

CURRICULUM VITAE



Professor Dr. Mohd Amran Mohd Radzi
Professor in Power and Energy

Department of Electrical and Electronic Engineering,
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Education

1. PhD (Power Electronics), 2010, University of Malaya
2. MSc (Electrical Power Engineering), 2002, Universiti Putra Malaysia
3. BEng (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
4. Graduate Member, Institution of Engineers, Malaysia (IEM)

Appointments

Position	Duration
1. Professor, Department of Electrical and Electronic Engineering, Faculty of Engineering, UPM	October 2020 to date
2. Researcher, Advanced Lightning, Power and Energy Research (ALPER) Centre, Faculty of Engineering, UPM	October 2018 to date
3. Deputy Dean of Research and Innovation, Faculty of Engineering, UPM	June 2020 to May 2022
4. Associate Professor, Department of Electrical and Electronic Engineering, Faculty of Engineering, UPM	March 2014 to September 2020
5. Head, Department of Electrical and Electronic Engineering, Faculty of Engineering, UPM	October 2016 to May 2020
6. Researcher, Centre for Advanced Power and Energy Research (CAPER), Faculty of Engineering, UPM	October 2012 to September 2018
7. Coordinator, Master of Engineering in Electrical Power (Without Thesis)	January 2015 to January 2016
8. Visiting Researcher for "JSPS Invitation Program for East Asian Young Researchers", The Institute of Advanced Energy, Kyoto University	September – October 2011
9. Senior Lecturer, Department of Electrical and Electronic Engineering, Faculty of Engineering, UPM	September 2010 - February 2014
10. Coordinator, Power Electronics Laboratory	February 2010 – October 2016
11. Coordinator, Development Committee, Department of Electrical and Electronic Engineering	March 2011 – August 2014.

Appointments	
Position	Duration
12. Coordinator, Electrical Laboratory I	August 2003 – August 2005
13. Lecturer, Department of Electrical and Electronic Engineering, Faculty of Engineering, UPM	June 2003 - August 2010
14. Counsellor, IEEE Student Branch Counselor, Universiti Putra Malaysia	December 2001 - December 2003, January 2005 – December 2005
15. Tutor, Department of Electrical and Electronic Engineering, Faculty of Engineering, UPM	July 2000 - June 2003

Publications	
Journals (Latest 5 years from total of 140)	
1.	N.M.M. Altwallbah, M.A. M. Radzi , N. Azis, S. Shafie, and M.A.A.M. Zainuri, "New perturb and observe algorithm based on trapezoidal rule: Uniform and partial shading conditions," <i>Energy Conversion and Management</i> , vol. 264, pp. 1-23, 15 July 2022. (2020 IF = 9.709, Q1)
2.	F.A.M. Sobri, M. Ariffin, A.H. Sharaai, and M.A.M. Radzi , "Public support for feed-in-tariff and net energy metering policies in Malaysia: the role of policy information," <i>International Journal of Renewable Energy Development</i> , vol. 11, no. 3, pp. 694-702, 2022. (Scopus)
3.	A.H.M. Hashim, N. Azis, J. Jasni, M.A.M. Radzi , K. Masahiro, M. Kamarol, and Z. Yaakub, "Partial Discharge Localization in Oil through Acoustic Emission Technique Utilizing Fuzzy Logic," <i>IEEE Transactions on Dielectrics and Electrical Insulation</i> , vol. 29, no. 2, pp. 623 – 630, April 2022. (2020 IF = 2.931, Q2)
4.	A.X.R. Irudayaraj, N.I.A. Wahab, M. Premkumar, M.A.M. Radzi , N. Sulaiman, V. Veerasamy, R.A. Farade, and M.Z. Islam, "Renewable sources-based automatic load frequency control of interconnected systems using chaotic atom search optimization," <i>Applied Soft Computing</i> , vol. 199, pp. 1-17, April 2022. (2020 IF = 6.725, Q1)
5.	A. Farooqi, M.M. Othman, M.A.M. Radzi , I. Musirin, S.Z.M. Noor, I.Z. Abidin, "Dynamic voltage restorer (DVR) enhancement in power quality mitigation with an adverse impact of unsymmetrical faults," <i>Energy Reports</i> , vol. 8, sup. 1, pp. 871-882, April 2022. (2020 IF = 6.870, Q1).
6.	A. Farooqi, M.M. Othman, M.A.M. Radzi , I.Z. Abidin, and D.S.S. Mohammed, "PV system based dynamic voltage restorer (DVR) in water pumping system for agricultural application," <i>Journal of Mechanical Engineering</i> , vol. 18, no. 3, pp. 163-180, 2021. (Scopus)
7.	M.F. Yaakub, M.A.M. Radzi , M. Azri, and F.H.M. Noh, "LCL filter design for grid-connected single-phase flyback microinverter: a step by step guide LCL filter design for grid-connected single-phase flyback microinverter: a step by step guide," <i>International Journal of Power Electronics and Drive System</i> , vol. 12, no. 3, pp. 1632-1643, September 2021. (Scopus)
8.	M. Karami, N. Mariun, M.Z.A.A. Kadir, N. Mison, and M.A.M. Radzi , "Motor current signature analysis-based non-invasive recognition of mixed eccentricity fault in line start permanent magnet synchronous motor," <i>Electric Power Components and Systems</i> , vol. 49, no. 1-2, pp. 1-13, 2021. (2019 IF = 0.824, Q4)
9.	B. Ismail, N.I.A. Wahab, M.L. Othman, M.A.M. Radzi , K.N. Vijayakumar, and M.N.M. Naain, "A comprehensive review on optimal location and sizing of reactive power compensation using hybrid-based approaches for power loss reduction, voltage stability improvement, voltage profile enhancement and loadability enhancement," <i>IEEE Access</i> , vol. 8, pp. 222733 – 222765, 2020. (2018 IF = 4.098, Q1)
10.	A.N.M. Mohammad, M.A.M. Radzi , N. Azis, S. Shafie, and M.A.A.M. Zainuri, "A novel hybrid approach for maximizing the extracted photovoltaic power under complex partial shading conditions," <i>Sustainability</i> , vol. 12, no. 14, pp. 1-24, 2020. (2018 IF = 2.592, Q2)
11.	A.N.M. Mohammad, M.A.M. Radzi , N. Azis, S. Shafie, and M.A.A.M. Zainuri, "An enhanced adaptive perturb and observe technique for efficient maximum power point tracking under partial shading conditions," <i>Applied Sciences</i> , vol. 10, no. 11, pp. 1 - 29, 2020. (2018 IF = 2.217, Q2)
12.	M.F. Yaakub, M.A.M. Radzi , F.H.M. Noh, and M. Azri, "Silicon carbide power device characteristics, applications and challenges: an overview," <i>International Journal of Power Electronics and Drive System (IJPEDS)</i> , vol. 11, no. 4, pp. 2194-2202, December 2020. (Scopus)
13.	S.H. Mohamad, M.A.M. Radzi , N.F. Mailah, N.I.A. Wahab, A. Jidin, and M.Y. Lada, "Adaptive notch filter under indirect and direct current controls for active power filter," <i>Bulletin of Electrical</i>

