390, 2014. (Scopus)
  60. M. Karami, N. Mariun, M.R. Mehrjou, M.Z.A.A. Kadir, N. Misron, and **M.A.M. Radzi**, "Static Eccentricity Fault Recognition in Three-Phase Line Start Permanent Magnet Synchronous Motor Using Finite Element Method," *Mathematical Problems in Engineering*, vol. 2014, pp. 1-12, 2014. (2014 IF = 0.762, Q3)
  61. S. Toosi, N. Misron, T. Hanamoto, I. Aris, **M.A.M. Radzi**, and H. Yamada, "Novel Modulation Method for Multidirectional Matrix Converter," *The Scientific World Journal*, vol. 2014, pp. 1-12, 2014. (Scopus)
  62. U. Waqas, **M.A.M. Radzi**, and N. Mariun, "Dynamic Voltage Restorer for Efficient Detection and Compensation of Voltage Sag Using ANN Based LMS as a New Control Strategy," *Journal of Engineering Science and Technology (Special Issue on Applied Engineering and Sciences)*, pp. 21-29, October 2014. (Scopus)
  63. S. Toosi, M. Norhisam, T. Hanamoto, I. Aris, **M.A.M. Radzi**, and H. Yamada, "Configurations Comparison of Multi Directional Matrix Converter for Low Power Application," *Journal of Engineering Science and Technology (Special Issue on Applied Engineering and Sciences)*, pp. 1-10, October 2014. (Scopus)
  64. S. Hajighorbani, **M.A.M. Radzi**, M.Z.A. Ab Kadir, S. Shafie, R. Khanaki, and M.R. Maghami, "Evaluation of Fuzzy Logic Subsets Effects on Maximum Power Point Tracking for Photovoltaic System," *International Journal of Photoenergy*, vol. 2014, pp. 1-13, 2014. (2014 IF = 1.563, Q2)
  65. M.H.M. Nordin, M.K. Hassan, A.C. Soh, and **M.A.M. Radzi**, "Hardware-In-Loop of Fault Detection System for Air-Fuel Ratio Control," *Applied Mechanics and Materials*, vol. 663, pp 233-237, 2014. (Scopus)
  66. J. Nadarajah, F.A. Aziz, B.T.H.T. Baharudin, and **M.A.M. Radzi**, "Improved Maintenance for Energy Optimization in the Calcium Compound Processing Industry," *Applied Mechanics and Materials*, vol. 564, pp 747-751, 2014. (Scopus)
  67. M.E. Ya'acob, H. Hizam, T. Khatib, **M.A.M. Radzi**, C. Gomes, M. Bakri A., M.H. Marhaban, and W. Elmenreich, "Modelling of photovoltaic array temperature in a tropical site using generalized extreme value distribution," *Journal of Renewable and Sustainable Energy*, vol. 6, no. 3, pp. 033134-1 - 033134-1, May 2014. (2014 IF = 0.904, Q3)
  68. A. Saberian, H. Hizam, **M.A.M. Radzi**, M. Z. A. Ab Kadir, and M. Mirzaei, "Modelling and prediction of photovoltaic power output using artificial neural networks," *International Journal of Photoenergy*, vol. 2014, pp. 1-10, 2014. (2014 IF = 1.563, Q2)
  69. M.E. Ya'acob, H. Hizam, and **M.A.M. Radzi**, "Real Time Monitoring and Analysis of Tropical Impact on PV Performance Based on LabVIEW Architecture," *Journal of Automation and Control Engineering*, vol. 2, no. 2, pp. 138-142, June 2014.
  70. S. Zahurul, N. Mariun, V. Grozescu, M. Lutfi, H. Hashim, **M. Amran**, and Izham, "Development of a prototype for remote current measurements of PV panel using WSN," *International Journal of Smart Grid and Clean Energy*, vol. 3, no. 2, pp. 241-246, April 2014.
  71. M.A.A.M. Zainuri, **M.A.M. Radzi**, A.C. Soh, N.A. Rahim, "Development of adaptive perturb and

