PROFESSOR IR. DR. ISMAIL MUSIRIN

Professor of Power System
Faculty of Electrical Engineering
Universiti Teknologi MARA,
40450 Shah Alam, Selangor, Malaysia

Head:
Power System Operation Computational Intelligence
Research Group (POSC),
Universiti Teknologi MARA,
40450 Shah Alam, Selangor, Malaysia

Tel. No: 603 55436109, 6012 6603864
Fax. No: 603 55436109
E-mail: ismailbm1@gmail.com, ismailbm@salam.uitm.edu.my

- Diploma in Electrical Power Engineering, Universiti Teknologi Malaysia, 1987.
- Bachelor in Electrical Engineering, Universiti Teknologi Malaysia, Second Class (Upper Division), 1990.
- MSc in Pulsed Power Technology, University of Strathclyde, Glasgow United Kingdom, 1992.
- PhD in Electrical Engineering, Universiti Teknologi MARA, Malaysia, 2005.
- **(First PhD Graduate of the Faculty of Electrical Engineering, UiTM).**

- Have assessed 65 PhD theses (Malaysia and overseas)
- Have assessed 45 MSc theses (Malaysia and overseas)
- Total Research Grants (accumulated) = 29 Grants
- Have given 6 Keynote Speeches at the International Conferences.
- Have chaired 13 International Conferences since 2007.
- FRGS, PRGS, TRGS, LRGS and FRGS-MRSA Research Grants Panel at MOHE.
- YUTP Research Grants Evaluator
- International Kazakhstan Research Grant Evaluator

- No. of Citation : 3075 (filtered)
- H-Index : 21
- I_10 Index : 85
- No of Journals : 213 (as of 2019). 20 – 2020 (not yet updated)
- No. of index/refereed proceedings: 212

- 13 PhD Candidates Graduated
- 17 MSc Candidates Graduated
- 14 Current PhD Students
- 4 Current MSc Students

SUMMARY OF ACHIEVEMENTS

- Director, Community of Research (CoRe), Advanced Computing and Communication (ACC), UiTM Shah Alam. Feb 2014 – Dec 2017.
- Deputy Dean (Research and Industrial Linkages), Faculty of Electrical Engineering, UiTM Shah Alam. 2008-2010.
- Head of Department, Centre for Electrical Power Engineering Studies (CEPES), Faculty of Electrical Engineering, UiTM Shah Alam. 2007-2008.
- Head of Programme (Diploma in Electrical Engineering, FEE, UiTM) 2004-2007.
- Professional Engineer (Ir). Awarded by Board of Engineers Malaysia (BEM), 2016.

- Keynote Speaker, 2017 International Conference of Applied Sciences on Engineering, Business, Linguistic and Information Technology (ICoASCNITECH) 2017. 14 October 2017, Padang, Indonesia.
- Keynote Speaker, 2016 International Conference on Advances in Engineering & Technology Research (AETR-16). Dubai, 10 – 11 Jan. 2016.
- Keynote Speaker, 2016 6th International Conference on Computer and Communication Engineering (ICCCE), Kuala Lumpur, 25-27 July 2016.
- Plenary Speaker: 4th International Conference on APPLIED and COMPUTATIONAL MATHEMATICS (ICACM '15), Seoul,Korea, September 5-7, 2015.
- Keynote Speaker: 2015 International Conference on Electrical, Control And Computer Engineering (IneCCE2015), 27 September 2015, Gambang, Pahang.
- Keynote Speaker: International Conference on Computer & Communication Engineering 2014, Kuala Lumpur, Malaysia.

- Keynote Speaker: International Conference on Informatics, Statistics and Mathematics 2013, Penang, Malaysia.
- Keynote Speaker: 2008 International Conference on Artificial Intelligence, Knowledge and Data Bases (AIKED2008), Cambridge, United Kingdom.

- Executive Member, IEEE Malaysia PES Chapter. 2012-2014.
- Chair, IEEE Malaysia PES Chapter, 2010.
- Past Chair, IEEE Malaysia PES Chapter, 2011-2012.
- Vice Chair, IEEE Malaysia PES Chapter, 2008-2009.
- Have reviewed numerous manuscripts for international journals/international conferences.
- Have conducted more than 7 workshops/short courses for UiTM and Local Universities.
- Have given numerous talks/seminars on **Publication/High Impact Publication since 2007.**
- Have supervised more than 200 Bachelor Degree Projects since 1992.

AWARDS/RECOGNITIONS

1. UiTM Research Summit Day Award 2017, Mentor Researcher (Silver Medal)
2. Academic Receipient Award 2012 – Faculty of Electrical Engineerinmg, UITM.
3. Research Mentor Lecturer Award 2012 - Faculty of Electrical Engineerinmg, UITM.
4. Excellent Postgraduate Supervisor Award (Highest Number of Supervision Category) – Faculty of Electrical Engineerinmg, UITM.
5. Excellence Service Award 1996, Universiti Teknologi Mara.
6. Excellence Service Award 2004, Universiti Teknologi Mara.
7. Excellence Service Award 2010, Universiti Teknologi Mara.
8. Keynote Speaker at the 8th WSEAS International Conference on Artificial Intelligence, Knowledge and Data Bases (AIKED2009), Cambridge University, United Kingdom, Feb 2009.
9. Best Paper Award at IAENG International Conference of Electrical Engineering (ICEE2008), Kow Loon, Hong Kong. March 2009.
10. Session Chair in at the *8th WSEAS International Conference on Artificial Intelligence, Knowledge and Data Bases (AIKED2009)* at Cambridge University, UK, 21-23 February 2009.
11. Session Chair: WSEAS International Conference of Power Systems and Electromagnetic Compatibility (ICOPEMC2004), Izmir, Turkey.
12. International Reviewer: International Journal of Power and Energy Systems (Elsevier Science) - 2005
13. International Reviewer: IEEE Transaction on Power Systems – 2005 – now
14. International Programme Committee: WSEAS International Conference of Power Systems and Electromagnetic Compatibility (ICOPEMC05), Corfu, Greece: 2005
15. International Programme Committee: International Conference on Artificial Intelligence and Soft Computing, India. - 2005
16. International Reviewer: International Journal of Electrical Power and Energy Systems (Science Direct) - 2006
17. International Reviewer: World Scientific and Engineering Academy and Society (WSEAS) – Europe Based Society: 2004 – now.
18. International Reviewer: IEEE First International Power and Energy Conference (PECON2006)- 2006
19. International Reviewer: IEEE Student Conference on Research and Development (SCOReD2007)
20. IEEE Transaction on Power Systems
21. International Reviewer : IEEE Transaction on Power Delivery: 2007 – now.
22. International Reviewer: IEEE Transaction on Energy Conversion: 2007 – now
23. Session Chair: The 2008 IAENG International Conference on Artificial Intelligence and Applications, Hong Kong, 19-21 March, 2008.
24. Session Chair: The 2008 IAENG International Conference on Electrical Engineering Hong Kong, 19-21 March, 2008.
25. Editor-in-Chief: International Journal of Power, Energy and Artificial Intelligence (IJPEAI).
26. Editor: Journal of Electrical and Electronics Systems Research (JEESR).
27. Excellence Service Award (Anugerah Perkhidmatan Cemerlang) UiTM 1995- UiTM.
28. Certificate of Appreciation: BRC Researcher 2002: Prof. Dr. Azni Zain Ahmed, PNC IRDC - 2002

29. Promising Researcher of UiTM awarded in conjunction to Conference of Scientific and Social Science Research (CSSR) 2002 : Dato' Seri Prof. Ibrahim Abu Shah, VC UiTM - 2002

30. Best Presenter in the Conference of Scientific and Social Science Research (CSSR) 2002 - Dato' Seri Prof. Ibrahim Abu Shah, VC UiTM. 2002

31. Certificate of Participation: IASTED International Conference on Power and Energy Systems (EUROPES 2002), Crete, Greece - IASTED Secretariat: 2002

32. Certificate of Appreciation: "Student Paper Award" in IEEE transmission & Distribution Conference & Exhibition 2002, Yokohama, Japan - Chairperson, Organizing Committee IEEE Japan – 2002.

33. Certificate of Participation: IASTED International Conference on Power and Energy Systems (EUROPES 2003), Marbella, Spain - IASTED Secretariat. 2003.

34. Certificate of Appreciation: International Conference Presenter in 4th WSEAS International Conference on Power Systems and Electromagnetic Compatibility

35. Prof. Nikos Mastorakis, President of World Scientific and Engineering Academy and Society (WSEAS): 2004.

36. Excellence Service Award (Anugerah Perkhidmatan Cemerlang) UiTM 2004 – UiTM -2004.

37. Certificate of attendance – Signal Processing, Automation and Control Conference (ConSPAC2004): Dean, FKE, UiTM -2004.

