CURRICULUM VITAE

Ir. Dr. Noor Izzri bin Abdul Wahab

Associate Professor

Dept. of Electrical and Electronic Engineering, Faculty of Engineering, Universiti Putra Malaysia, 43400 UPM Serdang, Selangor

Education

PhD in Electrical, Electronic and System Engineering (UKM) - 2010

Thesis Title: *Transient Stability Assessment and Control of Power Systems using Computational Intelligence*

MSc in Electrical Power Engineering (UPM) – 2002

Thesis Title: *Power Quality Improvement using Distribution Static Compensator (D-STATCOM) on 11 kV Distribution System* Courses: 18 Credits (CGPA: 4.0)

Bachelor of Eng. (Hons) Electrical and Electronic Eng. (UMIST, UK) - 1998

Areas of Interest

Power System Stability, Application of Artificial Intelligence(AI)/ Computational Intelligence(CI) in Power System and Power Quality

Professional Qualification/ Membership/ Affiliation

Institution of Electrical and Electronics Engineers (IEEE) (No.: 41558825)	Senior Member
IEEE Power and Energy Soc	Member
IEEE ComSoc	Member
Board of Engineers Malaysia(BEM). (No.: 36335A) Professional Engineer (Ir.) (Registration No.: 17709)	Member
The Institution of Engineering and Technology (MIET) – (No.: 1100277214) Chartered Engineer (CEng)	Member
Centre for Advanced Power and Energy Research	Member

Appointments

Position	Department/Faculty/Other Institution	Year	Duration
Tutor	Department, UPM	2000 - 2002	3 yrs
Lecturer	Department, UPM	2003 - 2010	7 yrs
Senior Lecturer	Department, UPM	2010 - 2016	6 yrs
Associate Professor	Department, UPM	2016 - present	
Member	Departmental ISO Taskforce Committee, Department of Electrical and Electronic Engineering	2003	(May 2003 – Nov 2003).

Head of Lab (KEE 008)	Dept. of Electrical and Electronic Engineering	(Aug 2003 – Aug 2005)	2 yrs
Academic Advisor for BE(Electrical and Electronics) students	Dept. of Electrical and Electronic Engineering	2003-2005	3 yrs
Head of Lab (KEE 009)	Dept. of Electrical and Electronic Engineering	April 2010 – Feb 2011	10 mths
MSc (without thesis) Programme Development Committee	Coordinator	2011 - 2016	
Coordinator of Research for Dept of Electrical and Electronic Eng	Faculty of Eng	Aug 2011 - Present	-
Head of Power Unit	Dept. of Electrical and Electronic Engineering	March 2011 – July 2011	3 mths
Academic Coodinator	Dept. of Electrical and Electronic Engineering	Jan 2019 – Dec 2021	3 yrs

Publications

Journals

1. Sabo, A., Abdul Wahab, N. I., Othman, M. L., Mohd Jaffar, M. Z. A., Beiranvand, H., & Acikgoz, H. (2021). Application of a neuro-fuzzy controller for single machine infinite bus power system to damp low-frequency oscillations. Transactions of the Institute of Measurement and Control, 014233122110427. https://doi.org/10.1177/01423312211042781

2. Farade, R. A., Wahab, N. I. A., Mansour, D. E. A., Azis, N. B., Jasni, J. B., Veerasamy, V., Vinayagam, A., Kotiyal, B. M., & Khan, T. M. Y. (2021). The Effect of Interfacial Zone Due to Nanoparticle–Surfactant Interaction on Dielectric Properties of Vegetable Oil Based Nanofluids. IEEE Access, 9, 107033–107045. https://doi.org/10.1109/access.2021.3098758 Q1

3. Veerasamy, V., Abdul Wahab, N. I., Ramachandran, R., Othman, M. L., Hizam, H., Devendran, V. S., Irudayaraj, A. X. R., & Vinayagam, A. (2021). Recurrent network based power flow solution for voltage stability assessment and improvement with distributed energy sources. Applied Energy, 302, 117524. https://doi.org/10.1016/j.apenergy.2021.117524 Q1

4. Islam, M. Z., Othman, M. L., Abdul Wahab, N. I., Veerasamy, V., Opu, S. R., Inbamani, A., & Annamalai, V. (2021). Marine predators algorithm for solving single-objective optimal power flow. PLOS ONE, 16(8). https://doi.org/10.1371/journal.pone.0256050

5. Keifa vamba Konneh, Hasan Masrur, Mohammad Lutfi Othman, Noor Izzri Abdul Wahab, Hashim Hizam, Syed Zahurul Islam, Peter Crossley, Tomonobu Senjyu, "Optimal Design and Performance Analysis of a Hybrid Off-Grid Renewable Power System Considering Different Component Scheduling, PV Modules, and Solar Tracking Systems," in IEEE Access, vol. 9, pp. 64393-64413, 2021, doi: 10.1109/ACCESS.2021.3075732.Q1

6. Rizwan A Farade, Noor Izzri Abdul Wahab, Diaa-Eldin A Mansour, Norhafiz B Azis, Veerapandiyan Veerasamy, Mariammal Thirumeni, Andrew Xavier Raj Irudayaraj, Avinash Srikanta Murthy, "Investigation of the Effect of Sonication Time on Dispersion Stability, Dielectric Properties, and Heat Transfer of Graphene Based Green Nanofluids," in IEEE Access, vol. 9, pp. 50607-50623, 2021, doi: 10.1109/ACCESS.2021.3069282. Q1

7. Veerasamy, V., Abdul Wahab, N.I., Ramachandran, R. et al. Power flow solution using a novel generalized linear Hopfield network based on Moore–Penrose pseudoinverse. Neural Comput & Applic (2021). https://doi.org/10.1007/s00521-021-05843-9 Q1