- observe-fuzzy control maximum power point tracking for photovoltaic boost dc–dc converter,” *IET Renewable Power Generation*, vol. 8, no. 2, pp. 183-194, March 2014. (2014 IF = 1.904, Q2)
72. M.E. Ya’acob, H. Hizam, T. Khatib, and **M.A.M. Radzi**, “A comparative study of three types of grid connected photovoltaic systems based on actual performance,” *Energy Conversion and Management*, vol. 78, pp. 8–13, February 2014. (2014 IF = 4.380, Q1)
  73. M. Fadaeenejad, **M.A.M. Radzi**, M.Z.A. AbKadir, and H. Hizam, “Assessment of hybrid renewable power sources for rural electrification in Malaysia,” *Renewable and Sustainable Energy Reviews*, vol. 30, pp. 299–305, February 2014. (2014 IF = 5.901, Q1)
  74. M. Fadaeenejad, A.M. Saberian, M. Fadaee, **M.A.M. Radzi**, H. Hizam, and M.Z.A. AbKadir, “The present and future of smart power grid in developing countries,” *Renewable and Sustainable Energy Reviews*, vol. 29, pp. 828-834, January 2014. (2014 IF = 5.901, Q1)
  75. M.E. Ya’acob, H. Hizam, **M.A.M. Radzi**, and T. Khatib, “Correlations of light intensity and humidity factor on power performance for fixed flat PV generator. A short term field evaluation in the tropics,” *International Proceedings of Chemical, Biological and Environmental Engineering (IPCBE)*, vol. 61, pp. 84-88, 2014.
  76. B. Ghazanfarpour, **M.A.M. Radzi**, and N. Mariun, “Adaptive Neural Network with Heuristic Learning Rule for Series Active Power Filter,” *International Review on Modelling and Simulations (IREMOS)*, vol. 6, no. 6, pp. 1753-1759, December 2013. (Scopus)
  77. M.E. Ya’acob, H. Hizam, **M.A.M. Radzi** and M.Z.A.A. Kadir, “Field Measurement of PV Array Temperature for Tracking and Concentrating 1 kWp Generators Installed in Malaysia,” *International Journal of Photoenergy*, vol. 2013, pp. 1-8, 2013. (Scopus)
  78. S.M. Lurwan, N. Mariun, **M.A.M. Radzi**, and H. Hizam, “Solar Radiation Prediction Model for Solar Panel and Thermal Collectors in Malaysia,” *International Journal of Electrical Components & Sustainable Energy*, vol. 1, no. 2, pp. 21-27, October 2013.
  79. A. Sabo, N.I.A. Wahab, **M.A.M. Radzi**, and N.F. Mailah, “Artificial neural network (ANN) based algorithm in single phase shunt active power filter (SAPF) control,” *International Journal of Electrical Components & Sustainable Energy*, vol. 1, no. 2; pp. 1-7, October 2013.
  80. M.E. Ya’acob, H. Hizam, M.T. Htay, **M.A.M. Radzi**, T. Khatib, and M. Bakri, “Calculating electrical and thermal characteristics of multiple PV array configurations installed in the tropics,” *Energy Conversion and Management*, vol. 75, pp. 418–424, November 2013. (2013 IF = 3.590, Q1)
  81. F. Azadian and **M.A.M. Radzi**, “A general approach toward building integrated photovoltaic systems and its implementation barriers: A review,” *Renewable and Sustainable Energy Reviews*, vol. 22, pp. 527–538, June 2013. (2013 IF = 5.510, Q1)
  82. M.H. Taghvaei, **M.A.M. Radzi**, S.M. Moosavain, Hashim Hizam and M. Hamiruce Marhaban, “A current and future study on non-isolated DC–DC converters for photovoltaic applications,” *Renewable and Sustainable Energy Reviews*, vol. 17, pp. 216-227, January 2013. (2013 IF = 5.510, Q1)

#### Conference Proceedings (Latest 5 years from total of 54)

1. Z.P. Goh, **M.A.M. Radzi**, H. Hizam, N.I.A. Wahab, “Investigation of Harmonic Components on Voltage Flicker Measurement,” in *2016 IEEE International Conference on Power and Energy (PECon)*, Melaka, Malaysia, 28-29 November 2016, pp. 13-17.
2. M. Izadi, N. Mariun, M.R. Mehrjou, M.Z.A.A. Kadir, N. Misron, **M.A.M. Radzi**, “Broken Rotor Bar Fault Detection in Line Start Permanent Magnet Synchronous Motor Using Transient Current Signal,” in *2016 IEEE International Conference on Automatic Control and Intelligent Systems (I2CACIS)*, Shah Alam, Malaysia, 22 October 2016, pp. 51-54.
3. M.R. Mehrjou, N. Mariun, N. Misron, **M.A.M. Radzi**, “A Survey of Broken Rotor Bar Detection Using PT and HT in Squirrel Cage Electrical Machine,” in *2015 IEEE Student Conference on Research and Development (SCOReD)*, Kuala Lumpur, Malaysia, 13-14 December 2015, pp. 506-510.
4. M.R. Mehrjou, N. Mariun, M. Karami, N. Misron, **M.A.M. Radzi**, “Statistical Features Analysis of Transient Current Signal for Broken Bars Fault Detection in LS-PMSMs,” in *2015 IEEE 3rd International Conference on Smart Instrumentation, Measurement and Applications (ICSIMA)*, Putrajaya, Malaysia, 24-25 November 2015, pp 1-6.
5. S.K. Mohammed, N. Mariun, **M.A.M. Radzi**, N.I.A. Wahab, S.M. Lurwan, “Evaluation of the Effects of Photovoltaic Inverter Controllers on Grid Injected Power with Local Dynamic Loads,” in *2015 IEEE Innovative Smart Grid Technologies – Asia (ISGT ASIA)*, Bangkok, Thailand, 3-6 November 2015, pp. 1-5.
6. N.H. Zaini, M.Z.A. Kadir, M. Izadi, N.I. Ahmad, **M.A.M. Radzi**, N. Azis, “The Effect of