38. Certificate of Appreciation: As Researcher in 2004 - Prof. Dr. Azni Zain Ahmed, PNC IRDC: 2004.

39. Certificate of Appreciation: Program Pemantapan Wawasan: As Invited Speaker - Dean, FKE, UiTM: 2005.

40. Appreciation Letter: Panel for Research Technical Meeting Prof. Dr. Azni Zain Ahmed, PNC IRDC: 2005.

41. Congratulation Letter: for the PhD Award - Pn. Rabiah Latif, UiTM Registrar: 2005.

42. Appreciation Letter: Flyers Preparation for FKE - Dean, FKE, UiTM: 2005.

43. Certificate of Appreciation: MARA Syllabus Review: Head of Director – MARA 2005.

44. Certificate of Appreciation: As Researcher : Prof. Dr. Azni Zain Ahmed, PNC IRDC 2005.

45. Certificate of Appreciation: International Conference Presenter in WSEAS Int. Conf. on NN, FZ and EC, 2005 Lisbon, Portugal : Prof. Nikos Mastorakis, President of World Scientific and Engineering Academy and Society (WSEAS): 2005.

46. Appreciation Letter for being the Journal Reviewer for the International Journal of Electrical Power & Energy Systems (Elsevier): Prof. T. S. Dillon (Australia) – 2005.

47. Certificate of Appreciation – Publication Chair CSPA 2005 - Dean, FKE, UiTM: 2005.

48. Appreciation Letter – MARA (IKM) Curriculum Advisory Panel - Dato' Zamani Bin Mohd. Noor, MARA : 2005.

49. Certificate of Appreciation – Student Council Election Involvement 2005 - Dean, FKE, UiTM: 2005.

50. Certificate of Appreciation: PhD Supervision Course - Assoc. Prof. Mustafa Mohd. Ghazali. PNC, ILQAM: 2006.

51. Appreciation Letter for Conference Proceedings Contribution to PTAR - Pn. Zaimah Hj. Mokhtar, Timb. Ketua Pustakawan, UiTM – 2006.

52. Appreciation Letter: Head of Programme for EE112: Dato' Prof. Ir. Sahol Hamid Abu Bakar, TNCA UiTM: 2006.

53. Certificate of Appreciation: Vice Chairman for 4th Students Conference of Research and Development (SCOReD2006) - Dean, FKE, UiTM: 2006.

54. Certificate of Appreciation: Chairman of Technical Session in SCOReD2006 - SCORED2006 Organizing Chair.

55. Certificate of Appreciation: Invited Speaker for "Kempen Budi Bahasa". Sek. Keb. Puncak Alam 2 - Head Master: Sek. Keb. Puncak Alam 2 - Kuala Selangor – 2006.
56. Appreciation Letter for the given Motivational Talk: How to Excel in the University: Dean, FKE, UiTM – 2006.
57. Certificate of Appreciation: Chair Person for CSPA 2006 -Dean, FKE, UiTM.
58. Certificate of Appreciation: Conference Presenter in CSPA 2006 - Dean, FKE, UiTM.
59. Certificate of Appreciation: Publication Chair for CSPA 2006 - Dean, FKE, UiTM.
60. Appreciation Letter: I-Learn Course - Dato' Prof. Ir. Sahol Hamid Abu Bakar, TNCA UiTM: 2006.
61. Certificate of Appreciation: in Conjunction with Student Council (MPP) 2006: Dean, FKE, UiTM.
62. Certificate of Appreciation: 6th WSEAS International Conference on Power Systems, Lisbon Portugal - Prof. Nikos Mastorakis, President of World Scientific and Engineering Academy and Society (WSEAS) – 2006.
63. Certificate of Appreciation: International Journal Reviewer: Institute of Engineering & Technology (IET), UK – 2007.
64. Certificate of Appreciation: Speaker for "One Day Workshop on ANN and Evolutionary Computation Techniques (ANNECT)" : Dean, FKE, UiTM - 2007
65. Certificate of Appreciation: ANNECT2007 Organizer: Dean, FKE, UiTM – 2007.
66. Appreciation Letter: Seminar Series 9 - Dean, FKE, UiTM – 2007.
67. Certificate of Appreciation: IEEE International Journal Reviewer
68. Prof. Louis Wozniak, IEEE – 2007.
69. Appreciation Letter: CSSR 2007 Judge Panel: Prof. Dr. Azni Zain Ahmed, PNC IRDC.
70. Appreciation Letter: Seminar FKE Siri 2: Dean, FKE, UiTM - 2007
71. Certificate of Appreciation: PEOCO2007 Presenter - 1st International Power Engineering and Optimization Conference (PEOCO2007) : Chair.
72. Certificate of Appreciation: Being PEOCO2007 Organizing Chair: Dean, FKE, UiTM 2007
73. Certificate of Appreciation: Being SCANNEP2007 Speaker: Dean, FKE, UiTM – 2007.
74. Appreciation Letter: Outcome-Based Education (OBE) Workshop - Dean, FKE, UiTM 2007.

INTERNATIONAL MEMBERSHIP

1. Artificial Immune System Society (ARTIS) – Member
2. International Association of Engineers, Hong Kong (IAENG) – Member.
3. International Association of Computer Science and Information Technology (ICASIT) – Senior Member.

PUBLICATIONS

BOOKS:

1. Transformer and Rotating Machine, Penerbit University-Education Press (Uni-Ed), ISBN 983-40409-0-3, June 2000
2. Basic Electronics and Electricity   Penerbit University-Education Press (Uni-Ed), ISBN 983-40409-1-1, Julay 2000

INTERNATIONAL REFEREED/INDEXED JOURNAL

Year: 2002
[1]   **Musirin** and T. K. A. Rahman, "Estimating Maximum Loadability for Weak Bus Identification Using *FVSI*", *IEEE Power Engineering Review,* Vol. 22, 2002, pp. 50 - 52.

Year: 2004
[2]   **Musirin**, T.K.A Rahman and M. K. Idris, "Optimal Reactive Power Dispatch for Voltage Instability Alleviation Using Evolutionary Programming Technique", *WSEAS Transaction on Circuits and Systems*, Vol. 3, No. 6. 2004, pp. 1487-1492.
[3]   M. F. M. Kamal, T. K. A. Rahman and **I. Musirin**, "Improved Genetic Algorithms (IGA) for Optimal Reactive Power Planning in Loss Minimization Scheme", *WSEAS Transaction on Circuits and Systems*, Vol. 3, No. 6. 2004, pp. 1493-1498.
[4]   T. K. A. Rahman, S. R. A. Rahim and **I. Musirin**, "Implementation of Embedded Generator for Voltage Regulation and Loss Minimization in Distribution System", *International Journal of Engineering and Technology*, Vol. 1, No. 1, 2004, pp. 1-12.

Year: 2005
[5]   **I. Musirin** and T. K. A. Rahman, "Estimation of Maximum Loadability in Power Systems by Using Fast Voltage Stability Index", *International Journal of Power and Energy Systems*, Vol. 25, Number 3, 2005, pp. 181- 189.
[6]   **I. Musirin** and T. K. A. Rahman, "Evolutionary Programming Optimization Technique for Solving Reactive Power Planning in Power System", *WSEAS Transactions on Information Science and Applications*, Vol. 2, No. 5, May 2005, pp. 495-500.
[7]   M.F. Mohd Kamal, T. K. A. Rahman, **I. Musirin**, "Tandem Application of Exploration Factors and Variant Spin Mechanism on Steady State Genetic Algorithms for Loss Minimisation in Power System", *WSEAS Transactions on Information Science and Applications*, Vol. 2, No. 5, May 2005, pp. 518-523.

Year: 2006
[8]   **Ismail Musirin**, Mohd. Rozely Kalil and Muhammad Murtadha Othman, "Optimal Reactive Power Dispatch Using Ant Colony Optimization Technique", *WSEAS Transactions on Power Systems*, Issue 8, Vol. 1, August 2006, pp. 1423-1430.
[9]   Titik Khawa Abdul Rahman, Saiful Izwan Suliman, **Ismail Musirin**, "Artificial Immune-Based Optimization Technique for Solving Economic Dispatch in Power System*",Springer Verlang, Lecture Notes in Computer Science*, Volume 3931/2006. Lecture Notes in Computer Science, PublisherSpringer Berlin / Heidelberg ISSN: 0302-9743 (Print) 1611-3349 (Online) Volume 3931/2006.

Year: 2007

[10]   Z. Baharudin, N. S. Kamel, I. Musirin, *"ARMA versus AR in Short Term Load Forecast"*, International Journal of Power, Energy and Artificial Intelligence, August 2008, No.1, Vol. 1, (ISSN: 1985-6431) pp. 66-72.

Year: 2008

[11]   Abdul Rahman Minhat, **Ismail Musirin,** Muhammad Murtadha Othman, Mohamad Khayat Idris, **"**Evolutionary Programming Based Technique for Secure Operating Point Identification in Static Voltage Stability Assessment", *Journal of Artificial Intelligence (JAI).*Vol. 1, No. 1, 2008, pp. 12-20.