Publications

- Engineering and Informatics*, vol. 9, no. 5, pp. 1794-1802, October 2020. (Scopus)
14. A. Al-Mahrouk, N.F. Mailah, **M.A.M. Radzi**, and M.K. Hassan, "Systematic Review of Multilevel and Matrix Usage in Power Electronics: Circuit Types, System Taxonomy, Applications and Recommendations," *International Review of Electrical Engineering*, vol. 15, no. 2, pp. 108-125, March-April 2020. (Scopus)
15. A.K. Ghazali, M.K. Hassan, **M.A.M. Radzi**, and A. As'arry, "Sliding mode control optimization method using fuzzy-gain scheduling for regenerative braking system," *Journal of Advanced Research in Dynamical and Control Systems*, vol. 12, no. 4 (Special Issue), pp. 2020- 1509, 2020. (Scopus)
16. M.Y. Lada, **M.A.M. Radzi**, J. Jasni, H. Hizam, A. Jidin, and S.H. Mohamad, "Performance of three-phase three-wire cascaded H-bridge multilevel inverter-based shunt active power filter," *International Journal of Power Electronics and Drive System (IJPEDS)*, vol. 11, no. 3, pp. 1430-1440, September 2020. (Scopus)
17. B.I.N.A. Azman, N.I.A. Wahab, M.L. Othman, **M.A.M. Radzi**, and M.M. Naain, "Investigation of optimal location for series and shunt reactive power compensation in distribution network," *Test Engineering and Management*, vol. 83, pp. 7704 – 7711, March - April 2020. (Scopus)
18. A.H. Mohammad, A.C. Soh, N.F. Ismail, R.Z.A. Rahman, and **M.A.M. Radzi**, "Improvement of LMS adaptive noise canceller using uniform Poly-phase digital filter bank," *Indonesian Journal of Electrical Engineering and Computer Science*, vol. 17, no. 3, pp. 1258-1265, March 2020. (Scopus)
19. Y. Hoon, **M.A.M. Radzi**, and A.S. Al-Ogaili, "Adaptive linear neural network approach for three-phase four-wire active power filtering under non-ideal grid and unbalanced load scenarios," *Applied Sciences*, vol. 9, no. 24, pp. 1-25, December 2019. (2017 IF = 1.689, Q3)
20. Y. Hoon, **M.A.M. Radzi**, M.A.A.M. Zainuri, and M.A.M. Zawawi, "Shunt Active Power Filter: A Review on Phase Synchronization Control Techniques," *Electronics*, vol. 8, no. 7, pp. 1-20, July 2019. (2017 IF = 2.11, Q2)
21. M.S.M. Nasir, M.Z.A. Ab-Kadir, **M.A.M. Radzi**, M. Izadi, N.I. Ahmad, and N.H. Zaini, "Lightning performance analysis of a rooftop grid-connected solar photovoltaic without external lightning protection system," *PLoS One*, vol. 14, no 7, pp 1-19, July 2019. (2017 IF = 2.766, Q1)
22. M. Ahmadipour, H. Hizam, M.L. Othman, **M.A.M. Radzi**, and N. Chireh, "A novel islanding detection technique using modified Slantlet transform in multi-distributed generation," *Electrical Power and Energy Systems*, vol. 112, pp. 460–475, 2019 (2017 IF = 3.610 Q1)
23. **M.A.M. Radzi**, N.A. Rahim, H.S. Che, H. Ohgaki, H. Farzaneh, W.S.H. Wong, and L.C. Hung, "Optimal solar powered system for long houses in Sarawak by using Homer tool," *55 ASEAN Engineering Journal*, vol. 9, no. 1, pp. 1-14, 2019. (Scopus)
24. M. Ahmadipour, H. Hizam, M.L. Othman, **M.A.M. Radzi**, and N. Chireh, "A fast fault identification in a grid-connected photovoltaic system using wavelet multi-resolution singular spectrum entropy and support vector machine," *Energies*, vol 12, no. 13, June 2019. (2017 IF = 2.676, Q2)
25. A.A. Abulifa, A.C. Soh, M.K. Hassan, R.M.K.R. Ahmad, and **M.A.M. Radzi**, "Energy management system in battery electric vehicle based on fuzzy logic control to optimize the energy consumption in HVAC system," *International Journal of Integrated Engineering*, vol. 11, no. 4, pp. 11–20, 2019 (Scopus)
26. M.A.A.M. Zainuri, E.A. Azari, A.A. Ibrahim, A. Ayob, Y. Yusof, and **M.A.M. Radzi**, "Analysis of adaptive perturb and observe-fuzzy logic control maximum power point tracking for photovoltaic boost dc-dc converter," *International Journal of Advanced Trends in Computer Science and Engineering*, vol. 8, no. 6, pp. 201 – 210, 2019. (Scopus)
27. A. Farooqi, M.M. Othman, A.F. Abidin, S.I. Sulaiman, and **M.A.M. Radzi**, "Mitigation of power quality problems using series active filter in a microgrid system," *International Journal of Power Electronics and Drive System*, vol. 10, no. 4, pp. 2245-2253, December 2019. (Scopus)
28. M. Ahmadipour, H. Hizam, M.L. Othman, **M.A.M. Radzi**, "Islanding detection method using ridgelet probabilistic neural network in distributed generation," *Neurocomputing*, vol. 329, pp. 188-209, 15 February 2019. (2017 IF = 3.241, Q1)
29. M. Ahmadipour, H. Hizam, M.L. Othman, **M.A.M. Radzi**, and A.S. Murthy, "Islanding detection technique using Slantlet transform and Ridgelet probabilistic neural network in grid-connected photovoltaic system," *Applied Energy*, vol. 231, pp. 645-659, 1 December 2018. (2016 IF = 7.182, Q1)
30. S.E.G. Mohamed, J. Jasni, **M.A.M. Radzi**, and H. Hizam, "Implementation of the power transistor-assisted Sen transformer in steady-state load flow analysis," *IET Generation, Transmission and Distribution*, vol. 12, no. 12, pp. 4182-4193, 16 October 2018. (2016 IF =