8. Veerapandiyan Veerasamy, Noor Izzri Abdul Wahab, Mohammad Lutfi Othman, Sanjeevikumar Padmanaban, Kavaskar Sekar, Rajeswari Ramachandran, Hashim Hizam, Arangarajan Vinayagam, Mohammad Zohrul Islam, "LSTM Recurrent Neural Network Classifier for High Impedance Fault Detection in Solar PV Integrated Power System," in IEEE Access, vol. 9, pp. 32672-32687, 2021, doi: 10.1109/ACCESS.2021.3060800. Q1

9. Hazrol, M. D., Sapuan, S. M., Zainudin, E. S., Zuhri, M. Y. M., & Abdul Wahab, N. I. (2021). Corn Starch (Zea mays) Biopolymer Plastic Reaction in Combination with Sorbitol and Glycerol. Polymers, 13(2), 242. doi:10.3390/polym13020242 Q1

10. B. Ismail, N. I. Abdul Wahab, M. L. Othman, M. A. M. Radzi, K. Naidu Vijyakumar and M. N. Mat 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," in IEEE Access, vol. 8, pp. 222733-222765, 2020, doi: 10.1109/ACCESS.2020.3043297. Q1

11. Sabo, A.; Wahab, N.I.A.; Othman, M.L.; Mohd Jaffar, M.Z.A.; Acikgoz, H.; Beiranvand, H. Application of Neuro-Fuzzy Controller to Replace SMIB and Interconnected Multi-Machine Power System Stabilizers. Sustainability 2020, 12, 9591. Q2

12. Sabo A, Abdul Wahab NI, Othman ML, Mohd Jaffar MZA, Beiranvand H. Optimal design of power system stabilizer for multimachine power system using farmland fertility algorithm. Int Trans Electr Energ Syst. 2020;e12657. https://doi.org/10.1002/2050-7038.12657 Q3

13. Andrew Xavier Raj Irudayaraj, Noor Izzri Abdul Wahab, Mallapu Gopinath Umamaheswari, Mohd Amran Mohd, Nasri Sulaiman, Veerapandiyan Veerasamy, S C Prasanna, Rajeswari Ramachandran, "A Matignon's Theorem Based Stability Analysis of Hybrid Power System for Automatic Load Frequency Control using Atom Search Optimized FOPID controller," in IEEE Access, doi: 10.1109/ACCESS.2020.3021212. Q1

14. Syahrul Hisham Mohamad, Mohd Amran Mohd Radzi, Nashiren Farzilah Mailah, Noor Izzri Abd. Wahab, Auzani Jidin, Musa Yusup Lada. Adaptive notch filter under indirect and direct current controls for active power filter. Bulletin of Electrical Engineering and Informatics, Vol.9, No.5, October 2020, pp. 1794 – 1802. SCOPUS

15. Khan, A.; Hizam, H.; Abdul-Wahab, N.I.; Othman, M.L. Solution of Optimal Power Flow Using Non-Dominated Sorting Multi Objective Based Hybrid Firefly and Particle Swarm Optimization Algorithm. Energies 2020, 13, 4265. Q3

16. Khan A, Hizam H, bin Abdul Wahab NI, Lutfi Othman M (2020) Optimal power flow using hybrid firefly and particle swarm optimization algorithm. PLoS ONE 15(8): e0235668. https://doi.org/10.1371/journal.pone.0235668 Q2

17. Kadhem, A. A., Wahab, N. I. A., & Abdalla, A. (2020). The Contribution of Wind Energy Capacity on Generation Systems Adequacy Reliability using Differential Evolution Optimization Algorithm. Advances in Science, Technology and Engineering Systems Journal, 5(6), 331–340. https://doi.org/10.25046/aj050640 (SCOPUS)

18. Muhammad Shahzad Nazir, MingXin Jiang, Suqun Cao, Rendong Ji, Athraa Ali Kadhem, Abdul Wahab, Noor Izzri, Ahmed N Abdalla, Metaheuristic searching genetic algorithm based reliability assessment of hybrid power generation system Energy Exploration & Exploitation, SAGE Publishing, [1-14], 2020. Q4

19. Veerapandiyan Veerasamy, Noor Izzri Abdul Wahab, Rajeswari Ramachandran, Balasubramonian Madasamy, Muhammad Mansoor, Mohammad Lutfi Othman, Hashim Hizam, A novel RK4-Hopfield Neural Network for Power Flow Analysis of power system, Applied Soft Computing, 2020, 106346, ISSN 1568-4946. https://doi.org/10.1016/j.asoc.2020.106346. Q1

20. Rizwan A. Farade, Noor Izzri Bin Abdul Wahab, Diaa-Eldin A. Mansour, Norhafiz B. Azis, Jasronita Jasni, N. R. Banapurmath, and Manzoore Elahi M. Soudagar, "Investigation of the Dielectric and Thermal Properties of Non-Edible

Cottonseed Oil by Infusing h-BN Nanoparticles," in IEEE Access, vol. 8, pp. 76204-76217, 2020, doi: 10.1109/ACCESS.2020.2989356. Q1

21. Farade, R.A.; Abdul Wahab, N.I.; Mansour, D.-E.A.; Azis, N.B.; bt. Jasni, J.; Soudagar, M.E.M.; Siddappa, V. Development of Graphene Oxide-Based Nonedible Cottonseed Nanofluids for Power Transformers. Materials 2020, 13, 2569. Q2