[12]   Ismail Musirin, Nur Dianah Mohd. Radzi, Muhammad Murtadha Othman, Mohamad Khayat Idris, Titik Khawa Abdul Rahman, "Voltage Profile Improvement Using Unified Power Flow Controller via Artificial Immune System", *WSEAS Transaction on Power Systems* Issue 4, Volume 3, April 2008, ISSN: 1790-5060 194, pp. 194 – 204.

[13]   Mohd Zamri Laton, Ismail Musirin Titik Khawa Abdul Rahman, "Voltage Stability Assessment via Continuation Power Flow Method", *Journal of Electrical and Electronics Systems Research (JEESR),* Vol. 1, No. 1, June, 2008, pp. 71-78.

[14]   N. Mat, M.M. Othman, I. Musirin, A. Mohamed and A. Hussain, "Fast Evaluation of Available Transfer Capability (ATC) Considering Integral Square Generator Angle (ISGA)", *WSEAS Transaction on Power Systems,* Issue 4, Volume 3, April 2008, ISSN: 1790-5060 194, pp. 182-193.

[15]   Sarizan Bin Ilias, Muhammad Murtadha Bin Othman, Ismail Bin Musirin, Azah Mohamed and Aini Hussain, "Simultaneous ATCs Determination Using Pareto Based Evolutionary Programming Technique", *Journal of Electrical and Electronics Systems Research (JEESR),* Vol. 1, No. 1, June, 2008, pp. 79-87.

[16]   Siti Rafidah Abdul Rahim , Titik Khawa Abdul Rahman, **Ismail Musirin**, Syahrul Ashikin Azmi, Mohd Fayzul Mohammed, Muhd Hatta Hussain, M. Faridun*, "*Comparing the Network Performance between the Installation of DG and Compensating Capacitor using EP", *International Journal of Power, Energy and Artificial Intelligence (IJPEAI),* August 2008, pp. 14-21.

[17]   Ismail Musirin, Mohd Rozely Kalil, **"**Ant Colony Optimization Technique for Optimal Transformer Tap Changer Setting in Voltage Stability Improvement", *Journal of Management and Science*, Volume 6, No. 1 June 2008, pp.83-90.

[18]   Ismail Musirin, Nur Hazima Faezaa Ismail, Mohd. Rozely Kalil, Muhammad Khayat Idris, Titik Khawa Abdul Rahman, Mohd Rafi Adzman, "Ant Colony Optimization (ACO) Technique in Economic Power Dispatch Problems", *Lecture Notes in Electrical Engineering, Book Chapter, Springer Verlag.* March, 2008.

Year: 2009

[19]   **Musirin** and T.K.A. Rahman, "Evolutionary Programming Based Optimal Reactive Power Planning for Voltage Stability Improvement and Loss Minimization in Power System, *International Journal of Power and Energy Systems*, Vol. 29, No. 1, 2009, pp. 1 – 9.

[20]   *K. A. A. Rahman, *M. M. Othman, I. Musirin, A. Mohamed, A. Hussain. "*Short-Term Load Forecasting Using Autoregressive Box-Jenkins Model", *International Journal of Power, Energy and Artificial Intelligence (IJPEAI)*, Vol. 2, No. 1, March 2009, pp. 110-115.

[21]   *Mohd Rozely Kalil, Ismail Musirin, Muhammad Murtadha Othman, "*Optimal Transformer Tap Changer Setting Using Ant Colony Optimization for Voltage Stability Improvement", *International Journal of Power, Energy and Artificial Intelligence (IJPEAI)*, Vol. 2, No. 1, March 2009, pp. 88-94.

[22]   S.I Sulaiman, T.K Abdul Rahman, and I. Musirin, "Partial Evolutionary ANN for Output Prediction of a Grid-Connected Photovoltaic System", *International Journal of Computer and Electrical Engineering (IJCEE)*, Vol. 1, No. 1, April 2009, pp. 1793-8198.

[23]   *S.I. Sulaiman, T.K. Abdul Rahman, I. Musirin, and S. Shaari,* "ANN-Based Technique with Embedded Data Filtering Capability for Predicting Total AC Power from Grid-connected Photovoltaic System", *International Journal of Power, Energy and Artificial Intelligence (IJPEAI)*, Vol. 2, No. 1, March 2009, pp. 72-76.

[24]   Shahril Irwan Sulaiman, Ismail Musirin,Titik Khawa Abdul Rahman, "Prediction of Grid-Photovoltaic System Output Using Three Variate ANN Models", *WSEAS Transactions on Information Science and Applications*, Issue 8, Volume 6, August 2009, Pp. 1339 – 1348.

[25]   Ismail Musirin*,* Mohd Rozely Kalil, "Optimal Reactive Power Dispatch for Loss Minimization in Power System Using ACO, EP and AIS", *International Journal of Electrical Energy Systems (IJEEPS), January - June 2009.pp. 39-47.*

[26]   Stendley Busan, M. Murtadha Othman, I. Musirin, A. Mohamed and A. Hussain, "Application of Ralston's Method Incorporating Cubic-Spline Interpolation Technique in Available Transfer Capability Assessment', *Australian Journal of Basic and Applied Sciences.* October 2009. Vol. 3, No. 4, pp. 4568-4590, 2009. ISSN 1991-8178.

[27]   Siti Rohani Kasim, M. Murtadha Othman, Nor Fadhilawati Abd Ghani, I. Musirin, A. Mohamed and A. Hussain, "Determination of Power System Risk by Means of Bootstrap Technique" *Australian Journal of Basic and Applied Sciences.* 2009. 3(4): pp. 4534-4558, 2009, ISSN 1991-8178.

Year: 2010

[28]   Norziana Aminudin, Titik Khawa Abdul Rahman and Ismail Musirin, "ORPP with MAIEP Based Technique for Loadability Enhancement", *International Journal of Electrical Power and Energy Systems Engineering* 3:1 2010, pp. 31-35.

[29]   Nor Azwan Mohamed Kamari, Ismail Musirin and M. Murtadha Othman, "EP Based Optimization for Estimating Synchronizing and Damping Torque Coefficients", *Australian Journal of Basic and Applied Sciences.* 2010. 4(8), pp. 3741-3754, **2010** ISSN 1991-8178.

[30]   Nor Rul Hasma Abdullah, Ismail Musirin and Muhammad Murthada Othman, "Static VAR Compensator for Minimising Transmission Loss and Installation Cost Calculation", *Australian Journal of Basic and Applied Sciences.* April 2010. pp. 646-657. [ISSN 1991-8178]

[31]   S. Busan, M. M. Othman, I. Musirin, A. Mohamed, A. Hussain, "Determination of Available Transfer Capability By Means of Ralston's Method Incorporating Cubic-Spline Interpolation Technique (P N/A)**",** *European Transactions on Electrical Power.* 2010. pp. 453.

[32]   R. H. Zaini, M. M. Othman, I. Musirin, A. Mohamed, A. Hussain, "Determination Of Transmission Reliability Margin Considering Uncertainties of System Operating Condition and Transmission Line Outage (P N/A), *European Transactions on Electrical Power.* 2010. pp. 448.

[33]   Stendley Busan, Mohammad Murtadha Othman, Ismail Musirin, Azah Mohammed, and Aini Hussain, "A New Algorithm for The Available Transfer Capability Determination", *Journal of Mathematical Problems in Engineering*, June 2010, pp. 1-42.

[34]   N. R. H. Abdullah, I. Musirin, M. M. Othman, "Transmission Loss Minimization Using Evolutionary Programming Considering UPFC Installation Cost", *International Review of Electrical Engineering (IREE),* Volume. 5, Issue 3, May-June 2010,   pp. 1189 – 1203. Impact Factor = 1.364.

[35]   D. Johari, T. K. A. Rahman, I. Musirin, N. Aminudin, *"*Application of Meta-Evolutionary Programming in ANN-Based Lightning Prediction System", *International Review of Electrical Engineering (IREE), August 2010.* Impact Factor = 1.364.

[36]   S.I Sulaiman, T.K Abdul Rahman, I. Musirin, S. Shaari, "Performance Analysis of Evolutio

nary ANN for Output Prediction of a Grid-Connected Photovoltaic System", *International Journal of Electrical and Information Engineering*, Vol. 4, No. 2 2010, pp.102-108.

[37] S. I. Sulaiman, T. K. A. Rahman, I. Musirin, "Novel Intelligent Sizing Algorithm for Grid-connected Photovoltaic System Design", *International Review on Modelling   and   Simulations*, Vol. 3. No. 4, 2010. Price Worthy, pp. 639-652.

Year: 2011

[38] M. Murtadha Othman and I. Musirin,"A Novel Approach to Determine Transmission Reliability Margin Using Parametric Bootstrap Technique", International Journal of Electrical Power and Energy Systems (Elsevier), Vol. 33, 2011, pp. 1666-1674. Impact Factor = 2.073. ISI WoS Indexed.