- Temperature on a Mono-crystalline Solar PV Panel,” in *2015 IEEE Conference on Energy Conversion (CENCON)*, Johor Bahru, Malaysia, 19-20 October 2015, pp. 249-253.
7. N.I. Ahmad, M.Z.A. Kadir, M. Izadi, N.H. Zaini, M.A.M. Radzi, N. Azis, “Effect of Temperature on a Poly-crystalline Solar Panel in Large Scale Solar Plants in Malaysia,” in *2015 IEEE Conference on Energy Conversion (CENCON)*, Johor Bahru, Malaysia, 19-20 October 2015, pp. 244-248.
  8. M.R. Mehrjou, N. Mariun, M. Karami, N. Misron, **M.A.M. Radzi**, “Wireless sensors system for broken rotor bar fault monitoring using wavelet analysis,” in *4th International Conference on Electronic Devices, Systems and Applications (ICEDSA)*, Kuala Lumpur, Malaysia, 14-19 September 2015, pp. 1-10.
  9. A.H. Sabry, W.Z.W. Hasan, M.Z.A.A. Kadir, M.A.M Radzi, S. Shafie, “Power Consumption and Size Minimization of a Wireless Sensor Node in Automation System Application” in *2015 IEEE Regional Symposium on Micro and Nanoelectronics (RSM)*, Kuala Terengganu, Malaysia, 19-21 August 2015, pp. 1-4.
  10. N.F.A.A. Rahman, **M.A.M. Radzi**, A.C. Soh, N. Mariun, N.A. Rahim, “Double soft-computing techniques based triple functionalities for shunt active power filter with voltage source inverter topology,” in *2015 IEEE 15th International Conference on Environment and Electrical Engineering (EEEIC)*, Rome, Italy, 10-13 June 2015, pp. 796 – 801.
  11. F. Behrooz, N. Mariun, M.H. Marhaban, **M.A.M. Radzi**, A.R. Ramli, “New design approach to MIMO nonlinear controller for direct expansion air conditioning system in building automation system,” in *2015 IEEE 15th International Conference on Environment and Electrical Engineering (EEEIC)*, Rome, Italy, 10-13 June 2015, pp. 1706 – 1712.
  12. S. Hajighorbani, **M.A.M Radzi**, M.Z.A. A. Kadir, S. Shafie, “Novel Hybrid Maximum Power Point Tracking Algorithm for PV Systems under Partially Shaded Conditions,” in *2015 10th Asian Control Conference (ASCC)*, Kota Kinabalu, Malaysia, 31 May-3 June 2015, pp. 1-6.
  13. T. Ramalu, **M.A.M. Radzi**, M.A.A.M. Zainuri, N.I.A. Wahab, R.Z.A. Rahman, “Dual-Fuzzy Based MPPT for Dual-Load Operation with Photovoltaic SEPIC Converter,” in *2015 10th Asian Control Conference (ASCC)*, Kota Kinabalu, Malaysia, 31 May-3 June 2015, pp. 1-6.
  14. M.R. Mehrjou, N. Mariun, M. Karami, N. Misron, **M.A.M. Radzi**, “Performance analysis of line-start permanent magnet synchronous motor in presence of rotor fault,” *2014 IEEE Student Conference on Research and Development (SCOReD)*, Batu Ferringhi, Malaysia, 16-17 Dec. 2014, pp. 1-4.
  15. M. Karami, N. Mariun, M.R. Mehrjou, M.Z.A.A. Kadir, N. Misron, **M.A.M. Radzi**, “Diagnosis of Static Eccentricity Fault in Line Start Permanent Magnet Synchronous Motor,” in *2014 IEEE International Conference on Power and Energy (PECon)*, Kuching, Malaysia, 1-3 Dec. 2014, pp. 83-86.
  16. M.H.M. Sidek, W.Z.W. Hasan, M.Z.A.A. Kadir, S. Shafie, **M.A.M. Radzi**, S.A. Ahmad, M.H. Marhaban, “GPS Based Portable Dual-Axis Solar Tracking System Using Astronomical Equation,” in *2014 IEEE International Conference on Power and Energy (PECon)*, Kuching, Malaysia, 1-3 Dec. 2014, pp. 245-249.
  17. S.E.G. Mohamed, J. Jasni, **M.A.M. Radzi**, H. Hizam, M. Mirzaei, “Optimal Allocation of Sen Transformer for Active Power Loss Reduction,” in *2014 IEEE International Conference on Power and Energy (PECon)*, Kuching, Malaysia, 1-3 Dec. 2014, pp. 59-64.
  18. A.H. Sabry, A.M. Almassri, W.Z.W. Hasan, **M.A.M. Radzi**, Z.A.A. Kader, S. Shafie, “Cut-Off Solar Charge Controller as an alternative towards system efficiency optimization,” in *2014 IEEE International Conference on Power and Energy (PECon)*, Kuching, Malaysia, 1-3 Dec. 2014, pp. 236-240.
  19. S.M. Lurwan, N. Mariun, H. Hizam, **M.A.M. Radzi**, A. Zakaria, “Predicting Power Output of Photovoltaic Systems with Solar Radiation Model,” in *2014 IEEE International Conference on Power and Energy (PECon)*, Kuching, Malaysia, 1-3 Dec. 2014, pp. 304-308.
  20. M.A.A.M. Zainuri, **M.A.M. Radzi**, N.F.A.A. Rahman, A.C. Soh, N.A. Rahim, “Single Phase Shunt Active Power Filter with Simplified ADALINE Neural Network,” in *3rd IET International Conference on Clean Energy and Technology (CEAT) 2014*, Kuching, Malaysia, 24-26 Nov. 2014, pp. 1-6.
  21. S. Musa, **M.A.M. Radzi**, H. Hizam, N.I.A. Wahab, “Fuzzy logic controller based three phase shunt active power filter for harmonics reduction,” in *2014 IEEE Conference on Energy Conversion (CENCON)*, Johor Bahru, Malaysia, 13-14 Oct. 2014, pp. 371 – 376.
  22. M.I. Muhamad, **M.A.M. Radzi**, N.I.A. Wahab, H. Hizam, M.F. Mahmood, “Optimal Design of Hybrid Renewable Energy System Based on Solar and Biomass for Halal Products Research Institute, UPM,” in *2014 IEEE Innovative Smart Grid Technologies – Asia (ISGT ASIA)*, Kuala Lumpur, Malaysia, 20-23 May 2014, pp. 692-696.