22. Veerapandiyan Veerasamy, Noor Izzri Abdul Wahab, Rajeswari Ramachandran, Mohammad Lutfi Othman, Hashim Hizam, Andrew Xavier Raj Irudayaraj, Josep M. Guerrero, and Jeevitha Satheesh Kumar, "A Hankel Matrix Based Reduced Order Model for Stability Analysis of Hybrid Power System Using PSO-GSA Optimized Cascade PI-PD Controller for Automatic Load Frequency Control," in IEEE Access, vol. 8, pp. 71422-71446, 2020. Digital Object Identifier 10.1109/ACCESS.2020.2987387. Q1

23. Veerasamy, V, Abdul Wahab, NI, Vinayagam, A, et al. A novel discrete wavelet transform-based graphical language classifier for identification of high-impedance fault in distribution power system. Int Trans Electr Energ Syst. 2020; e12378. https://doi.org/10.1002/2050-7038.12378 . Q3

24. Islam, M.Z.; Wahab, N.I.A.; Veerasamy, V.; Hizam, H.; Mailah, N.F.; Guerrero, J.M.; Nasir, M.N.M. A Harris Hawks Optimization Based Single- and Multi-Objective Optimal Power Flow Considering Environmental Emission. Sustainability 2020, 12, 5248. Q2

25. Aliyu Sabo, Noor Izzri Abdul Wahab, Mohammad Lutfi Othman, Mai Zurwatul Ahlam Mohd Jaffar and Hamzeh Beiranvand. Farmland Fertility Optimization for Designing of Interconnected Multi-machine Power System Stabilizer. Applications of Modelling and Simulation, vol.4, pp. 183-201, 2020.

26. Aliyu Sabo, Noor Izzri Abdul Wahab, Mohammad Lutfi Othman, Mai Zurwatul Ahlam Mohd Jaffar. (2020). Novel Farmland Fertility Algorithm Based Pidpss Design For Smib Angular Stability Enhancement. International Journal of Advanced Science and Technology, 29(6s), 873 - 882. SCOPUS

27. Aker, E. E., Mohammad, L. O., Aris, I., Noor Izzri, A. W., Hizam, H., & Emmanuel, O. (2020). Transmission line fault identification and classification with integrated FACTS device using multiresolution analysis and naïve bayes classifier. International Journal of Power Electronics and Drive Systems, 11(2), 907-913. doi:http://dx.doi.org/10.11591/ijpeds.v11.i2.pp907-913 (SCOPUS)

28. Veerasamy, V.; Abdul Wahab, N.I.; Ramachandran, R.; Vinayagam, A.; Othman, M.L.; Hizam, H.; Satheeshkumar, J. Automatic Load Frequency Control of a Multi-Area Dynamic Interconnected Power System Using a Hybrid PSO-GSA-Tuned PID Controller. Sustainability 2019, 11, 6908. Q2

29. Veerasamy, V., Abdul Wahab, N.I., Ramachandran, R., Thirumeni, M., Subramanian, C., Othman, M. L., Hizam, H. High-impedance fault detection in medium-voltage distribution network using computational intelligence-based classifiers. Neural Comput & Applic (2019). Q1. https://doi.org/10.1007/s00521-019-04445-w

30. Matsukawa, Y.; Watanabe, M.; Abdul Wahab, N.I.; Othman, M.L. Voltage Stability Index Calculation by Hybrid State Estimation Based on Multi Objective Optimal Phasor Measurement Unit Placement. Energies 2019, 12, 2688. Q2

31. Ali Kadhem, A.; Abdul Wahab, N.I.; N. Abdalla, A. Wind Energy Generation Assessment at Specific Sites in a Peninsula in Malaysia Based on Reliability Indices. Processes 2019, 7, 399. Q3

32. Misron, N., Zanil, U., Mustafa, S.S., Aris, I., Wahab, N.I.A.; Effect of dual permanent magnets on low-speed mover having different pitch: Linear oscillatory actuator integrated with magnetic gear (2019) Journal of Engineering Science and Technology, 14 (Special Issue on SU18), pp. 229-240. (SCOPUS)

33. Veerasamy, V.; Abdul Wahab, N.I.; Ramachandran, R.; Mansoor, M.; Thirumeni, M.; Lutfi Othman, M. High Impedance Fault Detection in Medium Voltage Distribution Network Using Discrete Wavelet Transform and Adaptive Neuro-Fuzzy Inference System. Energies 2018, 11, 3330 Q2

34. Warid Warid, Hashim Hizam, Norman Mariun, Noor Izzri Abdul Wahab. A novel quasi-oppositional modified Jaya algorithm for multi-objective optimal power flow solution, Applied Soft Computing, Volume 65, 2018, Pages 360-373, ISSN 1568-4946. Q1

35. Waqar Tariq, Mohammad Lutfi Othman, Noor Izzri Abdul Wahab, Shamim Akhtar. Smart Monitoring and Controlling of Frequency Deviation by Using MATLAB GUI and ARDUINO DAQ Card. Indonesian Journal of Electrical Engineering and Computer Science Vol.11, No.1, July 2018, pp. 224~232. (SCOPUS)

36. Kadhem AA, **Wahab NIA**, Aris I, Jasni J, Abdalla AN. Advanced Wind Speed Prediction Model Based on a Combination of Weibull Distribution and an Artificial Neural Network. *Energies*. 2017; 10(11):1744.

37. Athraa Ali Kadhem, **Noor Izzri Abdul Wahab**, Ishak Aris, Jasronita Jasni, Ahmed N. Abdalla, Computational techniques for assessing the reliability and sustainability of electrical power systems: A review, *Renewable and Sustainable Energy Reviews*, Volume 80, December 2017, Pages 1175-1186, ISSN 1364-0321, https://doi.org/10.1016/j.rser.2017.05.276.