[39] Zulkiffli Abdul Hamid, Ismail Musirin, Muhammad Murtadha Othman, Nor Azam Rahim, "Efficient Power Scheduling via Stability Index Based Tracing Technique and Blended Crossover Continuous Ant Colony Optimization", *Australian Journal of Basic and Applied Sciences (AJBAS), Vol. 5, No. 9, pp. 1335-1347, 2011. ISSN 1991-8178. 2011.* Scopus Indexed.

[40] Zulkiffli Abdul Hamid, Ismail Musirin, Muhammad Murtadha Othman, Norazam Abdul Rahim, "New Formulation Technique for Generation Tracing via Evolutionary Programming", *Accepted for publication in International Review of Electrical Engineering (IREE), Impact Factor 1.364*. ISI WoS Indexed.

[41] Shahril Irwan Sulaiman, Titik Khawa Abdul Rahman, Ismail Musirin, Sulaiman Shaari, "Evolutionary Programming Versus Artificial Immune System in Evolving Neural Network for Grid-connected Photovoltaic System Output Prediction, WSEAS TRANSACTIONS on SYSTEMS and CONTROL ISSN: 1991-8763 197 Issue 6, Volume 6, June 2011. Scopus Indexed.

[42] R. H. Zaini, M. M. Othman1, I. Musirin, A. Mohamed, A. Hussain, "Determination of transmission reliability margin considering uncertainties of system operating condition and transmission line outage", European Transactions on Electrical Power, Volume 21, Issue 1, pp. 380–397.

[43] S. Busan; M.M. Othman; I. **Musirin**; A. Mohamed; A. Hussain, "Determination of transmission reliability margin considering….", European Transactions on Electrical Power, Volume 21, Issue 1, pp. 439–464.

Year: 2012

[44] **Z. Hamid, I. Musirin, M. M. Othman, M. N. A. Rahim,** Bus Priority Ranking via Stability Index Tracing and Evolutionary Programming, **Journal of Theoretical and Applied Information Technology,** 15 February 2012. Vol. 36 No.1. ISSN: **1992-8645**, E-ISSN: **1817-3195. (Scopus Indexed)**

[45] Z. Hamid**, I. Musirin**, M. N. A. Rahim, "Blended Crossover Continuous Ant Colony Optimization and Stability Index Tracing for Effective FACTS Devices Installation", International Review of Electrical Engineering - Papers- Part B, Feb. 2012. (ISI Web of Science Indexed)

[46] Shahril Irwan Sulaiman, Titik Khawa Abdul Rahman, Ismail Musirin, Sulaiman Shaari, Kamaruzaman Sopian, "An Intelligent Method for Sizing Optimization in Grid-Connected Photovoltaic System", Solar Energy, Elsevier. 86 (2012) 2067–2082.

[47] Z. Hamid**, I. Musirin**, M. M. Othman, M. N. A. Rahim "A New Technique for FACTS Devices Placement via Stability Index-Load Tracing", *Int. Journal of Electrical and Electronic Systems Research (IEESR)*,

[48] Z. Hamid, I. Musirin, M. N. A. Rahim, N. A. M. Kamari, "Optimization Assisted Load Tracing via Hybrid Ant Colony Algorithm for Deregulated Power System", WSEAS TRANSACTIONS on POWER SYSTEMS. Issue 3, Volume 7, July 2012, pp. 145-158.

[49] S.A. Jumaat, I. Musirin, M. M. Othman, H. Moklis, "**Comparison of FACTS Device Installation in Power Transmission System",** *International Review of Modelling and Simulations (I.R.E.M.O.S.), Vol. 5, No. 4, August 2012.*pp. 1679-1689. (Scopus Indexed)

[50] N. A. M. Kamari, I. Musirin, Z. A. Hamid, M. N. A. Rahim , "EP-Based Optimisation for Estimating Synchronising and Damping Torque Coefficients", Energy and Power 2012, 2(2): 17-23DOI: 10.5923/j.ep.20120202.03. pp 17-23.

[51] N. A. M. KAMARI, I. MUSIRIN, Z. A. HAMID, M. N. A. RAHIM, "Optimal Design of SVC-PI Controller for Damping Improvement Using New Computational Intelligence Approach", Journal of Theoretical and Applied Information Technology, 31 August 2012. Vol. 42 No.2. pp. 271-280.

[52] S.A. Jumaat, I. Musirin, M. M. Othman, H. Moklis, "Computational Intelligence Based Technique in Multiple FACTS Devices Installation for Power System Security", Journal of Theoretical and Applied Information Technology. 2012. Vol. 46 No.2, pp. 538-549.

[53] S.R.A., Rahim, I. Musirin, M.H.Hussain, M.M.Othman, "EMEFA approach for DG installation in distribution system", International Review on Modelling and Simulations 5 (6), pp. 2546-2553.

[54] Z. Hamid, I. Musirin, M. N. A. Rahim, and N. A. M. Kamari, "Application of electricity tracing theory and hybrid ant colony algorithm for ranking bus priority in power system", International Journal of Electrical Power and Energy Systems, vol. 43, no. 1, pp. 1427 - 1434, 2012. Elsevier ScienceDirect, [indexed by: ISI Thomson and Scopus].

Year: 2013
[55] M.H. Hussain, I. Musirin, S.R.A. Rahim, A.F. Abidin, "Computational Intelligence Based Technique in Optimal Overcurrent Relay Coordination: A Review", The International Journal of Engineering and Science (IJES), 2013, Volume 2, Issue 1, pp.01-09.

[56] N. A. Rahmat, I. Musirin, "Differential Evolution Immunized Ant Colony Optimization Technique in Solving Economic Load Dispatch Problem", International Journal of Engineering, 2013, Vol. 5, pp. 157-162.

[57] H. Hashim, I.Z. Abidin, I.Musirin, K. Siah Yap, Y.R.Omar, M.R.Zulkepali. "An Evolutionary Programming Approach to Optimize Synchronous Generator Input Power Swing Area-Based Transient Stability Indexes", Journal of Theoretical and Applied Information Technology 53 (3), pp. 381-391.

[58] Z. Hamid, I. Musirin, "Optimal fuzzy inference system incorporated with stability index tracing: an application for effective load shedding", Expert Systems with Applications, 2013. Elsevier ScienceDirect. Volume 41, Issue 4, Part 1, March 2014, Pages 1095–1103. [indexed by: ISI Thomson and Scopus].

[59] Z. Hamid, I. Musirin, M. M. Othman, "Utilizing Stability Index Tracing for Precise Load Buses Identification in Load Shedding Problem", International Journal of Engineering, 2013, Vol. 5, pp. 168-173.

[60] M.H. Hussain, S.R.A. Rahim, I. Musirin, "Optimal Overcurrent Relay Coordination: A Review", Procedia Engineering, Volume 53, 2013, pp. 332-336.

[61] N. A. Rahmat, I. Musirin, "Hybrid Differential Evolution-Ant Colony Optimization for Economic Load Dispatch Problem", Journal of Theoretical and Applied Information Technology 53 (3), pp. 680-690.

[62] Nur Ashida Salim MuhammadMurtadha Othman, Ismail Musirin, Mohd Salleh Serwan, "Critical System Cascading Collapse Assessment for Determining the Sensitive

Transmission Lines and Severity of Total Loading Conditions", International Journal of Mathematical Problems in Engineering. Hindawi. 2013. pp. 1 – 10.

[63]   N. A. Salim, M. M. Othman, I. Musirin, and M. S. Serwan, "Determination of Severe Loading Condition at Critical System Cascading Collapse Considering the Effect of Protection System Hidden Failure", Journal World Academy of Science, Engineering and Technology 77, 2013. pp. 349-352.

Year: 2014

[64]   Nur Ashida Salim, Mohd Salleh Serwan, Mahmud Fotuhi-Firuzabad, Amir Safdarian and Ismail Musirin, "Determination of Available Transfer Capability with Implication of Cascading Collapse Uncertainty", *Accepted for publication* in *IET Generation, Transmission & Distribution. 2014.*

[65]   N. A. Salim, M. M. Othman, I. Musirin, M. S. Serwan, "Determination of Sensitive Transmission Lines Due to the Effect of Protection System Hidden Failure in a Critical System Cascading Collapse", Journal World Academy of Science, Engineering and Technology. Vol: 77, S: 147. pp. 50 -55.

[66]   Zulkiffli Abdul Hamid, Ismail Musirin, Muhammad Nor Azam Rahim, Nor Azwan Mohamad Kamari, "Application of electricity tracing theory and hybrid ant colony algorithmfor ranking bus priority in power system", Electrical Power and Energy Research, Elsevier. Impact Factor = 3.432. Vol. 43. pp. 1427–1434.

[67]   Fathiah Zakaria, Dalina Johari, Ismail Musirin, **"**Artificial Intelligence Based Technique For The Detection Of Incipient Faults In Power Transformer Based on Dissolved Gas Analysis (DGA) Method**",**   *Accepted for publication in Journal of Theoretical and Applied Information Technology,* Scopus Index Journal. 2014.