Publications

- 2.213, Q2)
31. A.F.M. Saupi, N.F. Mailah, **M.A.M. Radzi**, K.B. Mohamad, S.Z. Ahmad and A.C. Soh, "An illustrated guide to estimation of water velocity in unregulated river for hydrokinetic performance analysis studies in East Malaysia," *Water*, vol. 10, no. 10, pp. 1-14, October 2018. (2016 IF = 1.832, Q2)
32. N. Roslan, M.E. Ya'acob, **M.A.M. Radzi**, Y. Hashimoto, D. Jamaludin, and G. Chen, "Dye sensitized solar cell (DSSC) greenhouse shading: new insights for solar radiation manipulation," *Renewable and Sustainable Energy Reviews*, vol. 92, pp. 171–186, September 2018. (2016 IF = 8.050, Q1)
33. Y. Hoon, **M.A.M. Radzi**, M.K. Hassan, and N.F. Mailah, "Operation of three-level inverter-based shunt active power filter under non-ideal grid voltage conditions with dual fundamental component extraction," *IEEE Transactions on Power Electronics*, vol. 33, no. 9, pp. 7558-7570, September 2018. (2016 IF = 7.151, Q1)
34. Y. Hoon and **M.A.M. Radzi**, "PLL-Less Three-phase four-wire SAPF with STF-dq0 technique for harmonics mitigation under distorted supply voltage and unbalanced load conditions," *Energies*, vol. 11, no. 8, pp. 1-27, August 2018. (2016 IF = 2.262, Q2)
35. Y.H. Sabri, W.Z.W. Hasan, S. Shafie, **M.A.M. Radzi**, and A. H. Sabry, "Daily harvested energy of cadmium telluride thin film photovoltaic," *Indonesian Journal of Electrical Engineering and Computer Science*, vol. 11, no. 1, pp. 18-26, July 2018. (Scopus)
36. A.H. Sabry, W.Z.W. Hasan, M.Z.A.A. Kadir, **M.A.M. Radzi**, and S. Shafie, "Wireless monitoring prototype for photovoltaic parameters," *Indonesian Journal of Electrical Engineering and Computer Science*, vol. 11, no.1, pp. 9-17, July 2018. (Scopus)
37. Y.H. Sabry, W.Z.W. Hasan, A.H. Sabry, M.Z.A.A. Kadir, **M.A.M. Radzi**, and S. Shafie, "Measurement-based modeling of a semitransparent CdTe thin-film PV module based on a custom neural network," *IEEE Access*, vol. 6, pp. 34934-34947, June 2018. (2016 IF = 3.244, Q1)
38. Y. Hoon, **M.A.M. Radzi**, M.K. Hassan, and N.F. Mailah, "A dual-function instantaneous power theory for operation of three-level neutral-point-clamped inverter-based shunt active power filter," *Energies*, vol. 11, no. 6, pp. 1-17, June 2018. (2016 IF = 2.262, Q2)
39. F. Behrooz, N. Mariun, M.H. Marhaban, **M.A.M. Radzi**, and A.R. Ramli, "Review of control techniques for HVAC systems-nonlinearity approaches based on fuzzy cognitive maps," *Energies*, vol. 11, no. 3, pp. 1-41, March 2018. (2016 IF = 2.262, Q2)
40. J.C. Quiroz, N. Mariun, M.R. Mehrjou, M. Izadi, N. Misron, and **M.A.M. Radzi**, "Fault detection of broken rotor bar in LS-PMSM using random forests," *Measurement*, vol. 116, pp. 273–280, February 2018. (2016 IF = 2.359, Q1)
41. N.I. Ahmad, 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*, vol. 82, no. 1, February 2018. (2016 IF = 8.050, Q1)
42. M. Ahmadipour, H. Hizam, M.L. Othman, and **M.A.M. Radzi**, "An anti-islanding protection technique using a wavelet packet transform and a probabilistic neural network," *Energies*, vol. 11, no. 10, pp. 1-31, October 2018. (2016 IF = 2.262, Q2)
43. E.Z.Ali, Y. Zakaria, **M.A.M. Radzi**, L.H. Ngu, and S.A. Jusoh, "Mutation study of malaysian patients with ornithine transcarbamylase deficiency: clinical, molecular, and bioinformatics analyses of two novel missense mutations of the OTC gene," *BioMed Research International*, vol. 2018, pp. 1-15, 2018. (2016 IF = 2.476 Q2)
44. M.A.A.M. Zainuri, **M.A.M. Radzi**, A.C. Soh, N. Mariun, N.A. Rahim, J. Teh, and C.-M. Lai, "Photovoltaic integrated shunt active power filter with simpler ADALINE algorithm for current harmonic extraction," *Energies*, vol. 11, no. 5, pp. 1-22, May 2018. (2016 IF = 2.262, Q2)
45. A.H. Sabry, W.Z.W. Hasan, M.Z.A.A. Kadir, **M.A.M. Radzi**, and S. Shafie, "Field data-based mathematical modeling by Bode equations and vector fitting algorithm for renewable energy applications," *PLoS One*, vol. 13, no 1, pp 1-22, January 2018. (2016 IF = 2.806, Q1)
46. N.H. Zaini, M.Z.A.A. Kadir, **M.A.M. Radzi**, M. Izadi, N. Azis, N.I. Ahmad, and M.S.M. Nasir, "Lightning surge analysis on a large scale grid-connected solar photovoltaic system," *Energies*, vol. 10, no. 12, pp. 1-18, December 2017. (2015 IF = 2.077, Q2)
47. Y. Hoon, **M.A.M. Radzi**, M.K. Hassan, and N.F. Mailah, "Control algorithms of shunt active power filter for harmonics mitigation: a review," *Energies*, vol. 10, no. 12, pp. 1-29, December 2017. (2015 IF = 2.077, Q2)
48. F. Behrooz, N. Mariun, M.H. Marhaban, **M.A.M. Radzi**, and A.R. Ramli, "A design of a hybrid

Publications

- non-linear control algorithm,” *Energies*, vol. 10, no. 11, pp. 1-32, November 2017. (2015 IF = 2.077, Q2)
49. A.H. Sabry, W.Z.W. Hasan, M.Z.A. Ab. Kadir, **M.A.M. Radzi**, and S. Shafie, “DC-based smart PV-powered home energy management system based on voltage matching and RF module,” *PLoS One*, vol. 12, no. 9, pp. 1-22, September 2017. (2015 IF = 3.057, Q1)
 50. A.H. Sabry, W.Z.W. Hasan, M.Z.A. Ab. Kadir, **M.A.M. Radzi**, and S. Shafie, “Photovoltaic-powered smart home system with direct current-environment,” *Journal of Computational and Theoretical Nanoscience*, vol. 14, no. 9, pp. 4158-4173, September 2017. (Scopus)
 51. 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, pp. 1-20, August 2017. (2015 IF = 1.726, Q2)
 52. 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. (2015 IF = 2.077, Q2)
 53. 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. (2015 IF = 0.982, Q3)
 54. 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. (2015 IF = 0.662, Q3)
 55. **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)
 56. 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)
 57. 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, May 2017. (2015 IF = 2.077, Q2)
 58. 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)
 59. 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. (2015 IF = 0.518, Q4)
 60. 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. (2015 IF = 2.077, Q2)
 61. 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. (Scopus)
 62. 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. (2015 IF = 4.292, Q1)
 63. 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. (2015 IF = 5.746, Q1)

Conference Proceedings (Latest 5 years from total of 85)

1. M.F. Yaakub, M.A.M. Radzi, M. Asri, S. Shafie, N. Aziz, F.H.M. Noh, “LCL Filter Design Based on Ripple Current Minimization Approach for Grid-Connected Inverter Application,” in *2021 IEEE Industrial Electronics and Applications Conference (IEACon)*, 22-23 Nov. 2021, Penang, Malaysia, pp. 45-49.
2. B.A. Fadheel, N.I.A. Wahab, A.J. Mahdi, M.A.M. Radzi, A.C. Soh, “Review of the Virtual Inertia Strategies from Intermittent Renewable Energy Resources on the Power System,” in *2021 12th*