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39. Goh, Zai Peng; Radzi, Mohd Amran Mohd; Hizam, Hashim; **Abdul Wahab, Noor Izzri**: 'Investigation of severity of voltage flicker caused by second harmonic', *IET Science, Measurement & Technology*, 2017, 11, (3), p. 363-370, DOI: 10.1049/iet-smt.2016.0369. **(Q3)**

40. Mansoor, M., Mariun, N., Toudeshki, A., **Abdul Wahab, N.I.**, Mian, A.U., Hojabri, M. Innovating problem solving in power quality devices: A survey based on Dynamic Voltage Restorer case (DVR) (2017). *Renewable and Sustainable Energy Reviews*, 70, pp. 1207-1216. DOI: 10.1016/j.rser.2016.12.022

41. Suleiman Musa, Mohd Amran Mohd Radzi, Hashim Hizam, **Noor Izzri Abdul Wahab**, Yap Hoon and Muhammad Ammirrul Atiqi Mohd Zainuri. 2017. "Modified Synchronous Reference Frame Based Shunt Active Power Filter with Fuzzy Logic Control Pulse Width Modulation Inverter". *Energies* 10(6): 758 – 774.

42. Mahmood Khalid Hadi, Mohammad Lutfi Othman and **Noor Izzri Abd Wahab**. 2017. 'Special Protection and Control Scheme for Transmission Line Overloading Elimination Based on Hybrid Differential Evolution/Electromagnetism-Like Algorithm', J Electr Eng Technol.2017; 12: 1921-718.

43. **Noor Izzri Abdul Wahab**, Ahmed Sahib Hammadi and Mohammad Lutfi Othman. 2017. 'Optimal Location and Size of Distributed Generation to Reduce Power Losses based on Differential Evolution Technique', Pertanika J. Sci. & Technol. 25 (S): 169 – 178.

44. Mohammad Lutfi Othman, Mahmood Khalid Hadi and **Noor Izzri Abdul Wahab**. 2017. 'A Corrective Action Scheme for Contingency Monitoring of Transmission Line Overloading', Pertanika J. Sci. & Technol. 25 (S): 129 – 138.

45. Athraa Iessa, **Noor Izzri Abdul Wahab** and Norman Mariun. 2017. 'Weakest Bus Frequency Identification of Power System via TFDI', Pertanika J. Sci. & Technol. 25 (S): 97 – 104.

46. Ali Kadhem, Athraa; **Abdul Wahab, Noor I.**; Aris, Ishak; Jasni, Jasronita; Abdalla, Ahmed N. 2017. "Reliability Assessment of Power Generation Systems Using Intelligent Search Based on Disparity Theory." *Energies* 10, no. 3: 343.

47. Goh, Zai Peng; Radzi, Mohd Amran Mohd; Hizam, Hashim; **Abdul Wahab, Noor Izzri**: 'Investigation of severity of voltage flicker caused by second harmonic', IET Science, Measurement & Technology, 2017, DOI: 10.1049/iet-smt.2016. 0369 IET Digital Library, http://digital-library.theiet.org/content/journals/10.1049/iet-smt.2016.0369

48. Muhammad Mansoor, Norman Mariun, **Noor Izzri Abdul Wahab**, Innovating problem solving for sustainable green roofs: Potential usage of TRIZ – Theory of inventive problem solving, *Ecological Engineering*, 9(2017): 209-221, ISSN 0925-8574, http://dx.doi.org/10.1016/j.ecoleng.2016.11.036.