23. A.S. Mohamad, N. Mariun, N. Sulaiman, **M.A.M. Radzi**, "A New Cascaded Multilevel Inverter Topology with Minimum Number of Conducting Switches," in *2014 IEEE Innovative Smart Grid Technologies – Asia (ISGT ASIA)*, Kuala Lumpur, Malaysia, 20-23 May 2014, pp. 164-169.
24. M.H.S.E. Gasim, J. Jasni, **M.A.M. Radzi**, H. Hizam, "Power System Security Enhancement and Loss Reduction using the SMART Power Flow Controller," in *2014 IEEE Innovative Smart Grid Technologies – Asia (ISGT ASIA)*, Kuala Lumpur, Malaysia, 20-23 May 2014, pp. 307-311.
25. A. Sabo, N.I.A. Wahab, **M.A.M. Radzi**, N.F. Mailah, "A Modified Digital Hysteresis and Artificial Neural Network (ANN) Algorithms in Single Phase Shunt Active Power Filter Control," in *2014 IEEE Innovative Smart Grid Technologies – Asia (ISGT ASIA)*, Kuala Lumpur, Malaysia, 20-23 May 2014, pp. 198-203.
26. P. Farzan, M. Izadi, C. Gomes, M.Z.A.A. Kadir, M.H. Hesamian, **M.A.M. Radzi**, "On the Fault Location Algorithm for Distribution Networks in Presence of DG," in *2014 IEEE Innovative Smart Grid Technologies – Asia (ISGT ASIA)*, Kuala Lumpur, Malaysia, 20-23 May 2014, pp. 652-656.
27. F. Azadian, **M.A.M. Radzi**, N.I.A. Wahab, "Controlled Islanding Strategy for Power Systems Based on Flexible Semi-supervised Spectral Clustering," in *2013 IEEE Student Conference on Research and Development (SCOReD)*, Putrajaya, Malaysia, 16-17 December 2013, pp. 454-458.
28. M.H.M. Nordin, M.K. Hassan, A.C. Soh, **M.A.M. Radzi**, "Hardware-In-Loop of Fault Detection System for Air-Fuel Ratio Control," in *2nd International Conference on Recent Advances in Automotive Engineering & Mobility Research (ReCAR2013)*, Kuala Lumpur, Malaysia, 16-18 December 2013, pp. 1-6.
29. N.F.A.A. Rahman, **M.A.M. Radzi**, N. Mariun, A.C. Soh, N.A. Rahim, "Integration of Dual Intelligent Algorithms in Shunt Active Power Filter," in *Proceeding of 2013 IEEE Conference on Clean Energy and Technology (CEAT 2013)*, Langkawi, Malaysia, 18-20 November 2013, pp. 259-264.
30. R. Khanaki, **M.A.M. Radzi**, M.H. Marhaban, "Comparison of ANN and P&O MPPT Methods for PV Applications under Changing Solar Irradiation," in *Proceeding of 2013 IEEE Conference on Clean Energy and Technology (CEAT 2013)*, Langkawi, Malaysia, 18-20 November 2013, pp. 287-292.
31. A. Sabo, N.I.A. Wahab, **M.A.M. Radzi**, N.F. Mailah, "A Modified Artificial Neural Network (ANN) Algorithm to Control Shunt Active Power Filter (SAPF) for Current Harmonics Reduction," in *Proceeding of 2013 IEEE Conference on Clean Energy and Technology (CEAT 2013)*, Langkawi, Malaysia, 18-20 November 2013, pp. 348-352.
32. H. Usman, H. Hizam, **M.A.M. Radzi**, "Simulation of Single-phase Shunt Active Power Filter with Fuzzy Logic Controller for Power Quality Improvement," in *Proceeding of 2013 IEEE Conference on Clean Energy and Technology (CEAT 2013)*, Langkawi, Malaysia, 18-20 November 2013, pp. 353-357.
33. N. Jayaseelan, A.A. Faeza, B.T.H.T. Baharudin, **M.A.M. Radzi**, N.K.T. Mathew, K.H. Chin, "An Energy Management initiative for the Calcium Compound Processing Industry," in *Preprints of the 2013 IFAC Conference on Manufacturing, Modelling, Management, and Control*, Saint Petersburg, Russia, 19-21 June, 2013, pp. 2134-2139.
34. B. Ghazanfarpour, **M.A.M. Radzi**, N. Mariun, R. Shoorangiz, "Adaptive Unified Neural Network for Dynamic Power Quality Compensation," in *Proceeding of IEEE 7th International Power Engineering and Optimization Conference (PEOCO 2013)*, Langkawi, Malaysia, 3-4 June 2013, pp. 114-118.
35. M.F. Nejad, A.M. Saberian, H. Hizam, **M.A.M. Radzi**, M.Z.A.A. Kadir, "Application of Smart Power Grid in Developing Countries," in *Proceeding of IEEE 7th International Power Engineering and Optimization Conference (PEOCO 2013)*, Langkawi, Malaysia, 3-4 June 2013, pp. 427-431.
36. A.M. Saberian, P. Farzan, M.F. Nejad, H. Hizam, C. Gomes, M.L. Othman, **M.A.M. Radzi**, M.Z.A.A. Kadir, "Role of FACTS Devices in Improving Penetration of Renewable Energy," in *Proceeding of IEEE 7th International Power Engineering and Optimization Conference (PEOCO 2013)*, Langkawi, Malaysia, 3-4 June 2013, pp. 432-437.

#### Chapter in Book

1. M.R. Mehrjou, N. Mariun, M. Karami, S.B.M. Noor, S. Zolfaghari, N. Misron, M.Z.A.A. Kadir, **M.A.M. Radzi** and M.H. Marhaban, Wavelet-Based Analysis of MCSA for Fault Detection in Electrical Machine, *Wavelet Transform and Some of Its Real-World Applications*, Dr. Dumitru Baleanu (Ed.), ISBN: 978-953-51-2230-2, InTech, DOI: 10.5772/61532. Available from: <http://www.intechopen.com/books/wavelet-transform-and-some-of-its-real-world-applications/wavelet-based-analysis-of-mcsa-for-fault-detection-in-electrical-machine>, 2015.