Publications

- International Renewable Energy Congress (IREC)*, 26-28 Oct. 2021, Hammamet, Tunisia, pp. 1-6.
3. A.H.M. Hashim, N. Azis, J. Jasni, **M.A.M. Radzi**, K. Masahiro, M.K.M. Jamil, "Investigation on Partial Discharge Localization in Oil Based on Time of Arrival Method," in *2021 IEEE International Conference on the Properties and Applications of Dielectric Materials (ICPADM)*, 12-14 July 2021, Johor Bahru, Malaysia, pp. 466-469.
 4. G.A. Lajis, J. Jasni, N. Azis, **M.A.M. Radzi**, M.N. Mohtar, N.A. Salim, "Bioelectricity Harvesting at Aquaponics System: Current and Future Challenges," in *2021 IEEE International Conference in Power Engineering Application (ICPEA)*, 8-9 March 2021, Malaysia, pp. 86-90.
 5. A.N.M. Mohammad, **M.A.M. Radzi**, N. Azis, S. Shafie, M.A.A.M. Zainuri, "Composite Trapezoidal Rule-based maximum power point tracking algorithm for photovoltaic systems under complex shading conditions," in *2020 IEEE International Conference on Power and Energy (PECon)*, 7-8 December 2020, Penang, Malaysia, pp. 270-275.
 6. M.A. Alwez, J. Jasni, **M.A.M. Radzi**, N. Azis, "PV system sizing to cover the Electricity shortage in a Residential quarter in Iraq," in *2020 IEEE International Conference on Power and Energy (PECon)*, 7-8 December 2020, Penang, Malaysia, pp. 214-218.
 7. V.S. Devendran, J. Jasni, **M.A.M. Radzi**, N. Azis, "Optimal Placement of PMU for Complete Observability of Power System Considering Zero Injection and Islanding Condition," in *2020 IEEE International Conference on Power and Energy (PECon)*, 7-8 December 2020, Penang, Malaysia, pp. 107-112.
 8. Z.Y. Tham, Y. Hoon, **M.A.M. Radzi**, "Synchronous Reference Frame with Finite Impulse response filter for operation of single-phase shunt active power filter," in *14th Eureka 2020 International Engineering and Computing Research Conference*, Malaysia, 25 November 2020, pp. 1-11.
 9. L. Cioccolanti, M. Moglie, K. Mahkamov, H. Paksoy, C. Chen, J. Lin, C. Li, Y. Guan, W. Zhou, E. Abdullah, **M.A.M. Radzi**, S. Shafie, Z. Alimuddin, M.Y. Idroas, T. Y. Heng, M.A. Ahmad, M. Miskam, K. Kraitong, W. Wongsapai, C. Chaichana, D. Damronsak, Analysis of labour market needs for engineers with enhanced knowledge in sustainable renewable energy solutions in the built environment in some Asian countries, in *2020 Applied Energy Symposium (ICAE)*, 100RES 2020, 29-30 October 2020, Pisa, Italy, pp. 1-6.
 10. B. Ismail, N.I.A. Wahab, Mohammad Lutfi Othman, **M.A.M. Radzi**, K.N. Vijayakumar, M.M. Naain, "Analytical Approaches on Optimal Placement of STATCOM Under Contingency Occasions," in *2020 2nd International Conference on Smart Power & Internet Energy Systems (SPIES)*, 15-18 September 2020, Bangkok, Thailand, pp. 7-12.
 11. **M.A.M. Radzi**, "Facing Energy Trilemma with Solar Power Generation as Future Main Player in Infrastructure Development," in *First International Conference on Sustainable Infrastructure with Smart Technology for Energy and Environmental Management (FIC-SISTEEM-2020)*, 3-4 September 2020, Tamil Nadu, India, pp. 1-5. (Keynote Speaker)
 12. S.Z.M. Noor, A.M. Omar, **M.A.M. Radzi**, A.H. Farnadia, "Design of closed-loop algorithm of single-stage grid inverter using Digital Signal Processor (DSP) TMS320F28335 processors evaluation board," in *2019 IEEE Conference on Sustainable Utilization and Development in Engineering and Technologies (CSUDET)*, 7-9 November 2019, Penang, Malaysia, pp. 290-294.
 13. A. Sabo, N.I.A. Wahab, **M.A.M. Radzi**, M.Z. Islam, M.N.M. Nasir, H. Beiranvand, "Real Time DSP Implementation of Dual Digital Controllers for Shunt Active Power Filter," in *2019 IEEE Conference on Sustainable Utilization and Development in Engineering and Technologies (CSUDET)*, 7-9 November 2019, Penang, Malaysia, pp. 234-239.
 14. A.K. Ghazali, M.K. Hassan, **M.A.M. Radzi**, A. As'arry, "Electric vehicle with sliding mode control super-twisting control strategy," in *1st International Conference on Emerging Electrical Energy, Electronics and Computing Technologies 2019 (ICE4CT 2019)*, 29-31 October 2019, Melaka, Malaysia, pp. 1-6.
 15. A.S. Mohamad, **M.A.M. Radzi**, N.F. Mailah, M.L. Othman, "The Effects of Number of Conducting Switches in a Cascaded Multilevel Inverter Output," in *2019 IEEE 10th Control and System Graduate Research Colloquium (ICSGRC 2019)*, 2-3 August 2019, Shah Alam, Malaysia, pp. 26-31.
 16. N.H. Zaini, M.Z.A.A. Kadir, **M.A.M. Radzi**, N. Azis, N.I. Ahmad, M.S.M. Nasir, M. Izadi, N.F.A. Aziz, Z. Ali, "Lightning Surge on the DC and AC Side of Solar PV System," in *2019 11th Asia-Pacific International Conference on Lightning (APL)*, 12-14 June 2019, Hong Kong, pp. 1-5.
 17. M.A.A.M. Zainuri, **M.A.M. Radzi**, N.F.A. Rahman, "Photovoltaic boost DC/DC converter for power led with adaptive P&O-fuzzy maximum power point tracking," in *Lecture Notes in Electrical*

Publications

- Engineering (10th International Conference on Robotic, Vision, Signal Processing and Power Applications, ROVISP 2018, Penang, Malaysia, 14-15 August 2018)*, vol. 547, pp. 245-251, 2019.
18. S. Shafie, M.Z.A.A. Kadir, N. Azis, **M.A.M. Radzi**, W.H.W. Zuha, M.A. Mustafa, "High efficiency portable solar generator utilizing optimum solar panel orientation," in *2018 IEEE 5th International Conference on Smart Instrumentation, Measurement and Application (ICSIMA)*, 28-30 November 2018, Songkla, Thailand, pp. 1-4.
 19. A.S. Mohamad, M.K. Rahmat, **M.A.M. Radzi**, N.F. Mailah, M.L. Othman, "A single battery bank, three-phase cascaded multilevel inverter with the least number of conducting switches," in *2018 IEEE 7th International Conference on Power and Energy (PECon)*, 3-4 December 2018, Kuala Lumpur, Malaysia, pp. 73-78.
 20. S.Z.M. Noor, A.M. Omar, **M.A.M. Radzi**, and Faranadia A.H, "Artificial intelligence based fuzzy-mppt technique of h-bridge inverter for grid connected photovoltaic system," in *2018 AEIT International Annual Conference*, 3-5 October 2018, Bari, Italy, pp. 1-6.
 21. A. Mohammed, N.F. Mailah, **M.A.M. Radzi**, M.K. Hassan, Y.K. Wu, Y.-L. Hu, "Modulation index sets of low switching frequency multilevel inverters for wind generation system," in *2018 IEEE PES Asia-Pacific Power and Energy Engineering Conference (APPEEC)*, 7-10 October 2018, Kota Kinabalu, Malaysia, pp. 246-251.
 22. N.H. Zaini, M.Z.A. Ab-Kadir, **M.A.M. Radzi**, M. Izadi, N.I. Ahmad, N. Azis, M.S.M. Nasir, "On the effect of surge protection devices (SPDs) placement for grid-connected solar PV farm," in *2018 34th International Conference on Lightning Protection (ICLP)*, 2-7 September 2018, Rzeszow, Poland, pp. 1-5.
 23. Y. Hoon, **M.A.M. Radzi**, M.K. Hassan, N.F. Mailah, "PLL-less SRF technique for operation of SAPF under unbalanced and distorted supply voltage," in *5th IET International Conference on Clean Energy and Technology (CEAT2018)*, 5-6 September 2018, Kuala Lumpur, Malaysia, pp. 1-8.
 24. A.S. Mohamad, **M.A.M. Radzi**, N.F. Mailah, M.L. Othman, "A cascaded multilevel inverter topology with only one bidirectional conducting switch," in *2017 IEEE 4th International Conference on Smart Instrumentation, Measurement and Application (ICSIMA)*, 28-30 November 2017, Putrajaya, Malaysia, pp. 1-5.
 25. Y.H. Sabri, W.Z. Wan. Hasan, S. Shafie, **M.A.M. Radzi**, A.H. Sabry, "Daily real-time monitoring of the PV thin film modules for analysis and system modelling," in *2017 IEEE 4th International Conference on Smart Instrumentation, Measurement and Application (ICSIMA)*, 28-30 November 2017, Putrajaya, Malaysia, pp. 1-6.
 26. A.H. Sabry, W.Z.W. Hasan, M.Z.A.A. Kadir, **M.A.M. Radzi**, S. Shafie, "Low cost wireless sensor monitoring system for photovoltaic (PV) array parameters," in *2017 IEEE 4th International Conference on Smart Instrumentation, Measurement and Application (ICSIMA)*, 28-30 November 2017, Putrajaya, Malaysia, pp. 1-6.
 27. A.A. Abulifa, R.K.R. Ahmad, A.C. Soh, **M.A.M. Radzi**, M. K. Hassan, "Modelling and simulation of battery electric vehicle by using MATLAB-Simulink," in *2017 IEEE 15th Student Conference on Research and Development (SCOReD)*, 13-14 December 2017, Putrajaya, Malaysia, pp. 383-387.
 28. A.S. Mohamad, **M.A.M. Radzi**, N.F. Mailah, M.L. Othman, "Analysis of Switches Blocking Voltages in a Voltage Taps Based Cascaded Multilevel Inverter Topology," in *2017 IEEE Conference on Energy Conversion (CENCON)*, Kuala Lumpur, Malaysia, 30-31 October 2017, pp. 27-31.
 29. S.Z.M. Noor, M.F. Yusof, A.M. Omar, A.H. Faranadia, **M.A.M. Radzi**, "Hardware design of magnetically isolated gate driver using Insulated Gate Bipolar Transistor (IGBT)," in *2017 IEEE 8th Control and System Graduate Research Colloquium (ICSGRC)*, Shah Alam, Malaysia, 4-5 August 2017, pp. 251-256.
 30. A.H. Sabry, W.Z.W. Hasan, M.Z.A. Ab.Kadir, **M.A.M. Radzi**, and S. Shafie, "Processing and Monitoring Algorithm for Solar-Powered Smart Home in DC-Environment System Based on RF-Radio Node," in *International Conference on Multi-disciplinary Trends in Artificial Intelligence*, 20-22 November 2017, Gadong, Brunei, pp. 304-314.