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Conference Proceedings

1. A. Sabo, N. Izzri Abdul Wahab, M. Lutfi Othman and M. Zurwatul Ahlam Mohd Jaffar, "Mitigation of Oscillations in SMIB using a Novel Farmland Fertility Optimization based PIDPSS," 2020 2nd International Conference on Smart Power & Internet Energy Systems (SPIES), Bangkok, Thailand, 2020, pp. 234-239, doi: 10.1109/SPIES48661.2020.9242924.
2. Veerapandiyan Veerasamy; Noor Izzri Abdul Wahab; Rajeswari Ramachandran; Mohammad Lutfi Othman; Hashim Hizam; Mohammad Zohrul Islam; Mohamad Nasrun Mohd Nasir; Andrew Xavier Raj Irudayaraj, "Load Flow Analysis using Intelligence-based Hopfield Neural Network for Voltage Stability Assessment," 2020 2nd International Conference on Smart Power & Internet Energy Systems (SPIES), Bangkok, Thailand, 2020, pp. 21-26, doi: 10.1109/SPIES48661.2020.9242541.
3. B. Ismail, N. I. Abdul Wahab, M. Lutfi Othman, M. A. Mohd Radzi, K. Naidu Vijayakumar and M. M. Naain, "Analytical Approaches on Optimal Placement of STATCOM Under Contingency Occasions," 2020 2nd International Conference on Smart Power & Internet Energy Systems (SPIES), Bangkok, Thailand, 2020, pp. 7-12, doi: 10.1109/SPIES48661.2020.9243128.
4. M. Z. Islam; Noor Izzri Abdul Wahab; Veerapandiyan Veerasamy; Nashiren Farzilah Mailah; Hashim Hizam; Mohamad Nasrun Mohd Nasir, Arangarajan Vinayagam, "Generation Fuel Cost and Loss Minimization Using Salp Swarm Algorithm Based Optimal Power Flow," 2020 International Conference on Computer Communication and Informatics (ICCCI), Coimbatore, India, 2020, pp. 1-6, doi: 10.1109/ICCCI48352.2020.9104100.
5. Bazilah Ismail, Muhammad Mat Naain, Noor Izzri Abdul Wahab, Lilik Jamilatul Awalin, Ibrahim Alhamrouni, Nadia Hanis Abd Rahman, Nur Farah Ain Azmi. 2019. Short circuit current and voltage sag profile studies for optimal location of DG in distribution network. AIP Conference Proceedings.
6. Athraa Ali Kadhem, Noor Izzri Abdul Wahab, Ahmed N Abdalla. 2019. Differential Evolution Optimization Algorithm Based on Generation Systems Reliability Assessment Integrated with Wind Energy. 2019 International Conference on Power Generation Systems and Renewable Energy Technologies (PGSRET), 1-6.
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10. Athraa Ali Kadhem, **N.I.A. Wahab**, Ishak Bin Aris, Jasronita Bt Jasni and Ahmed N. Abdalla. Reliability Assessment of Generating Systems with Wind Power Penetration via BPSO. In Proceedings of the 11th International Power Engineering & Optimization Conference (PEOCO 2017). 8th April 2017, Holiday Inn, Malacca, Malaysia.
11. Bazilah Ismail, Muhammad Mat Naain, **Noor Izzri Abdul Wahab**, Nur Syahidah Mohd Shaberon, Lilik Jamilatul Awalin, Ibrahim Alhamrouni, "Voltage Stability Indices Studies on Optimal Location of Wind Power Plant in Distribution Network" 3rd IEEE Conference on Energy Conversion (CENCON 2017), 2017.
12. Bazilah Ismail, Muhammad Mat Naain, **Noor Izzri Abdul Wahab**, Lilik Jamilatul Awalin, Ibrahim Alhamrouni, Mohd Fitri Abd Rahim, "Optimal Placement of DSTATCOM in Distribution Network Based on Load Flow and Voltage Stability Indices Studies " 2017 International Conference on Engineering Technology and Technopreneurship (ICE2T), 2017.
13. Athraa Ali Kadhem, **Noor Izzri Abdul Wahab**, Ishak Bin Aris, Jasronita Bt Jasni and Ahmed N. Abdalla. 2017. Statistical Analysis of Wind Speed Data at Mersing, Malaysia Using Weibull Distribution Parameters. In Proceedings of the 5th International Symposium on Applied Engineering and Sciences 2017 (SAES 2017), 14-15th November 2017, University Putra Malaysia, Malaysia.
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18. Shirzadi, S., Hizam, H., **Wahab, N. I. A.**, Maghami, M. R., & Macalpine, S. (2016). Increasing energy harvest of photovoltaic arrays under uniform illumination : AAA case study on photovoltaic arrays in boulder CO and tucson AZ. Paper presented at the PECON 2016 - *2016 IEEE 6th International Conference on Power and Energy*, Conference Proceeding, 23-27. doi:10.1109/PECON.2016.7951466
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24. Amirah Mohamed, **Noor Izzri Abdul Wahab**, Mohammad Lutfi Othman, Hashim Hizam. DC Power Forecasting for PV Solar Panel in Malaysia using Artificial Neural Network, *2nd International Symposium On Applied Engineering And Sciences(SAES 2014)*, 20-21 Dec 2014, Kyutech, Japan.