## Research Grants

No	Project Title (*As Principal Investigator)	Amount (RM)	Year	Source of Fund
1.	<b>Program Leader</b> for Putra Grouped Initiative Grant titled "Photovoltaic System: From Transparent Solar Cell to Greenhousing Applications Under Tropical Environment" (Under this program, also as Principal Investigator for Sub-Project 3 titled "Sub-Project 3: Development of Single-Stage Dual Functioned Converter for Transparent Photovoltaic Application")*	500,000	2016-2018	Putra Grant, UPM
2.	Japan-ASEAN Science, Technology and Innovation Platform (JASTIP) Collaborative Research (JASTIP-Net 2016) titled "Optimal Design of Green Energy Systems Based on Multi-Renewable Resources for Rural Electrification"*	20,279 (JPY 500,000)	2016-2017	Kyoto University
3.	Single Phase Photovoltaic Based Active Power Filter*	15,000	2015-2017	Putra Grant, UPM
4.	Development of a High Efficiency Portable Solar Generator utilizing Optimum Solar Panel Orientation for Flood Evacuation Centre	80,000	2015	Fundamental Research Grant Scheme (FRGS), Ministry of Higher Education (MOHE)
5.	Formulation of Maximum Power Point Tracking Algorithm Based on Artificial Intelligence under Shadowing Condition*	116,000	2014-2017	FRGS, MOHE
6.	Shunt Active Power Filter with Dual Intelligent Algorithms*	142,700	2014-2015	Putra Grant, UPM
7.	Assessment of Hybrid Classification Technique in Power Quality Analysis for Renewable Energy Systems*	82,000	2013-2016	Exploratory Research Grant Scheme (ERGS), MOHE
8.	Sustainable Hydrokinetic Renewable Energy - Hydrokinetic Green Energy Converter (HGEC)	204,000	2013-2016	Department of Civil Works (JKR)
9.	Prediction of Photovoltaic Power Generation Based on Solar Radiation Model for Connection the Local Grid	150,000	2013-2015	Putra Grant, UPM
10.	Power Quality, Stability and Demand Response Analysis of Power System with Penetration of Renewable Energy Sources	150,000	2013-2015	Putra Grant, UPM
11.	Intelligent Fault Detection Scheme for Line Start Permanent Magnet Synchronous Motors	109,000	2013-2015	FRGS, UPM
12.	Realization Techniques for the Mitigation of Power Quality Problems using Dynamic Voltage Restorer*	15,000	2012-2014	Research University Grant Scheme (RUGS), UPM
13.	Development of Photovoltaic Boost Converter with Adaptive P&O-Fuzzy Logic Maximum Power Point Tracking	13,000	2012-2014	RUGS, UPM
14.	Investigation and Characterization of Active Solar Power System with Angle Controller Utilizing Date and Time-based Approach	76,140	2012-2014	Prototype Research Grant Scheme (PRGS), Ministry of Energy, Green Technology and Water



### Research Grants

No	Project Title (*As Principal Investigator)	Amount (RM)	Year	Source of Fund
15.	Concentrated Photovoltaic Project in Collaboration with Sichuan Zhonghan	67,913	2011-2013	Matching Grant-UPM
16.	Realization Techniques of Single Phase to Three Phase System Using Matrix Converter for Variable Speed Drives of Poly Phase Induction Motors	100,000	2011-2014	FRGS, MOHE
17.	Special Project Formation Investigation (Young Researcher Team Feasibility Studies) for Science and Technology Research Partnership for Sustainable Development (SATREPS) titled "Feasibility Study on Renewable Energy Potential in Asia"	118,629 (JPY 3,000,000)	2011-2012	Japan Science and Technology Agency (JST)
18.	Design and Development of Integrated Flexible Dual Power Filters for Reduction of Harmonics*	30,000	2010-2012	RUGS, UPM
19.	Application of Computational Intelligence Technique for the Enhancement of Transient Stability Assessment of Power Systems	30,000	2010-2011	RUGS, UPM
20.	Software Development for the Prediction of Future of Electrical Energy Demand in Malaysia*	40,500	2004-2005	Fundamental-UPM
21.	Development of web-based distributed intelligent energy management system*	10,000	2004-2005	UPM
<b>Total</b>		<b>2,070,161</b>		

### Awards/Recognition

No.	Name of Awards	Title	Award Authority	Award Type	Year
1.	Gold	Invention, Innovation and Design (IID) Faculty of Electrical Engineering 2016	Universiti Teknologi MARA.	National	2016
2.	Excellent Service Award	-	Universiti Putra Malaysia	University	2014, 2010, 2004
3.	Silver Prize	International Engineering Invention and Innovation Exhibition (i-ENVEX) 2014	Universiti Malaysia Perlis	National	2014
4.	Third Winner	National Robotic Design Contest (Robocon)	MOHE, MOSTI, RTM and SIRIM	National	2005
5.	Best Idea Award	National Robotic DesignContest (Robocon)	MOHE, MOSTI, RTM and SIRIM	National	2005
6.	Best Design Award	National Robotic Design Contest (Robocon)	MOHE, MOSTI, RTM and SIRIM	National	2005
7.	Volunteer of the Year (Second Winner)	-	IEEE Malaysia Section	National	2004

### Consultation

No.	Year	Title	Authority	Amount
1.	2013	Embedded Electronics Boards for DISEGANNI Storage Unit	Nagasteel Equipment SdnBhd	RM21,175
2.	2011-2012	KL Sentral - Preliminary Harmonic Study at KL Sentral	UAT Air Conditioning SdnBhd	RM32,000
3.	2003	Top-Up Course (TET 412 – Power Electronic Drive) for Engineering Graduates, Universiti Malaysia Perlis (UniMAP) 2007, 2008 and 2009	UPM Education and Training SdnBhd	RM4,200