Book

1. M.A.A.M. Zainuri, **M.A.M. Radzi**, and N.A. Rahim, *Active Power Filter: Photovoltaic Integrations Impact on Power Quality Harmonics*, Bangi: UKM Press, 2020.

Publications

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.	Advanced Battery Charger System for Electric Vehicle	3,066,368	2022-2024	Petronas Research Sdn. Bhd.
2.	Advanced Partial Discharge Measurement System for Fault Analysis in Transformers	100,000	2022-2025	Putra Grant, UPM
3.	Development of Innovative Electrical Insulation Diagnostic System for Power Transformer using Partial Discharge Acoustic Measurement	76,000	2021-2023	Matching Grant-UPM
4.	Hotspot Detection and Performance Evaluation of Solar Photovoltaic modules using Deep Learning Networks	113,200	2021-2024	Putra Grant, UPM
5.	Sustainable Domestic Aquaponics System Integrated with Plant-Based Cell (PBC)	25,000	2021-2024	Putra Grant, UPM
6.	Energy storage performance for the developed nanocomposites (MXene)/nanofluids induced with emerging materials*	121,000	2020-2023	Putra Grant, UPM
7.	Intelligent Energy Management Scheme of Hybrid Energy Storage System Integrated with Fuel Cell in Economical Operation of Microgrid	156,640	2020-2023	Fundamental Research Grant Scheme (FRGS), Ministry of Higher Education (MOHE)
8.	A Conjoint AI and Maximum Power Point Tracking Algorithm for Improving Global Peak Tracking Under Various Insolation Conditions	50,000	2020-2022	Geran Galakan Penyelidik Muda, UKM
9.	Flexible Energy Management Scheme with Economic Factors for Hybrid Energy Storage System in Microgrid Operation*	119,000	2019-2022	FRGS, Ministry of Education (MOE)
10.	Erasmus+ Capacity Building in the field of Higher Education (CBHE) titled "Enhancement of engineering skills of students of all levels for application of evidence based sustainable renewable energy solutions in the built environment – SKYBELT"	509,146 (EUR 110,451)	2019-2022	Education, Audiovisual and Culture Executive Agency, European Commission
11.	Feasibility Study of Development Dendro Power Generation System for Rural Electrification in Malaysia	25,000	2019-2021	Putra Grant, UPM
12.	A New Optimal Switching Modulation Technique for Fast Torque Dynamic Response of Induction Motor	56,000	2019-2021	FRGS for Research Acculturation of Early Career

Research Grants

No	Project Title (*As Principal Investigator)	Amount (RM)	Year	Source of Fund
13.	Indirect Step Size Fuzzy Maximum Power Point Tracking Algorithm for Stand Alone Photovoltaic Boost Dc/Dc Converter	17,500	2019-2021	Researchers (RACER), MOE Short Term Research Grant (USM)
14.	Project of Data Collection and Validation of Stunning Value for Poultry for Development of Malaysian Standard (MS)	226,643.94	2019-2020	UPM Education & Training Sdn. Bhd.
15.	Development of Clustered Misai Kucing Plots in Solar PV Farms for Natural Cooling Mechanism	290,000	2019-2020	AAIBE
16.	Three-phase Four-leg Shunt Active Filter with Harmonic Extraction Algorithm Based on Self-adaptive Artificial Neural Network*	25,000	2018-2020	Putra Grant, UPM
17.	Design and Development of Bidirectional Multilevel Power Converter for Energy Conversion System	50,000	2018-2020	Putra Grant, UPM
18.	Predictive Optimization for Energy Management System in a Battery Electric Vehicle Using Hybrid Artificial Intelligence	47,900	2018-2020	Putra Grant, UPM
19.	Development of Electrical Wiring Safety Model	40,000	2018-2019	Putra Grant, UPM
20.	Development Of Integrated Multilevel Matrix Converter For Solar Photovoltaic Energy Conversion	25,000	2017-2019	Putra Grant, UPM
21.	Program Leader 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
22.	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"*	19,738 (JPY 500,000)	2016-2017	Kyoto University
23.	High Efficiency Integrated Solar Home Automation System Based on DC Load Matching Technique	20,000	2016-2017	Putra Grant, UPM
24.	Single Phase Photovoltaic Based Active Power Filter*	15,000	2015-2017	Putra Grant, UPM
25.	Development of a High Efficiency Portable Solar Generator utilizing Optimum Solar Panel Orientation for Flood Evacuation Centre	80,000	2015	FRGS, MOHE
26.	Fountain Installation Project between AS Engineering and Faculty of Engineering UPM	270,000 (In kind)	2014-2021	AS Engineering
27.	Formulation of Maximum Power Point Tracking Algorithm Based on Artificial Intelligence under Shadowing Condition*	116,000	2014-2017	FRGS, MOE
28.	A Modified Artificial Neural Network (ANN) Algorithm to Control Shunt Active Power Filter (SAPF) For Current Harmonic Reduction	15,000	2014-2015	Putra Grant, UPM

Research Grants

No	Project Title (*As Principal Investigator)	Amount (RM)	Year	Source of Fund
29.	Shunt Active Power Filter with Dual Intelligent Algorithms*	142,700	2014-2015	Putra Grant, UPM
30.	Assessment of Hybrid Classification Technique in Power Quality Analysis for Renewable Energy Systems*	82,000	2013-2016	Exploratory Research Grant Scheme (ERGS), MOE
31.	Sustainable Hydrokinetic Renewable Energy - Hydrokinetic Green Energy Converter (HGEC)	204,000	2013-2016	Malaysian Electricity Supply Industries Trust Account (AAIBE)
32.	Prediction of Photovoltaic Power Generation Based on Solar Radiation Model for Connection the Local Grid	150,000	2013-2015	Putra Grant, UPM
33.	Power Quality, Stability and Demand Response Analysis of Power System with Penetration of Renewable Energy Sources	150,000	2013-2015	Putra Grant, UPM
34.	Intelligent Fault Detection Scheme for Line Start Permanent Magnet Synchronous Motors	109,000	2013-2015	FRGS, MOHE
35.	Realization Techniques for the Mitigation of Power Quality Problems using Dynamic Voltage Restorer*	15,000	2012-2014	Research University Grant Scheme (RUGS), UPM
36.	Development of Photovoltaic Boost Converter with Adaptive P&O-Fuzzy Logic Maximum Power Point Tracking*	13,000	2012-2014	RUGS, UPM
37.	Investigation and Characterization of Active Solar Power System with Angle Controller Utilizing Date and Time-based Approach	76,140	2012-2014	FRGS, MOHE
38.	Development of a high efficiency solar-integrated power system utilizing motorized system with two axes angle controller	240,000	2012-2014	Prototype Research Grant Scheme (PRGS), Ministry of Energy, Green Technology and Water
39.	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
40.	Concentrated Photovoltaic Project in Collaboration with Sichuan Zhonghan	67,913	2011-2013	Matching Grant-UPM
41.	Performance and Suitability Assessment Study of Concentrated Photovoltaic (CPV) Systems in Tropical Climate Conditions	103,000	2011-2013	FRGS
42.	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"	118,860 (JPY 3,000,000)	2011-2012	Japan Science and Technology Agency (JST)
43.	Design and Development of Integrated Flexible Dual Power Filters for Reduction of Harmonics*	30,000	2010-2012	RUGS, UPM
44.	Application of Computational Intelligence Technique for the Enhancement of Transient Stability Assessment of Power Systems	30,000	2010-2011	RUGS, UPM
45.	Software Development for the Prediction of Future	40,500	2004-	Fundamental-