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28. Mirfendereski, Shojaeddin; **Abdul Wahab, Noor Izzri**; Jasni, Jasronita; Lutfi Othman, Mohammad. 2013. Application Of Posicast Controller On Power System Stabilizer And Its Effect On Oscillatory Stability, *7th Global Conference on Power Control and Optimization*, Prague, Czech Republic , vol., no., pp. 6pgs, 25-26 August 2013.
29. Mirfendereski, Shojaeddin; **Abdul Wahab, Noor Izzri**; Jasni, Jasronita; Lutfi Othman, Mohammad. 2013. Posicast Controller in Mitigation of Small Signal Oscillatory Instability and Its Optimization Method, *lnternational Symposium of Applied Engineering and Sciences 2013 (SAES 2013)*, pp. 2pgs.
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32. Aliyu Sabo, **Noor Izzri Bin Abdul Wahab**, Mohd Amran Mohd Radzi, Nashiren Farzilah Binti Mailah. (2013). A Modified Artificial Neural Network (ANN) Algorithm To Control Shunt Active Power Filter (Sapf) For Current Harmonics Reduction. *2013 IEEE Conference on Clean Energy and Technology (CEAT)*, pp. 334 - 339.
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37. Omer H. Mehdi, **Noor Izzri**, Ahmed N. Aballa, Aqeel S. Jaber, Nadheer A. Shalash and Yasar Noori Lafta. 2012. Prediction of Voltage Stability Index based on Intelligent Techniques. Malaysia Postgraduate Conference on Electrical, Electronic and Control Technology (MCEECT 2012), pp. 19-20.
38. Toudeshki, N. Mariun, H. Hizam and **A. W. Noor Izzri**, "The Energy and Cost Calculation for a Marx Pulse Generator Based on Input DC Voltage, Capacitor Values and Number of Stages," in 2012 IEEE 4th International Power and Energy Conference, 3-5 Dec 2012, pp.733–737.
39. Misron Norhisam, Ng Seng Shin, Raja Nor Firdaus Raja Othman, **Abd Wahab Noor Izzri**, M.Nirei, Desa Ahmad, Reduction of Cogging Torque of Single Phase Brushless DC Motor Using Flux Barrier, 2011 IEEE Student Conference on Research and Development (SCOReD), Putrajaya, Malaysia, 19-20 Dec 2011, pp 318-321.
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42. **A. W. Noor Izzri**, Azah Mohamed. 2009. Transient Stability Assessment of a Large Actual Power System using Probabilistic Neural Network with Enhanced Feature Selection and Extraction. Proc. of International Conference on Electrical Engineering and Informatics, 8: 519 – 524.
43. **A. W. Noor Izzri**, Azah Mohamed. 2008. A New Transient Stability Index for Large Power System Based on COI-referred Rotor Angles. Proc. Of the 2nd International Power Engineering and Optimization Conference (PEOCO2008), Shah Alam, Selangor, MALAYSIA. 4-5 June 2008. pg : 25-29.
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49. Imtiaz A K, Norman B Mariun, M. A. M. Radzi, M Saleem, **N I A Wahab** and Mohibullah. 2006. Evaluation and Forecasting of Long Term Electricity Consumption Demand for Malaysia by Statistical Analysis. Proceeding of the First International Power and Energy Conference. Putrajaya, Malaysia, pp 257-261.
50. Mohibullah, Norman Mariun, **Noor Izzri Abdul Wahab**, Ong Yoke Teng. 2005. Design and Testing of McMurray Inverter for Emergency Loads, Proc. of 1st National Conference on Electronic Design 2005 (NCED 2005), Putra Palace Hotel, Kangar, Perlis, 18th-19th May 2005.
51. Norman Mariun, Shamsul Aizam, Hashim Hizam, **Noor Izzri Abd Wahab**. 2005. Design of the Pole-Placement Controller for D-STATCOM in Mitigating Three Phase Fault, Proc. of IEEE PES Inaugural Conference, Durban South Africa, 12-15 July 2005.
52. Norman Mariun, Shamsul Aizam, Hashim Hizam, **Noor Izzri Abd Wahab**. 2005. Design and Simulation of Pole Placement Controller for D-STATCOM in SLG Fault Mitigation, Proc. of WSEAS Conference, Corfu Island, Greece, 22-25 August.
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55. Norman Mariun, Samsul Aizam, Hashim Hizam, **Noor Izzri Abd Wahab**, "Pole Placement Controller for D-STATCOM In DPG Fault Application", Proc. of Brunei International Conference on Engineering and Technology, 15-18 August 2005, Brunei.
56. Mohibullah; **Noor Izzri Abdul Wahab** and Mohd Shafirol B. Mohammad Othman. 2004. 'The Solder Wire Fuse Protection for Power Electronic Devices' , Proc. of National Power & Energy Conference (PECon 2004), 29-30 Nov , Pan Pacific Glenmarie Kuala Lumpur, Malaysia, pp52-54.
57. Mohibullah, Norman Mariun, **Noor Izzri Abdul Wahab**, MHD for Electrical Power Generation, Proc. of National Conference on Engineering and Technology, 26-27 May 2004, Universiti Malaya.
58. **Noor Izzri Abdul Wahab**, Norman Mariun, Azah Mohamed, Mohibullah. 2003. Response Of D-STATCOM Under Unbalanced Voltage Condition Caused By SLG Fault, Proc. of Student Conference on Research and Development (SCOReD 2003), pp 395-400, Renaissance Hotel, Bangi, Malaysia.
59. **Noor Izzri A.W.**, Norman Mariun, Azah Mohamed, Mohibullah. 2002. Design And Simulation of a Distribution STATCOM Considering Voltage Sags Mitigation and Harmonic Elimination, Proc of World Engineering Congress 2002, 22-24 July 2002, Kuching Sarawak, Malaysia.

Research Grants

No.	Project No.	Project Title	Year	Source	Status
		Principle Researcher			
1	05-03-10-0968RU	Application of Computational Intelligence Technique for the Enhancement of Transient Stability Assessment of Power Systems (RM30,000)	2010 - 2011	RUGS	Completed
2	05-02-12-2305RU	Assessment and Control of Power Systems using Hybrid Artificial Intelligence Techniques for Small Signal Stability Problem (RM13,000)	2013-2014	RUGS 2-2012	Completed

3	05-02-12-2302RU	Dynamic Vulnerability Assessment System for Electrical Power System Stability Enhancement (RM57,200)	2013-2014	RUGS 2-2012	Completed
4	GP-IPS/2013/9399817	A Modified Artificial Neural Network (ANN) Algorithm to Control Shunt Active Power Filter (SAPF) for Current Harmonic Reduction (RM15,000)	2014 - 2015	GP-IPS	Completed
5	GP-IPB/2013/9412102	Power Quality, Stability and Demand Response Analysis of Power System with Penetration of Renewable Energy Sources (RM150,000)	2013-2015	GP-IPB (Sub-Project)	Completed
6	SHRE (UPM-JKR)	Hydrokinetic Crude Energy Stabilizer (RM234,000)	2013-2018	JKR	Completed
7	GP-IPS/2016/9494400	Frequency Stability Assessment of Power Systems Considering COI Frequency to Estimate the Critical Level of Wind Power Penetration to the Power System (RM16,000)	2013-2015	GP-IPS	Completed
8	UPM/800-3/3/1/9630000	Development of TRIZ based forecasting model to achieve reliable future power systems: Forecasting Smart Grid's future developments and opening venues for breakthrough research and innovation (RM150,000)	2018-2020	GPB	Ongoing
9	International	'Bidirectional power flow analysis to calculate the power loss of the proposed scheme on integration to the grid system' Part of grant title, "Renewable Energy integrated movable charging unit for Electric Vehicles with grid management concept" (RM23,500)	2020-2023	All India Council for Technical Education	On-going
10	GP-GPB/2021/9706100	Hotspot Detection and Performance Evaluation of Solar Photovoltaic modules using Deep Learning Networks (RM113,200)	2021 - 2024	GPB	On-going
		Co-Researcher			
1	02-03-02-0022S	Custom Power Devices for Power Quality Enhancement (RM 15,000)	2002-2003	IRPA	Completed
2	05-03-10-0965RU	Design and Development of Integrated Flexible Dual Power Filters for Reduction of Harmonics (RM30,000)	2010-2011	RUGS	Completed
3	1057FR	An intelligent data mining technique in numerical protective relay performance analysis (RM98,000)	2011-2013	FRGS	Completed
4	05-02-12-1906RU	An Intelligent Load Control System for Autonomous Microgrid Based on Solar and Wind Energy (RM14,300)	2012-2014	RUGS	Completed