### Professional Services

No.	Role	Activity	Authority
1.	Internal Examiner for PhD/MSc Thesis	3 PhD, 11 MSc	Universiti Putra Malaysia
2.	Chairman of Thesis Examination	2 PhD, 10 MSc	Universiti Putra Malaysia
3.	External Examiner for PhD/MPhil/MSc/MEng Thesis	<ul style="list-style-type: none"> <li>• 1 PhD</li> <li>• 1 PhD, 1 MSc</li> <li>• 2 PhD, 3 MEng</li> <li>• 1 PhD</li> <li>• 3 MPhil</li> <li>• 1 MSc</li> </ul>	<ul style="list-style-type: none"> <li>• Anna University, India</li> <li>• Universiti Teknologi MARA</li> <li>• Universiti Tenaga Nasional</li> <li>• Universiti Malaysia Pahang</li> <li>• Universiti of Malaya</li> <li>• Universiti Teknikal Malaysia Melaka</li> <li>• Universiti Malaysia Perlis</li> </ul>
4.	Member	Editorial Board	International Journal of Renewable Energy Development (IJRED)
5.	Member	Advisory Board	International Conference on Electrical, Control and Computer Engineering, 2015
6.	Member	Advisory Panel, Master of Engineering (Industrial Electronics and Control)	University of Malaya
7.	Panel	Curriculum Review of Master of Renewable Energy, 2017 - 2020.	University of Malaya
8.	Member	Working Group on "Electrical measuring equipment and their accessories" (WG/S/7-3)	SIRIM
9.	Member	ASM Task Force on Energy Use and Energy Efficiency in Transportation	Academy of Sciences Malaysia (ASM)
10.	Plenary/Guest/Invited Speaker	<ul style="list-style-type: none"> <li>• UPM-Kyutech Joint Seminar on Solar Technology, 2017.</li> <li>• 3rd Japan-ASEAN Science, Technology and Innovation Platform (JASTIP) Symposium with title</li> </ul>	<ul style="list-style-type: none"> <li>• Universiti Putra Malaysia</li> <li>• Kyoto University</li> </ul>

**Professional Services**

No.	Role	Activity	Authority
		<ul style="list-style-type: none"> <li>“Study on Energy Usage and Quality of Life for Rural Community through Rural Electrification Using Renewable Energy”, 2017.</li> <li>2016 IEEE Industrial Electronics and Applications Conference (IEACon) with title of “Power Quality: Detection and Mitigation Techniques of Harmonics”, 2016.</li> <li>Exploring Frontier of Knowledge into the Futures Business Lecture Series: Power Energy, 2016</li> <li>National Lecture Program on Power Electronics, Machines and Drives with title of “Artificial Intelligence in Power Electronics”, 2015</li> <li>Technical Seminar on “Artificial Intelligence in Power Electronics Applications – Special Attention to Fuzzy and Neural Network”, 2014</li> </ul>	<ul style="list-style-type: none"> <li>IEEE Industry Applications Society-Industrial Electronics Society Malaysia Joint Chapter</li> <li>Puncak Niaga Management Services Sdn. Bhd.</li> <li>Universiti Teknologi MARA (UiTM)</li> <li>Universiti Selangor (UNISEL)</li> </ul>
11.	External Assessor	<ul style="list-style-type: none"> <li>Promotion of Academic Staffs to Associate Professor</li> </ul>	<ul style="list-style-type: none"> <li>Universiti Teknologi MARA (UiTM)</li> </ul>
12.	Grant Reviewer/Evaluator	<ul style="list-style-type: none"> <li>Grant Application of Ministry of Higher Education</li> <li>Grant Application of Ministry of Higher Education</li> <li>Research Grant Scheme Applications</li> <li>High Impact Research (HIR) Grant Proposal</li> <li>Taylor’s Research Grant Scheme (TRGS)</li> </ul>	<ul style="list-style-type: none"> <li>Department of Polytechnic Education</li> <li>Universiti Malaysia Pahang</li> <li>Universiti Putra Malaysia</li> <li>University of Malaya</li> <li>Taylor’s University</li> </ul>
13.	Judge/Assessor	<ul style="list-style-type: none"> <li>World Varsity Engineering</li> </ul>	<ul style="list-style-type: none"> <li>International Islamic University Malaysia (IIUM)</li> </ul>

## Professional Services

No.	Role	Activity	Authority
		<ul style="list-style-type: none"> <li>Challenge 2013 (WOVEC 2013)</li> <li>• Final Year Project Poster Presentations of Undergraduate Students 2014</li> <li>• Competition of Engineering in the Kitchen 2014</li> </ul>	<ul style="list-style-type: none"> <li>• National University of Malaysia</li> <li>• Universiti Putra Malaysia</li> </ul>
14.	Journal Reviewer		<ul style="list-style-type: none"> <li>• Journal of Circuits, Systems, and Computers</li> <li>• Jurnal Teknologi</li> <li>• ASEAN Journal on Science and Technology for Development</li> <li>• Engineering Science and Technology: an International Journal</li> <li>• International Journal of Renewable Energy Development (IJRED)</li> <li>• The Scientific World Journal</li> <li>• Journal of Solar Energy</li> <li>• Journal of Engineering Science and Technology (JESTEC)</li> <li>• Reviewer for International Journal of Electrical Power and Energy Systems (IJEPES)</li> <li>• COMPEL: The International Journal for Computation and Mathematics in Electrical and Electronic Engineering</li> <li>• European Transactions on Electrical Power</li> <li>• IEEE Transactions on Power Electronics</li> <li>• IEEE Transactions on Control Systems Technology</li> <li>• IET Signal Processing</li> <li>• Electric Power Components and Systems</li> </ul>
15.	Committee Membership	<ul style="list-style-type: none"> <li>• Co-Chair</li> <li>• Member of Technical Committee</li> <li>• Member of Steering Committee</li> <li>• Member of Organising Committee</li> <li>• Track Co-Chair</li> </ul>	<ul style="list-style-type: none"> <li>• International Conference on Electrical and Electronic Technology, 2016</li> <li>• 4th International Conference on Clean Energy and Technology 2016 (CEAT 2016)</li> <li>• IEEE Industrial Electronics and Applications Conference (IEACon 2016)</li> <li>• The 7th International Conference on Sustainable Agriculture for Food, Energy and Industry (ICSAFEI 2015)</li> <li>• 3rd IET International Conference on Clean Energy and Technology (CEAT), 2014</li> </ul>