Research Grants

No	Project Title (*As Principal Investigator)	Amount (RM)	Year	Source of Fund
	of Electrical Energy Demand in Malaysia*		2005	UPM
46.	Development of web-based distributed intelligent energy management system*	10,000	2004-2005	UPM
47.	Automatic Semiconductor Tap Changer for Power Transformer	79,920	2003-2005	IRPA
Total		7,937,169		

Awards/Recognition

No.	Name of Awards	Title	Award Authority	Award Type	Year
1.	Best Paper Award	2021 IEEE Industrial Electronics and Applications Conference (IEACon 2021)	IEEE Malaysia Industrial Electronics (IE)/Industrial Applications (IA) Joint Chapter	International	2021
2.	Excellent Service Award	-	Universiti Putra Malaysia	University	2018, 2014, 2010, 2004
3.	Gold	Invention, Innovation and Design (IID) Faculty of Electrical Engineering 2016	Universiti Teknologi MARA.	National	2016
4.	3rd (Power and Energy Track)	2015 Final Year Project Competition	IEEE Malaysia Section	National	2015
5.	Silver Prize	International Engineering Invention and Innovation Exhibition (i-ENVEX) 2014	Universiti Malaysia Perlis	International	2014
6.	Best Paper	Power and Energy Conversion Symposium (PECS 2012)	Universiti Teknikal Malaysia Melaka	International	2012
7.	Third Winner	National Robotic Design Contest (Robocon)	MOHE, MOSTI, RTM and SIRIM	National	2005
8.	Best Idea Award	National Robotic Design Contest (Robocon)	MOHE, MOSTI, RTM and SIRIM	National	2005
9.	Best Design Award	National Robotic Design Contest (Robocon)	MOHE, MOSTI, RTM and SIRIM	National	2005
10.	Volunteer of the Year (Second Winner)	-	IEEE Malaysia Section	National	2004

Consultation

No.	Year	Title	Authority	Amount
1.	2016	Ceylon Electricity Board Delegates from Sri Lanka for a International Training Program on Study of Technical Education Innovations for Developing Nations	Ceylon Electricity Board	RM500
2.	2013	Embedded Electronics Boards for DISEGANNI Storage Unit	Nagasteel Equipment Sdn Bhd	RM21,175
3.	2012	KL Sentral - Preliminary Harmonic Study at KL Sentral	UAT Air Conditioning Sdn Bhd	RM32,000
4.	2011	Top-Up Course (TET 412 – Power Electronic Drive) for Engineering Graduates, Universiti Malaysia Perlis (UniMAP) 2007, 2008 and 2009	UPM Education and Training Sdn Bhd	RM4,200

Professional Services

No.	Role	Activity	Authority
1.	Internal Examiner for PhD/MSc Thesis	19 PhD, 12 MSc	Universiti Putra Malaysia
2.	Chairman of Thesis Examination	4 PhD, 12 MSc	Universiti Putra Malaysia
3.	External Examiner for PhD/MPhil/MSc/MEng Thesis	<ul style="list-style-type: none"> • 1 PhD • 1 PhD • 1 PhD • 2 PhD • 1 PhD, 1 MSc • 1 PhD, 3 MSc • 4 PhD, 3 MEng • 3 PhD, 1 MSc • 2 PhD • 5 MPhil • 3 PhD, 1 MPhil • 1 MSc • 1 MSc • 2 MSc • 4 MSc 	<ul style="list-style-type: none"> • Visvesvaraya Technological University, India • Qatar University • Anna University, India • International Islamic University Malaysia • Multimedia University • Universiti Teknologi MARA • Universiti Tenaga Nasional • Universiti Malaysia Pahang • Universiti Kuala Lumpur • University of Malaya • Universiti Teknologi Malaysia • Universiti Kebangsaan Malaysia • Universiti Teknologi PETRONAS • Universiti Teknikal Malaysia Melaka • Universiti Malaysia Perlis
4.	Member	Editorial Board	International Journal of Renewable Energy Development (IJRED)
5.	Asia-Pacific Academic Network Young Researcher (Country Representative)	Sustainable Energy and Environment Forum (SEE Forum), 2010-2014	Kyoto University
6.	Member	Advisor	Symposium on Control System and Signal Processing 2019 (SymCSSP2019)
7.	Member	Advisory Committee	5th International Conference on Clean Energy and Technology (CEAT) 2018
8.	Member	Advisory Board	International Conference on Electrical, Control and Computer

Professional Services

No.	Role	Activity	Authority
9.	External Examiner (Programme Evaluation)	Bachelor of Engineering (Hons)	Engineering, 2015 Universiti Teknologi MARA
10.	Member	Electrical Engineering Study Committee,	University of Malaya
11.	Member	Institute for Advanced Studies, 2020 - 2023	University of Malaya
12.	Member	Study Committee, Master of Renewable Energy, 2020 - 2023	International Islamic University Malaysia
13.	Panel	Board of Studies, Master of Science (Mechatronics Engineering), 2021 - 2022	University of Malaya
14.	Member	Curriculum Review of Master of Renewable Energy, 2017 - 2020	UniKL-MFI
15.	Stakeholder	Board of Studies, Bachelor of Engineering Technology (Water Engineering and Energy), 2017-2019	UTeM
16.	Member	<ul style="list-style-type: none"> • Bachelor of Electrical Engineering, 2019 • Diploma in Electrical Engineering, 2019 • Master of Electrical Engineering (Mixed Mode), 2018 	University of Malaya
17.	Member	Advisory Panel, Master of Engineering (Industrial Electronics and Control), 2015	SIRIM
18.	Member	Working Group on “Electrical measuring equipment and their accessories” (WG/S/7- 3)	The United Nations Industrial Development Organization (UNIDO) and Malaysian Industry- Government Group for High Technology (MIGHT)
19.	Member	Project Advisory Committee – Smart Grid Project	Academy of Sciences Malaysia (ASM)
20.	Plenary/Guest/Invited Speaker	ASM Task Force on Energy Use and Energy Efficiency in Transportation <ul style="list-style-type: none"> • IEEE Malaysia PELS Chapter National Lecture Program (NLP), 2021 • Distributed and Smart Power 	<ul style="list-style-type: none"> • Fuzzy Logic Control in Empowering Performance of Power Electronic Converters • UM Power Energy Dedicated Advanced Centre (UMPEDAC)

Professional Services

No.	Role	Activity	Authority
		Technology for Affordable and Sustainable Energy, 2021	
		<ul style="list-style-type: none"> 3rd Online Working Group Discussion titled "Pre-Awards and Post Awards: Science, Technology and Innovation Coordinators in Japan and ASEAN towards Grand Challenges", 2020 First International Conference on Sustainable Infrastructure with Smart Technology for Energy and Environmental Management (FIC-SISTEEM-2020) with title of "Solar Power as Future Main Player in Infrastructure Development", 2020 UPM-Kyutech Joint Seminar on Solar Technology, 2017. 3rd Japan-ASEAN Science, Technology and Innovation Platform (JASTIP) Symposium with title of "Study on Energy Usage and Quality of Life for Rural Community through Rural Electrification Using Renewable Energy", 2017. 2016 IEEE Industrial Electronics and Applications Conference (IEACon) with title of "Power Quality: Detection and Mitigation Techniques of Harmonics", 2016. Exploring Frontier of Knowledge into the Futures Business 	<ul style="list-style-type: none"> Kyoto University Research Administration Office, ASEAN Foundation, Japan ASEAN Science, Technology and Innovation Platform (JASTIP), and ASEAN Secretariat Bannari Amman Institute of Technology, India Universiti Putra Malaysia Kyoto University, Japan IEEE Industry Applications Society-Industrial Electronics Society Malaysia Joint Chapter Puncak Niaga Management Services Sdn. Bhd.