5	05-02-12-2204RU	Development of Rule Base Maintenance Strategy of a Numerical Protective Relay Analysis Expert System Using Data Mining (RM115,000)	2012-2014	RUGS 22012	Completed
6	ERGS/1-2013/5527141	Assessment of Hybrid Classification Technique in Power Quality Analysis for Renewable Energy Systems (RM82,000)	2013-2016	ERGS	Completed
7	GP-IPB/2013/9412101	Intelligent Data-Mining-Based Protection Scheme in Smart Grid (RM100,000)	2013-2015	GP-IPB (SubProjek)	Completed
8	GP-IBT/2013/9417300	Development Of Conceptual Guidance Frameworks For Sub-Domain In Electrical Engineering With Focus Towards Comprehensive Guidance Development For Electrical Engineers (RM118,000)	2014-2015	GPB	Completed
9	FRGS 2015-1	Evaluation of mismatch power losses due to Photovoltaic modules I-V characteristics variation in tropical climate condition	2015-2017	FRGS	On-going
10	GIPP 2017	Development and evaluation on the use of engineering mathematics as one of the PutraMOOC among the 1st year engineering students	2017-2019	GIPP	On-going
11	GPB	Novel Water-air Forced Cooling (WAFC) Technique on Crystalline PV module for Efficient Energy Yield in NEM Application for Malaysia Smart City Plan (RM150,000)		GPB	On-going

Awards/Recognition (Current)

No.	Award/Recognition	Organisation Awarded	Date
1	UPM Scholarship (MSc)	UPM	2000
2	UPM Scholarship (PhD)	UPM	2006
3	Excellent Service Certificate	UPM	2002-2017
4	Excellent Service Award	UPM	2014, 2018

Professional Services/Consultation

No.	Title	Level (International/ National/University/Faculty/Department)	Year
1	2nd World Enginering Congress –Electrical and Electronics Enginering (Division) - Secretariat	University	2002
2	Student Conference on Research and Development 2003 (SCOReD 2003) – Secretariat	University	2003

3	National Power and Energy Conference 2003 (PECon 2003)-secretariat	University	2003
4	Renewable Energy Systems and Distributed Generation – Organiser	Department	2008
5	2010 IEEE International Conference on Power and Energy (PECon2010) – Registration Chair	International	2010
6	TENCON 2012 - member of the technical program committee	International	2012
7	Journal of Applied Sciences - Editor	International	2011-present
8	Journal of Artificial Intelligence – Editor	International	2011-present
9	Asian Journal of Scientific Research – Editor	International	2011-present
10	Centre of Excellence on Lightning Protection Committee Membership – member	Faculty	2010 – present
11	Centre for Advanced Power and Energy (CAPER) – Member	Faculty	2012 – present
12	International Conference of Electrical and Electronic Engineering and Technology (ICEETech 2017)	International	2016
13	Guest Editor – Special Issue ICEETech 2017	University	2016
14	Member – PutraMOOC UPM	University	2017
15	Engineering Technology Accreditation Council (BEM) – Panel	National	2018 -
16	Working Group on Preparing Std for E-cigarette (SIRIM STS) - Member	National	2017 – present
17	WG on Smart Grid (SIRIM STS) - Member	National	2015 - present

Student Supervision

No.	Level	Name of Students and Title of Thesis/Project	Status (Completed/Ongoing)	Grad
Main Supervisor				
1	PhD	Athraa Ali Khadem GS40780 – Reliability Assessment of Composite Power System	**Completed**	2018
2	PhD	Mohd. Azlan bin Abu GS34955-Reconfigurable Decoder For Power Optimization Via Adaptive Viterbi	**Completed**	2018
3	PhD	Veerapandiyan Veerasamy GS52996 – Recurrent Neural Network Approach for Stability Analysis and Special Protection Scheme of Power Systems with Distributed Generation	**Completed**	2021
4	PhD	Mohamad Nasrun Bin Mohd Nasir GS42919 Dynamic Security Assessment (DSA)	Ongoing	2017
5	PhD	Bazilah binti Ismail Location and sizing of CPD	Ongoing	2017
6	PhD	Farade Rijavan GS54813 - Dielectric and Thermal Properties Investigation on Natural Ester Green Nanofluids Based on Cottonseed Oil in the Vicinity of Transformer Applications	Ongoing (Thesis submitted)	2019
7	PhD	Andrew Xavier Raj GS55965– Load Frequency Control	Ongoing	2019