## Professional Services

No.	Role	Activity	Authority
		<ul style="list-style-type: none"> <li>• Programme Chair</li> <li>• Member of Technical Program Committee</li> <li>• Member of Organising Committee</li> <li>• Secretary of Organising Committee</li> <li>• Secretary of Organising Committee</li> <li>• Secretary of Organising Committee</li> <li>• Secretary of Organising Committee</li> </ul>	<ul style="list-style-type: none"> <li>• 2013 IEEE Conference on Clean Energy and Technology</li> <li>• 2012 IEEE International Conference on Power and Energy</li> <li>• Energy and Technology Conference and The 8th Sustainable Energy and Environment (SEE) Forum Meeting, 2011</li> <li>• 15th Asian Technology Conference in Mathematics, 2010</li> <li>• National Power and Energy Conference, 2004</li> <li>• National Power and Energy Conference</li> </ul>
16.	Involvement in Association	<ul style="list-style-type: none"> <li>• Committee Member, 2014-2016</li> <li>• Committee Member, 2014-2015</li> <li>• Committee Member, 2012</li> <li>• Co-opted Committee Member, 2011</li> <li>• Treasurer, 2006-2007.</li> <li>• Committee Member, 2005-2006</li> <li>• Treasurer, 2005-2006, 2002-2004</li> <li>• Treasurer, 2005-2006.</li> <li>• Secretary, 2003-2005</li> <li>• Protem Chair, 2003-2004</li> <li>• Co-opted Committee Member of Power Engineering Society Malaysia Chapter, 2001 – 2002</li> <li>• Member</li> </ul>	<ul style="list-style-type: none"> <li>• IEEE Industry Applications Society-Industrial Electronics Society Malaysia Joint Chapter</li> <li>• IEEE Power Electronics Society Malaysia Chapter</li> <li>• IEEE Power Electronics Society-Industry Applications Society-Industrial Electronics Society Malaysia Joint Chapter</li> <li>• IEEE Power Electronics Society-Industry Applications Society-Industrial Electronics Society Malaysia Joint Chapter</li> <li>• IEEE Malaysia Section</li> <li>• IEEE Malaysia Section</li> <li>• IEEE Power Engineering Society Malaysia Chapter</li> <li>• IEEE Power Electronics Society-Industry Applications Society-Industrial Electronics Society Malaysia Joint Chapter</li> <li>• IEEE Power Engineering Society Malaysia Chapter</li> <li>• IEEE GOLD Affinity Group Malaysia Chapter</li> </ul> <p>Academic Staff Association, UPM</p>



### Professional Services

No.	Role	Activity	Authority
		<ul style="list-style-type: none"> <li>• Member</li> </ul>	Sport and Social Club, Faculty of Engineering, UPM

### Student Supervision

#### PhD (Main Supervisor)

No.	Name	Title	Status
1	Nor Farahaida Binti Abdul Rahman (GS33766)	Shunt Active Power Filter using Hybrid Fuzzy-Proportional and Crisp-Integral Control Algorithm for Total Harmonic Distortion Improvement	Graduated 2016
2	Shahrooz Hajighorbani (GS36148)	Dual Search Maximum Power Point Algorithm Based on Mathematical Analysis under Partially Shaded Conditions	Graduated 2016
3	Goh Zai Peng (GS40154)	Development of Fast FT-ADALINE and Voltage Flicker Detection for Detection of Harmonics and Voltage Flicker in Power Electronic Application	Graduated 2017
4	Muhammad Ammirul Atiqi B Mohd Zainuri (GS38766)	Photovoltaic Shunt Active Power Filter Based on Indirect Self-Charging with Step Size Error Cancellation and Simplified Adaptive Linear Neuron	Graduated 2017
5	Hoon Yap (GS37714)	Enhanced Control Algorithms for Multilevel Inverter-based Shunt Active Power Filter	Graduated 2017
6	Musa Suleiman (GS33198)	Shunt Active Power Filter with Synchronous Reference Frame Technique and Fuzzy Logic Current Controller for Harmonic Mitigation	Passed Viva
7	Ahmad Syukri Mohamad (GS45668)	A New Improved Cascaded Multilevel Inverter Topology with Minimum Number of Conducting Switches	Ongoing
8	Tanaselan a/l Ramelu (GS48474)	Three-Phase Four-Leg Shunt Active Power Filter with Novel Control Algorithms	Ongoing
9	Musa Bin Yusup Lada (GS50078)	-	New
10	Syahrul Hisham Mohamad @ Abd Rahman (GS50079)	-	New
11	Syahrul Azalia Ab Shukor (GS50276)	-	New

#### PhD (External Co-Supervisor)

No.	Name	Institution	Title	Status
1	Siti Zaliha Mohammad Noor	Universiti Teknologi MARA	A Mathematical Model for Temperature Effect on PV Generator Performance in Tropical Climate Conditions	Ongoing

#### MSc with thesis (Main Supervisor)

No.	Name	Title	Status
1	Mohammad Hossein Taghvaei (GS27111)	Fuzzy Logic Based Hill Climbing Technique for Photovoltaic Maximum Power Point Tracking (MPPT) Converter	Graduated 2013
2	Muhammad Ammirul Atiqi B Mohd Zainuri (GS30355)	Photovoltaic Boost Dc/Dc Converter with Adaptive Perturb and Observe-Fuzzy Maximum Power Point Tracking Algorithm	Graduated 2013