Professional Services

No.	Role	Activity	Authority
		Lecture Series: Power Energy, 2016	
		<ul style="list-style-type: none"> National Lecture Program on Power Electronics, Machines and Drives with title of "Artificial Intelligence in Power Electronics", 2015 	<ul style="list-style-type: none"> Universiti Teknologi MARA (UiTM)
		<ul style="list-style-type: none"> Technical Seminar on "Artificial Intelligence in Power Electronics Applications – Special Attention to Fuzzy and Neural Network", 2014 	<ul style="list-style-type: none"> Universiti Selangor (UNISEL)
21.	External Assessor	<ul style="list-style-type: none"> Promotion of Associate Professor Promotion of Associate Professor Promotion of Academic Staffs to Associate Professor 	<ul style="list-style-type: none"> Universiti Malaysia Perlis (UniMAP) Universiti Tun Hussein Onn Malaysia (UTHM) Universiti Teknologi MARA (UiTM)
22.	Grant Reviewer/Evaluator	<ul style="list-style-type: none"> Higher Education Centre of Excellence (HICoE) Research Excellence Consortium Chilean National Science and Technology Commission (CONICYT - Chile) Grant Application of Ministry of Higher Education Grant Application of Ministry of Higher Education Research Grant Scheme Applications High Impact Research (HIR) Grant Proposal Taylor's Research Grant Scheme (TRGS) 	<ul style="list-style-type: none"> Ministry of Higher Education Ministry of Higher Education FONDECYT Regular 2019 Grant Competition Department of Polytechnic Education Universiti Malaysia Pahang Universiti Putra Malaysia University of Malaya Taylor's University
23.	Judge/Assessor	<ul style="list-style-type: none"> Judge, Assessment of Posters for Scientific Project II 2021 World Varsity Engineering 	<ul style="list-style-type: none"> National University of Malaysia International Islamic University Malaysia (IIUM)

Professional Services

No.	Role	Activity	Authority
		Challenge 2013 (WOVEC 2013)	
		<ul style="list-style-type: none"> Final Year Project Poster Presentations of Undergraduate Students 2014 Competition of Engineering in the Kitchen 2014 	<ul style="list-style-type: none"> National University of Malaysia Universiti Putra Malaysia
24.	Auditor	Internal Audit Quality for MS ISO/IEC 17025	University of Malaya
25.	Book Assessor	Revolusi Fotovoltan	Dewan Bahasa dan Pustaka
26.	Journal Reviewer		<ul style="list-style-type: none"> International Journal of Power Electronics and Drive Systems (IJPEDS) Journal of Electrical and Electronic Systems Research (JEESR) International Journal of Circuit Theory and Applications Basrah Journal of Agricultural Sciences Pertanika Journal of Science and Technology IEEE Transactions on Industrial Electronics International Journal of Ambient Energy MethodsX Journal of Circuits, Systems, and Computers Jurnal Teknologi ASEAN Journal on Science and Technology for Development Engineering Science and Technology: an International Journal International Journal of Renewable Energy Development (IJRED) The Scientific World Journal Journal of Solar Energy Journal of Engineering Science and Technology (JESTEC) Reviewer for International Journal of Electrical Power and Energy Systems (IJPES) COMPEL: The International Journal for Computation and Mathematics in Electrical and Electronic Engineering European Transactions on Electrical Power IEEE Transactions on Power Electronics IEEE Transactions on Control

Professional Services

No.	Role	Activity	Authority
27.	Committee Membership	<ul style="list-style-type: none"> General Chair Technical Program Chair Organising Chair Technical Program Chair Co-Chair Member of Technical Committee Member of Steering Committee Member of Organising Committee Track Co-Chair Programme Chair Member of Technical Program Committee Member of Organising Committee Secretary of Organising Committee Secretary of Organising Committee Secretary of Organising Committee Secretary of Organising Committee Committee Member, 2014-2015, 2020- 	<ul style="list-style-type: none"> Systems Technology IET Signal Processing Electric Power Components and Systems 2022 IEEE Industrial Electronics and Applications Conference (IEACon 2022) 2021 IEEE Industrial Electronics and Applications Conference (IEACon 2021) 2020 IEEE International Conference on Power and Energy (PECon) IEEE Student Conference on Research and Development (SCORED) 2017 International Conference on Electrical and Electronic Technology, 2016 4th International Conference on Clean Energy and Technology 2016 (CEAT 2016) IEEE Industrial Electronics and Applications Conference (IEACon 2016) The 7th International Conference on Sustainable Agriculture for Food, Energy and Industry (ICSAFEI 2015) 3rd IET International Conference on Clean Energy and Technology (CEAT), 2014 2013 IEEE Conference on Clean Energy and Technology 2012 IEEE International Conference on Power and Energy Energy and Technology Conference and The 8th Sustainable Energy and Environment (SEE) Forum Meeting, 2011 15th Asian Technology Conference in Mathematics, 2010 National Power and Energy Conference, 2004 National Power and Energy Conference Student Conference on Research and Development (SCORED), 2003 IEEE Power Electronics Society Malaysia Chapter
28.	Involvement in Association		

Professional Services

No.	Role	Activity	Authority
		2022	
		• Secretary, 2018-2019	• IEEE Power Electronics Society Malaysia Chapter
		• Committee Member, 2014-2016, 2019	• IEEE Industry Applications Society-Industrial Electronics Society Malaysia Joint Chapter
		• Committee Member, 2011-2012	• IEEE Power Electronics Society-Industry Applications Society-Industrial Electronics Society Malaysia Joint Chapter
		• Treasurer, 2006-2007.	• IEEE Malaysia Section
		• Committee Member, 2005-2006	• IEEE Malaysia Section
		• Treasurer, 2002-2003, 2005-2006	• IEEE Power Engineering Society Malaysia Chapter
		• Treasurer, 2005-2006	• IEEE Power Electronics Society-Industry Applications Society-Industrial Electronics Society Malaysia Joint Chapter
		• Secretary, 2003-2005	• IEEE Power Engineering Society Malaysia Chapter
		• Chair, 2003-2004	• IEEE GOLD Affinity Group Malaysia Chapter
		• Committee Member of, 2001 – 2002	• Power Engineering Society Malaysia Chapter
		• Member	• Academic Staff Association, UPM

Student Supervision

Postdoctoral Researcher

No.	Name	Title	Duration
1.	Dr. Hoon Yap	Development of Single-Stage Dual Functioned Converter for Transparent Photovoltaic Application	2017–2018

PhD (Main Supervisor)

No.	Name	Title	Status
1.	Dr. Nor Farahaida Abdul Rahman	Shunt Active Power Filter using Hybrid Fuzzy-Proportional and Crisp-Integral Control Algorithm for Total Harmonic Distortion Improvement	Graduated 2016
2.	Dr. Shahrooz Hajighorbani	Dual Search Maximum Power Point Algorithm Based on Mathematical Analysis under Partially Shaded Conditions	Graduated 2016
3.	Dr. Goh Zai Peng	Development of Fast FT-ADALINE and Voltage Flicker Detection for Detection of Harmonics and Voltage Flicker in Power Electronic Application	Graduated 2017
4.	Dr. Muhammad Ammirul Atiqi Mohd Zainuri	Photovoltaic Shunt Active Power Filter Based on Indirect Self-Charging with Step Size Error Cancellation and Simplified Adaptive Linear Neuron	Graduated 2017
5.	Dr. Hoon Yap	Enhanced Control Algorithms for Multilevel Inverter-based Shunt Active Power Filter	Graduated 2017

PhD (Main Supervisor)

No.	Name	Title	Status
6.	Dr. Musa Suleiman	Shunt Active Power Filter with Synchronous Reference Frame Technique and Fuzzy Logic Current Controller for Harmonic Mitigation	Graduated 2017
7.	Ahmad Syukri Mohamad	A New Improved Cascaded Multilevel Inverter Topology with Minimum Number of Conducting Switches	Ongoing
8.	Musa Bin Yusup Lada	Three-Phase Four-Wire Multilevel Inverter-Based Shunt Active Power Filter	Ongoing
9.	Syahrul Hisham Mohamad @ Abd Rahman	Shunt Active Power Filter Based on Adaptive Notch Filtering for Balanced Three Phase Three Wire System	Ongoing
10.	Syahrul Azalia Ab Shukor	Shunt Active Power Filter Using Artificial Intelligent Algorithm	Ongoing
11.	Norhazilina Bahari	New Optimization Control Strategy for Efficient Power Management in Modular Type Battery/Supercapacitor Hybrid Energy Storage System of Electric Vehicle	Ongoing
12.	Al Rubaye Ahmed Naji Zaidan	Single-stage Multilevel Inverter with Fuzzy Logic MPPT for PV System	Ongoing
13.	Muhamad Faizal Yaakub	Flyback Microinverter Photovoltaic Energy Harvesting	Ongoing
14.	Altwallbah Neda Mahmud Mohammad	Photovoltaic Solar Energy System Based on Perturb and Observe Maximum Power Point Tracking with Modified, Hybrid and Trapezoidal Rule Approaches	Ongoing
15.	Rozita Mustafa	Cooling Technique for Residential Retrofitted Rooftop Photovoltaic Solar System	Ongoing