8	PhD	Sabo Aliyu GS54742 – Artificial Intelligence-Based Power System Stabilizers for Frequency Stability Enhancement in Multi-Machine Power Systems	Ongoing (Thesis submitted)	2019
9	PhD	Al-Murshedi Bashar Abbas Fadheel GS58252 – Virtual Inertia	Ongoing	2020
10	PhD	Tukkee Ahmed Sahib Hammadi GS59655 – Microgrid Optimization	Ongoing	2020
11	Master	Omer Hikmat Mehdi - Voltage Stability Assessment Of Power Systems Using Voltage Stability Indices And Artificial Intelligence Techniques	**Completed**	2012
12	Master	Shojaeddin Mirfendereski -Small signal Stability and Control	**Completed**	2014
13	Master	Pouya Borazjani - Multi-agent based control of distribution system with dispersed energy storage systems	**Completed**	2015
14	Master	Amirah binti Mohamed- Artificial Neural Network Approach of Energy Forecasting for Photovoltaic Generators in the Tropics	**Completed**	2015
15	Master	Aliyu Sabo - A Modified Artificial Neural Network (ANN) Algorithm To Control Shunt Active Power Filter (SAPF) For Current Harmonics Reduction	**Completed**	2014
16	Master	Azimi bin Che Soh GS39257- SHRE turbine for rural electrification	**Completed**	2019
17	Master	Abubakar Kaigama, Muawiya GS38339 - Design of Domestic Grid Friendly Appliance Controller with Demand Response	**Completed**	2016
18	Master	Ahmad Sahib Hammadi GS41272- Artificial Intelligence Techniques used for Optimum Allocation and Sizing of Distributed Generations (DG) in Distribution System	**Completed**	2016
19	Master	Athraa Iessa Shaaban Al Mentefik GS42356 – Frequency Stability Assessment of Power System	**Completed**	2017
20	Master	Mohd Zohrul Islam GS53285 – Optimal Power Flow of Power Systems using Harris Hawks Optimization and Salp Swarm Algorithm	**Completed**	2021
21	Bacelor	Zulkifli Abdul Manap - A Talking Voltmeter	**Completed**	2004
22	Bacelor	Khoo Kar Chuan - Testing Of D-STATCOM On 14-bus IEEE Test System	**Completed**	2006
23	Bacelor	Marazira Mansor- Power System Security 2	**Completed**	2011
24	Bacelor	Zaidatun Nadiah Bt Muhamad Sanusi - Power System Security 1	**Completed**	2011
25	Bacelor	Nurul Farhanis- Transient Stability Assessment and Its GUI	**Completed**	2012

26	Bacelor	Nadzaty Azma - Small Signal Stability Assessment	**Completed**	2012
27	Bacelor	Ahmad Naquiuddin – TSA of PS using COI-speed index	**Completed**	2013
28	Bacelor	Adam Ruzaini – Transient Stability Assesement with RE	**Completed**	2014
29	Bacelor	Dell Thorno Sinson – Voltage Stability Assessemnt with RE	**Completed**	2014
30	Bacelor	Yang Jungang – Frequency Stability Assessement of Power systems	**Completed**	2016
31	Bacelor	Hani Muslihah binti Abdul Halim – Wind Energy Assessments for different sites in Malaysia	**Completed**	2017
32	Bacelor	Sek Yu Chai - A Novel Load Flow Analysis using PSO-GSA based Hopfield Neural Network for Contingency Ranking and Voltage Stability Assessment	**Completed**	2018
33	Bacelor	Muhammad Afiq - Optimization of Generation Fuel Cost and Loss Minimization using Salp Swarm Algorithm based Optimal Power Flow	**Completed**	2018
34	Bacelor	Muhammad Zahid bin Kamaruzaman – Reliability Assessment of Distribution of Power System with Photovoltaic System using ETAP	**Completed**	2018
35	Bacelor	Quah Kah Meng - Power System Static Stability Analysis using Hopfield Neural Network	**Completed**	2020
36	Bacelor	Muhammad Shamir - Power System State Estimation	**Completed**	2020
37	Bacelor	Thurgadarshne - High Impedance Fault Detection and Classification in Renewable Energy Integrated Power System using Deep Learning Classifier	**Completed**	2021
38	Bacelor	Muhammad Hajjo - Automatic Load Frequency Control of Hybrid Power System with Microgeneration Plant using ASO Optimized Multi-Loop Control Scheme	**Completed**	2021
Co-Supervisor				
1	PhD	Arash Mohammadi Toudeshki - Design and Development of New Prototype Pulsed Electric Field (PEF) Processing Unit for Liquid Foods	Completed	2013
2	PhD	Muhammad Mansoor - Developing a Guidance Tool for Electrical Engineers to Seek Innovative Solutions Systematically	Completed	2013
3	Master	Wahidah binti Abd Halim - Simulation of Statcom and SSSC Modes for Convertible Static Compensator (CSC)	Completed	2005
4	Master	Shamsul Aizam Zulkifli - Design And Simulation Of Controller For Unbalanced Voltage Mitigation	Completed	2006
5	Master	Mohd. Zin bin Hassan - Design and Development of Solid State Circuit Breaker	Completed	2009
6	Master	Ng Seng Shin - Cogging Torque Reduction of a Single Phase Brushless DC Motor by Adjustment of Flux Density Distribution in Air Gap	Completed	2013
7	PhD	Ahmad Rezaee Jordehi - Particle Swarm Optimisation Applications in FACTS Optimisation Problem	Completed	
8	PhD	Maryam Mirzaei - Voltage Stability Analysis	Completed	

9	PhD	Mohammadsoroush Soheilirad - Renewable Energy	Completed	
10	PhD	Musa Suleiman - Active Power Filter	Completed	
11	Master	Mohd Izhwan bin Muhamad - A new Hybrid Intelligent Technique in Power Quality Analysis Tool for Renewable Energy Systems	Completed	
12	Master	Nima Rezaei - Distance Protection Scheme	Completed	
13	Master	Nima Rezaei - Distance Protection Scheme	Completed	
14	Master	Qasim Badar- Differential Protection	Completed	
15	Master	Samad Shirzadi Deh Kohneh - Renewable Energy	Completed	
16	Master	Mohammed Sani Ya'u - Distance Protection	Completed	
17	Master	Waqar Tariq - Power system protection	Completed	
18	Master	Farshad Azadian - Controlled Islanding Strategy for Power Systems based on Flexible Supervised Spectral Clustering	Completed	
19	Master	Mohammad Seifi- In intelligent Monitoring System for Microgrid	Completed	
20	Master	Omid Sarafan - Renewable Energy	Completed	