No.	Name	Title	Status
3	Behzad Ghazanfarpour Khoulenjani (GS29201)	Unified Neural Network Controller of Series Active Power Filter for Power Quality Problems Mitigation	Graduated 2013
4	Mohsen Fadaee Nejad (GS32083)	Multi-Objective Optimization of Stand-Alone Hybrid Renewable Energy System using Genetic Algorithm	Graduated 2014
5	Razieh Khanaki (GS29822)	Maximum Power Point Tracking using Artificial Neural Network for Photovoltaic Standalone System	Graduated 2014
6	Farshad Azadian (GS32637)	Controlled Islanding Strategy for Power Systems based on Flexible Semi-Supervised Spectral Clustering	Graduated 2014
7	Mohd Izhwan Bin Muhamad (GS31381)	Hybrid Renewable Energy System Based on Biomass and Solar Resources in Tropical Climate Condition	Graduated 2016
8	Tanaselan a/l Ramelu (GS37932)	Photovoltaic-Based Single Ended Primary Inductor Converter with Dual Fuzzy Logic Control Based MPPT for Dual Load Operation	Graduated 2016

#### PhD/MSc (Member of Supervisory Committee)

No.	Programme	Matric No.	Name	Status
1	PhD	GS28611	Ir. Mohammad Effendy bin Yaacob	Graduated
2	PhD	GS33329	Mahdi Karami	Graduated
3	PhD	GS32985	Saman Toosi	Graduated
4	PhD	GS27837	Vengadeshwaran Velu	Graduated
5	PhD	GS31472	Mohammad Rezazadeh Mehrjou	Graduated
6	PhD	GS36080	Sabo Mahmoud Lurwan	Graduated
7	PhD	GS38303	Mohammed Saidu Kumo	Graduated
8	PhD	GS32674	Jayaseelan Nadarajah	Graduated
9	PhD	GS34849	Salah Eldeen Gasim Mohamed Hassan	Ongoing
10	PhD	GS33241	Zaini bin Yaakub	Ongoing
11	PhD	GS34454	Farinaz Behrooz	Ongoing
12	PhD	GS38666	Masnita binti Mat Isa	Ongoing
13	PhD	GS39925	Ahmad H. Sabry	Ongoing
14	PhD	GS40463	Nur Hazirah binti Zaini	Ongoing
15	PhD	GS46617	Abdulahadi Abdulsalam Abulifa	Ongoing
16	PhD	GS47645	Masoud Ahmadipour	Ongoing
17	PhD	GS47654	Fatimah Azzahraa Mohd Sobri	Ongoing
18	MSc	GS13579	Anayet Karim	Graduated
19	MSc	GS14519	Imtiaz Ahmad Khan	Graduated
20	MSc	GS25515	Suhairi Rizuan Che Ahmad	Graduated
21	MSc	GS11970	Wan Mohd Khairudin Wan Abdul Malik	Graduated
22	MSc	GS21802	Ahmad Syukri Mohamad	Graduated
23	MSc	GS29336	Usman Hamisu	Graduated
24	MSc	GS31959	Aminmohammad Saberian	Graduated
25	MSc	GS31792	Rebaz J. Ahmed	Graduated
26	MSc	GS34664	Ameer M. F. Sider	Graduated
27	MSc	GS31864	Seyedeh Narjes Fallah	Graduated
28	MSc	GS36582	Aliyu Sabo	Graduated
29	MSc	GS31403	Payam Farzan	Graduated





No.	Programme	Matric No.	Name	Status
30	MSc	GS37251	Alaa Hadi Mohammed Musa	Graduated
31	MSc	GS35296	Malik Qasim Badar	Graduated
32	MSc	GS37492	Ehsan Mohsin Obaid Alhamdawe	Graduated
33	MSc	GS31548	Soheil Roknideilami	Graduated
34	MSc	GS41527	Nor Izzati binti Ahmad	Graduated
35	MSc	GS34907	Muhammad Anwer Nazir	Ongoing
36	MSc	GS39256	Almalik Faisel bin Mohd Saupi	Ongoing
37	MSc	GS45159	Mohd Solehin bin Mohd Nasir	Ongoing
36	MSc	GS46276	Sabri Yasameen Hussein Sabri	Ongoing

### Teaching

No.	Course	Semester
1	KEE 3113 Electric Circuits	May-03/04, 1-04/05,
2	KEE 3905 Electrical and Electronics Laboratory V	May-03/04
3	KEE 4308 Wiring System Design	Nov-03/04
4	KEE 3906 Electrical and Electronics Laboratory VI	Nov-03/04, 2-04/05
5	KEE 3207 Microprocessor Technology	1-04/05, 1-05/06
6	KEE 3408 Microcontroller	2-04/05
7	KEE 4317 High Voltage Engineering	2-04/05
8	KEE 3312 Power Electronics	1-05/06
9	EEE 3501 Signal Processing	2-09/10, 2-10/11, 2-11/12
10	EEE 3907 Power System and Machine Laboratory	2-09/10
11	EEE 3302 Power Electronics	1-10/11, 1-11/12, 1-12/13, 1-13/14, 1-14/15
12	EEE 5301 Power Electronics Converters	1-11/12
13	EEE 5955 Photovoltaic Generation and Applications	2-11/12, 2-12/13
14	EEE 4311 Electric Power Quality	2-14/15
13	EEE 3909 Electronic Systems Design	2-15/16
16	EEE 3904 Electrical Power Engineering Laboratory	1-16/17
17	EEE 3201 Microprocessor Technology	2-10/11, 2-13/14, 2-15/16, 2-16/17
18	EEE 3106 Electric Circuits	1-12/13, 2-12/13, 1-13/14, 1-14/15, 1-15/16, 1-17/18