[68]   Siti Salwani Samat, Ismail Musortin, Aida Sulinda, **"**Prediction Of Partial Discharge Inception Voltage In Single Void Using Artificial Neural Network**",**   *Accepted for publication in Journal of Theoretical and Applied Information Technology, 2014.* Scopus Index Journal.

[69]   Wardiah Mohd Dahalan, Hazlie, Mokhlis, Rohaya Ahmad, A. H. Abu, Bakar & Ismail Musirin, "Simultaneous Network Reconfiguration and DG Sizing Using Evolutionary Programming and Genetic Algorithm to Minimize Power Losses", *Arabian Journal for Science and Engineering* (2014) 39:6327–6338. ISI Indexed Journal.

[70]   Wardiah Mohd Dahalan, Hazlie, Mokhlis, Rohaya Ahmad, A. H. Abu, Bakar & Ismail Musirin, "Simultaneous Network Configuration and DG Using EP", International Transaction on Electrical Energy System, John Wiley. 2014.

[71]   M.H. Hussain, I. Musirin, A.F. Abidin, S.R.A. Rahim, "Modified Swarm Firefly Algorithm Method for Directional Overcurrent Relay Coordination Problem", *Accepted for publication in Journal of Theoretical and Applied Information Technology, 2014.* Scopus Index Journal.

[72]   Husna Abdul Rahman, Sulaiman Wadi Harun, Hamzah Arof, Ninik Irawati, Ismail Musirin, Fatimah Ibrahim, Harith Ahmad, "Classification of Reflected Signals from Cavitated Tooth Surfaces Using an Artificial Intelligence Technique Incorporating a Fiber Optic Displacement Sensor", Journal of Biomedical Optics. [2014, 19(5):057009]. ISI Indexed Journal.

Year: 2015 - 2019

[73]   Mohamad Ariff Nur Hakim Mohamad Zahir, Nur Ain binti Abd Manap, Harizan Che Mat Haris, Ismail Musirin, Mohamad Fadhil Mohd Kamal, "Optimization of Automatic Transformer Tap Changer Using Cascaded-Evolutionary Programming Technique", Advanced Mechanics and Materials, Applied Mechanics and Materials, Vol. 785, pp. 429-434, Aug. 2015.

[74] Nur Ashida Salim, Muhammad Murtadha Othman, Ismail Musirin, Mohd Salleh Serwan, "Comparison between the System Cascading Collapse Based Hidden Failure and Fault Chain Theory in the Determination of Sensitive Transmission Lines", Applied Mechanics and Materials, Vol. 785, pp. 440-444, Aug. 2015.

[75] Nor Zulaily Mohamad, Ahmad Farid Abidin, Ismail Musirin, "Adaptive Distance Protection to Prevent False Relay Tripping during Power Swing", Applied Mechanics and Materials, Vol. 785, pp. 358-362, Aug. 2015.

[76] Nurzahirah Mohd Zaid, Mohd Khairi Mokhtar, Ismail Musirin, Nur Azzammudin Rahmat, "Multi-Objective Optimization for Sizing of Distributed Generation Using Cuckoo Search Algorithm", Applied Mechanics and Materials, Vol. 785, pp. 34-37, Aug. 2015.

[77] Nur Izzati Abdul Aziz, Shahril Irwan Sulaiman, Sulaiman Shaari, Ismail Musirin, "An Iterative Algorithm for Sizing Stand-Alone Photovoltaic System", Applied Mechanics and Materials, Vol. 785, pp. 601-605, Aug. 2015.

[78] Muhamad Hatta Hussain, Ismail Musirin, Ahmad Farid Abidin, S.R.A. Rahim, "Modified Swarm Firefly Algorithm for Optimal Settings of Directional Overcurrent Relays", Applied Mechanics and Materials, Vol. 793, pp. 473-477, Sep. 2015.

[79] Nur Zahirah Mohd Ali, Ismail Musirin, H. Mohamad, "Fast Voltage Stability Index (FVSI) Based Technique for Congestion Management Assessment", Applied Mechanics and Materials, Vol. 793, pp. 49-53, Sep. 2015.

[80] Mohd Ainor Yahya, Muhammad Murtadha Othman, Muhd Azri Abdul Razak, Zilaila Zakaria, Ismail Musirin, Mat Nasir Kari, Mohd Fazli Osman, Mohd Zaini Abu Hassan, Siti Habsah Mohd Dzin, Baihaki Azrae, Wan Shazli Wan Ismail, Mohd Hisham Salleh, Shaharani Jafar, Mohammad Lutfi Othman, ""Ant Colony Optimization Technique in Optimal Capacitor Placement and Sizing Problem in Unbalanced Electrical Distribution System", Applied Mechanics and Materials, Vol. 785, pp. 78-82, Aug. 2015.

[81] S.R.A. Rahim, Ismail Musirin, Muhammad Murtadha Othman, Muhamad Hatta Hussain, "Analysis on Load Model for Cost Optimization Using Embedded Meta EP-Firefly Algorithm for DG Installation", Applied Mechanics and Materials, Vol. 793, pp. 478-482, Sep. 2015.

[82] Nur Azzammudin Rahmat, I. Musirin, Ahmad Farid Abidin, Siti Amely Jumaat, "Differential Evolution Immunized Ant Colony Optimization in Solving Fuzzy Economic Dispatch with Multiple Fuel Options", Applied Mechanics and Materials, Vol. 785, pp. 479-483, Aug. 2015.

[83] Siti Amely Jumaat, Ismail Musirin, Nur Azzamudin Rahmat, "Comparison of EPSO, PSO and EP Approaches in Transmission Loss Minimization in Power System Network", Applied Mechanics and Materials, Vol. 785, pp. 3-8, Aug. 2015.

[84] Fathiah Zakaria, Dalina Johari, Ismail Musirin, "Artificial Intelligence Based Technique for the Classification of Incipient Faults in Power Transformer", Applied Mechanics and Materials, Vol. 785, pp. 29-33, Aug. 2015.

[85] Nur Azzammudin Rahmat, Ismail Musirin, Ahmad Farid Abidin, "Solving Fuzzy Combined Economic Load–Emission Dispatch by Using Differential Evolution Immunized Ant Colony Optimization Technique", Applied Mechanics and Materials, Vol. 785, pp. 500-505, Aug. 2015.

[86] Muhammad Murtadha Othman, Nurulazmi Abd Rahman, Ismail Musirin, "Ranking Index in the Pareto Optimal Front Based Evolutionary Programming Technique for Best Selection of Several Optimal Multi-Objective Capacity Benefit Margins", Applied Mechanics and Materials, Vol. 785, pp. 506-510, Aug. 2015.

[87] Nur Ashida Salim, Muhammad Murtadha Othman, Ismail Musirin, Mohd Salleh Serwan, Stendley Busan, "Severe Total Loading Condition Attributed by a Significant Impact of

Dynamic Power System Cascading Collapse", Applied Mechanics and Materials, Vol. 785, pp. 445-449, Aug. 2015.

[88] S. R. A. Rahim, I. Musirin, M. M. Othman, M. H. Hussain, "Clustering Technique for DG Planning Considering Load Models ", Applied Mechanics and Materials Vol. 793 (2015) pp 457-461.

[89] Siti Amely Jumaat, Ismail Musirin , "Comparison of SVC and TCSC Installation in Transmission Line with Loss Minimization and Cost of Installation via Particle Swarm Optimization", Applied Mechanics and Materials Vol. 785 (2015) pp 495-499.

[90] Nor Rul Hasma Abdullah, Mahaletchumi A/P Morgan and Ismail Musirin, "Constrained Reactive Power Control (CRPC) based Multi-Objective Optimization under Multi-Contingencies (N-m)", Applied Mechanics and Materials Vol. 785 (2015) pp 414-418.

[91] Mohd Khairi Mokhtar, Nurzahirah Mohd Zaid, Ismail Musirin and Nur Azzammudin Rahmat, "Cuckoo Search Algorithm in Loss Minimization via Capacitor Placement in Distribution System", Applied Mechanics and Materials Vol. 785 (2015) pp 24-28.

[92] Nur Ashida Salima, Muhammad Murtadha Othman, Ismail Musirin, Mohd Salleh Serwan, "Improvisation on Standard Limit of the Critical Clearing Time Specified for The Protection Relays Using One Machine Infinite Bus Equivalent", Applied Mechanics and Materials Vol. 785 (2015) pp 343-347.

[93] Harizan Che Mat Haris, Ismail Musirin, Mohd Fadhil Mohd Kamal, "Maximum Loadability Identification using Self-Tuning Algorithm Considering Voltage Limit", Applied Mechanics and Materials Vol. 785 (2015) pp 393-397.

[94] Ahmad Syazwan Aznan, Ismail Musirin, Siti Aliyah Mohd Saleh, Nur Azzammudin Rahmat, "Optimization of Hybrid Renewable Energy System (HRES) using Modified Evolutionary Strategy for Cost Minimization", Applied Mechanics and Materials Vol. 785 (2015) pp 546-550.