MSc with thesis (Main Supervisor)

No.	Name	Title	Status
1.	Mohammad Hossein Taghvaei	Fuzzy Logic Based Hill Climbing Technique for Photovoltaic Maximum Power Point Tracking (MPPT) Converter	Graduated 2013
2.	Muhammad Ammirul Atiqi Mohd Zainuri	Photovoltaic Boost Dc/Dc Converter with Adaptive Perturb and Observe-Fuzzy Maximum Power Point Tracking Algorithm	Graduated 2013
3.	Behzad Ghazanfarpour Khoulenjani	Unified Neural Network Controller of Series Active Power Filter for Power Quality Problems Mitigation	Graduated 2013
4.	Mohsen Fadaee Nejad	Multi-Objective Optimization of Stand-Alone Hybrid Renewable Energy System using Genetic Algorithm	Graduated 2014
5.	Razieh Khanaki	Maximum Power Point Tracking using Artificial Neural Network for Photovoltaic Standalone System	Graduated 2014
6.	Farshad Azadian	Controlled Islanding Strategy for Power Systems based on Flexible Semi-Supervised Spectral Clustering	Graduated 2014
7.	Mohd Izhwan Muhamad	Hybrid Renewable Energy System Based on Biomass and Solar Resources in Tropical Climate Condition	Graduated 2016
8.	Tanaselan Ramelu	Photovoltaic-Based Single Ended Primary Inductor Converter with Dual Fuzzy Logic Control Based MPPT for Dual Load Operation	Graduated 2016

No.	Name	Title	Status
9.	Hossain Md Hasnat	MXene Based Vanadium Redox Flow Battery Energy Storage	Ongoing

Master of Electrical Power Engineering (Dissertation - Main Supervisor)

No.	Name	Title	Status
1.	Arash Kavousighahfarokhi	Optimisation and Training of a Fuzzy Controller for Hybrid Energy Storage System by Neural Network and GWO Algorithm	Ongoing
2.	Basyir Ahmad Mamat @ Muhammad	Optimisation of Solar Energy Using Homer with Comparison Storage Utilisation Using Lithium Ion Battery and Lead Acid Battery	Ongoing

PhD (External Co-Supervisor)

No.	Name	Institution	Title	Status
1.	Siti Zaliha Mohammad Noor	Universiti Teknologi MARA	Single-Phase Single Stage String Inverter for a Grid Connected Photovoltaic System with Integrated Perturb and Observe – Fuzzy Logic Control MPPT Technique	Graduated 2018
2.	Muhammad Awais Farooqi	Universiti Teknologi MARA	A Significant Implementation of Artificial Intelligence to the Active Power Filter in a Micro-Grid System	Ongoing
3.	Nurul Farhana Abdul Hamid	Universiti Kebangsaan Malaysia	Development of Single Phase PV Inverter with AI Based DC Link Capacitor Voltage Control Integrated with Lithium Ion and Fuel Cells	Ongoing
4.	Saidatul Shema Saad	Universiti Kebangsaan Malaysia	Development of Optimized MPPT for Hybrid Solar PV-Wind System	Ongoing

PhD/MSc (Member of Supervisory Committee)

No.	Programme	Name	Status
1.	PhD	Ir. Mohammad Effendy bin Yaacob	Graduated
2.	PhD	Mahdi Karami	Graduated
3.	PhD	Saman Toosi	Graduated
4.	PhD	Vengadeshwaran Velu	Graduated
5.	PhD	Mohammad Rezazadeh Mehrjou	Graduated
6.	PhD	Sabo Mahmoud Lurwan	Graduated
7.	PhD	Mohammed Saidu Kumo	Graduated
8.	DEng	Jayaseelan Nadarajah	Graduated
9.	PhD	Salah Eldeen Gasim Mohamed Hassan	Graduated
10.	PhD	Farinaz Behrooz	Graduated
11.	PhD	Ahmad H. Sabry	Graduated
12.	PhD	Nur Hazirah Zaini	Graduated
13.	PhD	Masoud Ahmadipour	Graduated
14.	PhD	Akram Mohammed Abdul Aziz Al-Mahrouk	Graduated
15.	PhD	Anith Khairunnisa Ghazali	Graduated
16.	PhD	Fatimah Azzahraa Mohd Sobri	Ongoing
17.	PhD	Abdulhadi Abdulsalam Abulifa	Ongoing
18.	PhD	Mohd Izhwan Muhamad	Ongoing

No.	Programme	Name	Status
19.	PhD	Al Khaimi Muhammed Hussein Baqir	Ongoing
20.	PhD	Bazilah Ismail	Ongoing
21.	PhD	Vidhya Sagar	Ongoing
22.	PhD	Ahmad Hafiz bin Mohd Hashim	Ongoing
23.	PhD	Andrew Xavier Raj	Ongoing
24.	PhD	Ghaibulna binti Abdol Lajis	Ongoing
25.	PhD	Abo Alwez Mustafa Hussein Abed	Ongoing
26.	PhD	Al-Murshedi Bashar Abbas Fadheel	Ongoing
27.	PhD	Abo Alwez Mustafa Hussein Abed	Ongoing
28.	MSc	Anayet Karim	Graduated
29.	MSc	Imtiaz Ahmad Khan	Graduated
30.	MSc	Suhairi Rizuan Che Ahmad	Graduated
31.	MSc	Wan Mohd Khairudin Wan Abdul Malik	Graduated
32.	MSc	Ahmad Syukri Mohamad	Graduated
33.	MSc	Usman Hamisu	Graduated
34.	MSc	Aminmohammad Saberian	Graduated
35.	MSc	Rebaz J. Ahmed	Graduated
36.	MSc	Ameer M. F. Sider	Graduated
37.	MSc	Seyedeh Narjes Fallah	Graduated
38.	MSc	Aliyu Sabo	Graduated
39.	MSc	Payam Farzan	Graduated
40.	MSc	Alaa Hadi Mohammed Musa	Graduated
41.	MSc	Malik Qasim Badar	Graduated
42.	MSc	Ehsan Mohsin Obaid Alhamdawe	Graduated
43.	MSc	Soheil Roknideilami	Graduated
44.	MSc	Nor Izzati Ahmad	Graduated
45.	MSc	Sabri Yasameen Hussein Sabri	Graduated
46.	MSc	Almalik Faisel bin Mohd Saupi	Graduated
47.	MSc	Mohd Solehin bin Mohd Nasir	Graduated

Teaching

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

Teaching

No.	Course	Semester
15.	EEE 3201 Microprocessor Technology	2-10/11, 2-13/14, 2-15/16, 2-16/17
16.	EEE 3106 Electric Circuits	1-12/13, 2-12/13, 1-13/14, 1-14/15, 1-15/16, 1-17/18
17.	EEE 4311 Electric Power Quality	2-14/15, 1-18/19
18.	ECC 4204 Internet Computing	2-18/19
19.	EEE 3121 Electrical and Electronic Principles	1-19/20
20.	EEE 5301 Power Electronics Converters	1-11/12, 2-19/20, 1-20/21
21.	EEE 3924 Electrical Power Engineering Laboratory	1-19/20, 1-20/21, 1-2021/22
22.	EEE 3126 Electric Circuits	2-2021/22
23.	EEE 5315 Smart Power Grid Renewable Energy Systems	2-20/21, 1-2021/22, 2-2021/22