[95] Nur Azzammudin Rahmat, Ismail Musirin, Ahmad Farid Abidin, Mohd Redzuan Ahmad, "Solving Emission Dispatch Problem with Multiple Fuel Option by Using Differential Evolution Immunized Ant Colony Optimization Technique", Applied Mechanics and Materials Vol. 793 (2015) pp 462-466.

[96] Muhd Azri Abdul Razak, Muhammad Murtadha Othman, Mohd Ainor Yahya, Zilaila Zakaria, Ismail Musirin, Mat Nasir Kari, Mohd Fazli Osman, Mohd Zaini Abu Hassan, Siti Habsah Mohd Dzin, Baihaki Azrae, Wan Shazli Wan Ismail, Mohd Hisham Salleh, Shaharani Jafar, "Two Stage Optimal Capacitors Placement and Sizing Using Differential Evolution Particle Swarm Optimization", Applied Mechanics and Materials Vol. 785 (2015) pp 58-62.

[97] Nur Fadhilah Abdullah, Nur Emileen Abd Rashid, Ismail Musirin, Zuhani Ismail Khan, "Vehicles Classification Based on Different Combination of Feature Extraction Algorithm with Neural Network (NN) Using Forward Scattering Radar (FSR)", Journal of Theoretical and Applied Information Technology, 31st July 2015. Vol.77. No.3, pp. 311-319.

[98] Sidhratul Hakim Mohd Kerta, Zulkiffli Abdul Hamid, Ismail Musirin, "Real Power Generation Tracing for Deregulated Power System using the Flower Pollination Algorithm Technique", Accepted for publication in Journal of Theoretical and Applied Information Technology. 2015.

[99] M.H. Hussain, I. Musirin, A.F. Abidin, and S.R.A. Rahim, "Multi-Objective Approach for Solving Directional Overcurrent Relay Problem Using Modified Firefly Algorithm", Int'l Journal of Computing, Communications & Instrumentation Engg. (IJCCIE) Vol. 3, Issue 1 (2016) ISSN 2349-1469 EISSN 2349-1477.

[100] M.H. Hussain, I. Musirin, A.F. Abidin, S.R.A. Rahim. "Application of Modified Firefly Algorithmfor Solving Coordination Problem of Directional Overcurrent Relay", Journal of Electrical Systems, Special Issues AMPE2015. 2016. pp. 120-127. ISI/Scopus incdexed.

[101] Nur Zahirah Mohd Ali, Ismail Musirin, Saiful Izwan Suliman, Ngah Ramzi Hamzah, Zuhaina Zakaria. "Effect of Multi-DG Installation to Loss Reduction in Distribution System", Journal of Electrical Systems, 12-1 (2016): 187-196. ISI/Scopus Indexed.

[102] S. R. A. Rahim, I. Musirin, M. M. Othman, M. H. Hussain, "Penetration Level Sensitivity Index (PLSI) for Distributed Energy Resources Planning Using EMEFA Technique", Journal of Electrical Systems, Special Issues AMPE2015. 2016. pp. 12-17. ISI/Scopus Indexed.

[103] Hasmaini Mohamad, Amalina Izzati Md Isa Hazlie, Mokhlis, Nofri Yenita Dahlan, Ismail Musirin, "Under-Frequency Load Shedding Technique Considering Event-Based for an Islanded Distribution Network", Journal of Electrical System (JES). Volume 12, Issue 3, (September 2016). pp. 574-582.

[104] Nur Azzammudin Rahmat, Ismail Musirin, Ahmad Farid Abidin, "Solving Multi-Pollutant Emission Dispatch Problem Using Computational Intelligence Technique", Journal of Electrical System (JES). Volume 12, Issue 2, (September 2016). pp. 249-257.

[105] Sidratul Hakim Mohd Kerta, Zulkiffli Abdul Hamid*, Ismail Musirin, "The Ant Colony-Pollinated Flower Algorithm: A New Approach On Reactive Power Load Tracing For Deregulated Power System", International Journal of Simulation, Systems, Science & Technology. Volume 17, Number 41, 2016.

[106] Nor Azwan Mohamed Kamari*, Ismail Musirin, Muhammad Murtadha Othman, "SVC-PID Based Angle Stability Enhancement Using IPSO", International Journal of Simulation, Systems, Science & Technology. Volume 17, Number 41, 2016.

[107] Mimi Nurzilah Hashim, Muhammad Zakyizzuddin Rosselan, Harizan Che Mat Haris*, Mohamad Fauzi Omar, Mohamad Nabil Hidayat, Ismail Musirin, "Development of Waste Heat as Alternative Energy", International Journal of Simulation, Systems, Science & Technology. Volume 17, Number 42, 2016.

[108] Norhasnelly Anuar*, Zuhaina Zakaria, Ismail Musirin, Nur Fadhilah Jamaludin, "Cluster Validity Analysis and Optimization of Fuzzification Parameter of Fuzzy C-Means for Determination of Typical Load Profiles", International Journal of Simulation, Systems, Science & Technology. Volume 17, Number 42, 2016.

[109] S. K. S. Abdullah, M. K. N. M. Sarmin, N. Saadun, M. T. Azmi, I. Z. Abidin, I. Musirin, "New Generator and Shunt Reactive Power Control Based Secondary Voltage Control Approach", International Review of Automatic Control (I.RE.A.CO.), Vol. 9, N. 4, July 2016. pp. 192-206.

[110] Mohd Khairuzzaman Mohd Zamani, Ismail Musirin, Saiful Izwan Suliman, Muhammad Murtadha Othman, Mohd Fadhil Mohd Kamal, "Multi-Area Economic Dispatch Performance Using Swarm Intelligence Technique Considering Voltage Stability", International Journal on Advanced Science, Engineering and Information Technology (IJASEIT). Vol. 7 (2017) No. 1. DOI:10.18517/ijaseit.7.1.966.

[111] N.A. Salim, M.M. Othman, I. Musirin, M.S. Serwan, S. Busan, "Risk assessment of dynamic system cascading collapse for determining the sensitive transmission lines and severity of total loading conditions", Reliability Engineering and System Safety, Vol. 157, pp. 113-128.

[112] M. H. Mansor, I. Musirin, M. M. Othman, "Log-Normal Based Mutation Evolutionary Programming Technique for Solving Economic Dispatch Problem Considering Loss Minimization", Accepted International Journal of Advanced and Applied Sciences (IJAAS), ISI WOS indexed.

[113] Siti Amely Jumaat, Ismail Musirin, "σ-Multi-Objective Evolutionary Particle Swarm Optimization Approach for Transmission Loss and Cost Minimization with SVC Installation", Waiting for acceptance by IJAER, Scopus indexed journal. Already accepted by ICEMIE2017, Bandung.

[114] Kerta, S., Hamid, Z. A. & Musirin, I, .An ant colony-pollinated flower algorithm: A new approach on reactive power load tracing for deregulated power system", 2017 In : International Journal of Simulation: Systems, Science and Technology. 17, 41, p. 3.1-3.8

[115] Hamid, Z. A., Musirin, I. & Kerta, "An approach on non-discriminatory losses charge allocation for deregulated power market using meta-heuristic-optimization-based-electricity-tracing (MOET)", S. H. M. 2017 In : International Review of Electrical Engineering. 12, 2, p. 121-134 14 p.

[116] Kerta, S. H. M., Hamid, Z. A. & Musirin, I."A new approach to monitor line overloading in deregulated power system using electricity tracing", Jun 1 2017 In : Journal of Electrical Systems. 13, 2, p. 295-306 12 p.

[117] Mansor, M. H., Musirin, I., Othman, M. M., Shaaya, S. A. & Syed Mustaffa, S. A. Jun, "Application of immune log-normal evolutionary programming in distributed generation installation", 1 2017 In : Indonesian Journal of Electrical Engineering and Computer Science. 6, 3, p. 730-736 7 p.

[118] Jumaat, S. A., Musirin, I. & Baharun, M. M.. "A voltage improvement of transmission system using static var compensator via matlab/simulink", May 1 2017 In : Indonesian Journal of Electrical Engineering and Computer Science. 6, 2, p. 330-337 8 p.

[119] Anuar, N., Zakaria, Z., Musirin, I. & Jamaludin, "Cluster validity analysis and optimization of fuzzification parameter of fuzzy cmeans for determination of typical load profiles", N. F. 2017 In : International Journal of Simulation: Systems, Science and Technology. 17, 41, p. 43.1-43.5

[120] Hashim, M. N., Rosselan, M. Z., Haris, H. C. M., Omar, M. F., Hidayat, M. N. & Musirin, I,"Development of waste heat as alternative energy", 2017 In : International Journal of Simulation: Systems, Science and Technology. 17, 41, p. 34.1-34.6

[121] Abdullah, N. F., Rashid, N. E. A., Othman, K. A., Khan, Z. I. & Musirin, I."Ground vehicles classification using multi perspective features in FSR micro-sensor network", 2017 In : Journal of Telecommunication, Electronic and Computer Engineering. 9, 1-5, p. 49-52 4 p.

[122] Murtadha Othman, M., Mustapha, W. M. F. B. W., Kamaruzaman, A. A. M., Arriffin, A. M., Musirin, I., Salim, N. A., Hamid, Z. A. & Dahlan, N. Y., "Harmonic load mitigation using the optimal double tuned passive filter techniqu", May 1 2017 In : Indonesian Journal of Electrical Engineering and Computer Science. 6, 2, p. 338-348 11 p.

[123] Shaaya, S. A., Musirin, I., Sulaiman, S. I. & Mansor, M. H., "Immunized-evolutionary algorithm based technique for loss control in transmission system with multi-load increment", Jun 1 2017 In : Indonesian Journal of Electrical Engineering and Computer Science. 6, 3, p. 737-748 12 p.

[124] Mohamed Kamari, N. A. M., Musirin, I. & Othman, M. M."IPSO based SVC-PID for angle stability enhancement:, 2017 In : International Journal of Simulation: Systems, Science and Technology. 17, 41, p. 20.1-20.7

[125] Isa, A. I. M., Mohamad, H., Naidu, K., Dahlan, N. Y. & Musirin, I., "Method of determining load priority using fuzzy logic for adaptive under frequency load shedding technique", 2017 In : Pertanika Journal of Science and Technology.25, S, p. 239-248 10 p.

[126] Zamani, M. K. M., Musirin, I., Suliman, S. I., Othman, M. M. & Kamal, M. F. M. "Multi-area economic dispatch performance using swarm intelligence technique considering voltage stability", 2017 In : International Journal on Advanced Science, Engineering and Information Technology. 7, 1, p. 1-7 7.

[127] Rahim, S. R. A., Musirin, I., Othman, M. M. & Hussain, M. H., "Multiple DG planning considering distribution loss and penetration level using EMEFA-ANN method", Jul 1 2017 In : Indonesian Journal of Electrical Engineering and Computer Science. 7, 1, p. 1-8 8 p.

[128] Abdul Aziz, N. I., Sulaiman, S. I., Shaari, S., Musirin, I. & Sopian, K. "Optimal sizing of stand-alone photovoltaic system by minimizing the loss of power supply probability", Jul 1 2017 In : Solar Energy. 150, p. 220-228 9 p.

[129] Musirin, I. "Power engineering and optimization", 2017 In : International Journal of Simulation: Systems, Science and Technology. 17, 41, *Research*

[130] Salim, N. A., Othman, M. M., Musirin, I., Serwan, M. S. & Busan, S., "Risk assessment of dynamic system cascading collapse for determining the sensitive transmission lines and severity of total loading conditions", Jan 1 2017 In : Reliability Engineering and System Safety. 157, p. 113-128 16 p.

[131] Othman, M. M., Salim, N. A. & Musirin, I., "Sustainability from the occurrence of critical dynamic power system blackout determined by using the stochastic event tree technique", 2017 In : Sustainability (Switzerland). 9, 6, 941

[132] Zamani, M. K. M., Musirin, I. & Suliman, S. I.,"Symbiotic organisms search technique for SVC installation in voltage control", May 1 2017 In : Indonesian Journal of Electrical Engineering and Computer Science. 6, 2, p. 318-329 12

[133] Suliman, S. I., Musirin, I., Dzulkifli, R. & Rifin, R, "The implementation of constructive heuristic algorithm for frequency assignment task in wireless communications", 2017 In : Advanced Science Letters. 23, 6, p. 5318-5323 6 p.

[134] Hamid, Z.A., Musirin, I., Nan, M.A.A., Othman, Z., "Optimal voltage stability improvement under contingencies using flower pollination algorithm and thyristor controlled series capacitor", Indonesian Journal of Electrical Engineering and Computer Science, Vol. 12(2), 2018. pp. 497-504.

[135] Othman, Z., Sulaiman, S.I., Musirin, I., Omar, A.M., Shaari, S., "Hybrid stand-alone photovoltaic systems sizing optimization based on load profile", Bulletin of Electrical Engineering and Informatics. Vol. 7(2), 2018. pp. 153-160.

[136] Othman, M.M., Salim, M.A.I., Musirin, I., Salim, N.A., Othman, M.L., "Dynamic economic dispatch assessment using particle swarm optimization technique", Bulletin of Electrical Engineering and Informatics. Vol. 7(3), 2018. pp. 458-464.

[137] Salim, N.A., Othman, M.M., Jasni, J., Musirin, I., Serwan, M.S., "Modeling and evaluating the customer interruption cost due to dynamic electrical power and energy failure", International Journal of Electrical Power and Energy Systems Vol. 103, 2018. pp. 603-610.

[138] Kamari, N.A.M., Musirin, I., Hamid, Z.A., Ibrahim, A.A., "Optimal tuning of SVC-PI controller using whale optimization algorithm for angle stability improvement", Indonesian Journal of Electrical Engineering and Computer Science. Vol. 12(2), pp. 612-619.

[139] Kouadri, R., Slimani, L., Bouktir, T., Musirin, I., "Optimal power flow solution for wind integrated power in presence of VSC-HVDC using ant lion optimization", Indonesian Journal of Electrical Engineering and Computer Science. Vol. 12(2), 2018. pp. 625-633.

[140] Suyono, H., Santoso, H., Hasanah, R.N., Wibawa, U., Musirin, I., "Prediction of solar radiation intensity using extreme learning machine", Indonesian Journal of Electrical Engineering and Computer Science. Vol. 12(2), 2018. pp. 691-698.

[141] Kamari, N.A.M., Musirin, I., Hamid, Z.A., Zaman, M.H.M., "Oscillatory stability prediction using pso based synchronizing and damping torque coefficients", Bulletin of Electrical Engineering and Informatics. Vol. 7(3), 2018. pp. 331-344.

[142] Morshidi, M.N., Musirin, I., Rahim, S.R.A., Adzman, M.R., Hussain, M.H., "Whale optimization algorithm based technique for distributed generation installation in distribution system", Bulletin of Electrical Engineering and Informatics. Vol. 7(3), 2018. pp. 442-449.

[143] Ali, N.Z.M., Musirin, I., Mohamad, H., Suliman, S.I., Suyono, H., "IMLANNs for congestion management in power system", Indonesian Journal of Electrical Engineering and Computer Science. Vol. 11(2), 2018. pp. 630-636.

[144] Mansor, M.H., Raja Kechek, R.M.S., Musirin, I., (...), Shaaya, S.A., Aziz, N.F.A., "A hybrid optimization technique for solving economic dispatch problem", Journal of Physics: Conference Series. Vol. 1049(1), 2018. 012035.

[145] Mustaffa, S.A.S., Musirin, I., Othman, M.M., Zamani, M.K.M., Kalam, A., "Chaotic local search based algorithm for optimal DGPV allocation", Indonesian Journal of Electrical Engineering and Computer Science. Vol. 11(1), 2018. pp. 113-120.

[146] Zulkifli Othman, Shahril Irwan Sulaiman, Ismail Musirin, Sulaiman Shaari, Ahmad Maliki Omar, "Dolphin Echolocation - Based sizing algorithm for stand-alone photovoltaic system", Proceedings of 4th IEEE International Conference on Applied System Innovation 2018, ICASI 2018. pp. 1284-1287.

[147] Amroune, M., Bouktir, T., Musirin, I., Power System Voltage Stability Assessment Using a Hybrid Approach Combining Dragonfly Optimization Algorithm and Support Vector Regression, Arabian Journal for Science and Engineering. Vol. 43(6), 2018. pp. 3023-3036

[148] Ghani, N.A.M., Kamaruddin, S.B.A., Musirin, I., Hashim, H., Results of fitted neural network models on Malaysian aggregate dataset, Bulletin of Electrical Engineering and Informatics. Vol. 7(2), 2018. pp. 272-278

[149] Bakar, A.I.A., Zamani, M.K.M., Musirin, I., Ghani, N.A.M., Load management for voltage control study using parallel immunized-computational intelligence technique, Bulletin of Electrical Engineering and Informatics. Vol. 7(2), 2018. pp. 176-182

[150] Suyono, H., Hasanah, R.N., Setyawan, R.A., (...), Wijoyo, A., Musirin, I., Comparison of solar radiation intensity forecasting using ANFIS and multiple linear regression methods, Bulletin of Electrical Engineering and Informatics. Vol. 7(2), 2018. pp. 191-198

[151] Abdul Rahim, S.R., Musirin, I., Othman, M.M., Hussain, M.H., Effect of Load Model Using Ranking Identification Technique for Multi Type DG Incorporating Embedded Meta EP-Firefly Algorithm. 2018. MATEC Web of Conferences.150,01014

[152] Mohamad Zamani, M.K., Musirin, I., Hassan, H., (...), Ghani, N.A.M., Suliman, S.I., Active and reactive power scheduling optimization using firefly algorithm to improve voltage stability under load demand variation, Indonesian Journal of Electrical Engineering and Computer Science. Vol. 9(2), 2018. pp. 365-372

[153] Mansor, M.H., Othman, M.M., Musirin, I., Saleh, S.A.M., Solving non-convex economic dispatch problem using computational intelligence technique, Proceedings of Computing Conference 2017. 2018-January, pp. 168-172

[154] Othman, M.M., Musirin, I., Rosli, A.M.M., Othman, M.L., Reliability-based Phasor Measurement Unit with outage of transmission lines, International Journal of Engineering and Technology (UAE). Vol. 7(3), 2018. pp. 163-167

[155] Zamani, M.K.M., Musirin, I., Suliman, S.I., Mustaffa, S.A.S., Chaotic Immune Symbiotic Organisms Search algorithm for solving optimisation problem, International Journal of Engineering and Technology (UAE). Vol. 7(3), 2018. pp. 73-79

[156] Ghani, N.A.M., Kamaruddin, S.B.A., Musirin, I., Hashim, H., Fitting conventional neural network time series models on sand price indices dataset, International Journal of Engineering and Technology (UAE). Vol. 7(3), 2018. pp. 11-15

[157] Mustaffa, S.A.S., Musirin, I., Othman, M.M., Shaaya, S.A., Mohamad Zamani, M.K., Multi-objective approach for optimal DGPV location and sizing, International Journal of Engineering and Technology (UAE). Vol. 7(3), 2018. pp. 68-72

[158] Razali, N.S., Mansor, M.H., Musirin, I., Othman, M.M., Akoury, M., Embedded immune-evolutionary programming for Economic Dispatch of generators with prohibited operating zones, International Journal of Engineering and Technology (UAE). Vol. 7(3), 2018. pp. 183-186

[159] Nasru, M.H., Musirin, I., Zamani, M.K.M., (...), Hussain, M.H., Suyono, H., Loss minimization in optimal reactive power planning (ORPP) based on Whale Optimization

Algorithm, International Journal of Engineering and Technology (UAE). Vol. 7(3), 2018. pp. 192-196

[160] Mohamad Zamani, M.K., Musirin, I., Omar, M.S., (...), Ghani, N.A.M., Kamari, N.A.M., Gravitational search algorithm based technique for voltage stability improvement, Indonesian Journal of Electrical Engineering and Computer Science. Vol. 9(1), 2018. pp. 123-130

[161] Ruslan, N.F., Musirin, I., Zamani, M.K.M., (...), Baharuddin, Z.A., Ghani, N.A.M., Power tracing monitoring incorporating optimal reactive power dispatch, International Journal of Engineering and Technology (UAE). Vol. 7(3), 2018. pp. 1-5.

[162] Ameerul A. J. Jeman, Naeem M. S. Hannoon, Nabil Hidayat, Mohamed M. H. Adam, Ismail Musirin, Vijayakumar V. "Fault analysis for renewable energy power system in micro-grid distributed generation", Indonesian Journal of Electrical Engineering and Computer Science (IJEECS). Vol. 13, No. 3, March 2019, pp. 1117~1123.

[163] Nor Azura Md Ghani*, Saadi Bin Ahmad Kamaruddin, Ismail Musirin, Hishamuddin Hashim, "Conventional Neural Network Time Series Models on Roof Materials Costs Indices Data", International Journal of Engineering & Technology, 8 (1.7) (2019) 41-48.

[164] Hafizul Izwan Hashim, Ismail Musirin, Rahmatul Hidayah Salimin*, Zulkiffli Othman, Hadi Suyono, Naeem M S Hannoon, "Improved Swarm Evolutionary-Programming Technique for Voltage Control in Power System". International Journal of Engineering & Technology, 8 (1.7) (2019) 314-319.

[165] Zulkiffli Abdul Hamid, Ismail Musirin, Nor Rafidah Mohd Rapheal, Muhammad Murtadha Othman, Norziana Aminudin, "Voltage Stability Improvement in Power System under Different Loadings using Fuzzy Logic Technique". International Journal of Engineering & Technology, 8 (1.7) (2019) 82-88.

[166] H. D. Shahrulhisham, M. H. Mansor, I. Musirin, M. Akoury, N. Roslan1, S. A. Shaaya, S. A. Syed Mustaffa, "Application of Hybrid Optimization Technique for Static Var Compensator Installation". International Journal of Engineering & Technology, 8 (1.7) (2019) 238-245.

[167] Amroune, M., Bouktir, T., Musirin, I., "Power system voltage instability risk mitigation via emergency demand response-based whale optimization algorithm", Protection and Control of Modern Power Systems, 2019, 4(1),25.

[168] Mansor, M.A., Othman, M.M., Musirin, I., Noor, S.Z.M., "Dynamic voltage restorer (DVR) in a complex voltage disturbance compensation", International Journal of Power Electronics and Drive Systems, 2019, 10(4), pp. 2222-2230.

[169] Syed Mustaffa, S.A., Musirin, I., Mohamad Zamani, M.K., Othman, M.M., "Pareto optimal approach in Multi-Objective Chaotic Mutation Immune Evolutionary Programming (MOCMIEP) for optimal Distributed Generation Photovoltaic (DGPV)", Ain Shams Engineering Journal, 2019, 10(4), pp. 745-754

[170] Hasan, K., Othman, M.M., Rahman, N.F.A., Hannan, M.A., Musirin, I., "Significant implication of unified power quality conditioner in power quality problems mitigation", International Journal of Power Electronics and Drive Systems, 2019, 10(4), pp. 2231-2237.

[171] Masdi, H., Hasanah, R.N., Suyono, H., Musirin, I.B., Taufik, "D-STATCON model for voltage sag mitigation", International Journal of Power Electronics and Drive Systems, 2019, 10(4), pp. 2214-2221.

[172] Othman, M.M., Fazil, M.F.A.M., Harun, M.H.H., Musirin, I., Sulaiman, S.I., "Performance comparison of artificial intelligence techniques in short term current forecasting for photovoltaic system", International Journal of Power Electronics and Drive Systems, 2019, 10(4), pp. 2148-2156.

[173] Zulkefli, M.F.M., Musirin, I., Jelani, S., Mansor, M.H., Honnoon, N.M.S., "Embedded adaptive mutation evolutionary programming for distributed generation management",

Indonesian Journal of Electrical Engineering and Computer Science, 2019, 16(1), pp. 364-370.

[174] Shaaya, S.A., Musirin, I., Sulaiman, S.I., Mustaffa, S.A.S., Kamil, K., "Effect of optimal multi-DG siting and sizing in transmission system using hybrid optimization technique for loss control", International Journal of Engineering and Advanced Technology, 2019, 9(1), pp. 2526-2533.

[175] Ishak, M.S.B., Salimin, R.H., Musirin, I., Hamid, Z.A., "Development of PV array configuration under different partial shading condition", International Journal of Power Electronics and Drive Systems, 2019, 10(3), pp. 1263-1269.

[176] Othman, M.M., Jamaluddin, M.A.N.M., Fauzi, F., Musirin, I., Othman, M.L., "Improved reliability assessment of backup battery storage integrated with power supply system in a building", International Journal of Power Electronics and Drive Systems, 2019, 10(3), pp. 1538-1546.

[177] Othman, M.M., Rakami, N.M.L.F.N., Hamid, Z.A., Musirin, I., Othman, M.L., "Energy efficiency enhancement using dynamic voltage restorer (DVR)", International Journal of Power Electronics and Drive Systems, 2019, 10(3), pp. 1308-1316.

[178] Abas, N.A.S., Musirin, I., Jelani, S., Honnoon, N.M.S., Othman, M.M., "Integrated monte carlo-evolutionary programming technique for distributed generation studies in distribution system", Bulletin of Electrical Engineering and Informatics, 2019, 8(3), pp. 978-984.

[179] Othman, M.M., Ramlee, M.H.I., Harun, M.H.H., Musirin, I., "Short-Term Photovoltaic Power Forecasting Using Artificial Neural Network Considering Multiple Time Lags", 2019 International Conference on Engineering, Science, and Industrial Applications, ICESI 2019, 2019,

[180] Jeman, A.A.J., Hannoon, N.M.S., Hidayat, N., Musirin, I., Vijayakumar, V., "Stability check of doubly fed induction generator (DFIG) micro grid power system", Bulletin of Electrical Engineering and Informatics, 2019, 8(2), pp. 367-374.

[181] Jeman, A.A.J., Hannoon, N.M.S., Hidayat, N., Musirin, I., Vijayakumar, V., "Experimental study on transient response of fuel cell", Bulletin of Electrical Engineering and Informatics, 2019, 8(2), pp. 375-381.

[182] Mohd Ali, N.Z., Bin Musirin, I., Mohamad, H., "Effect of SVC installation on loss and voltage in power system congestion management", Indonesian Journal of Electrical Engineering and Computer Science, 2019, 14(1), pp. 428-435.

[183] Karupiah, S., Hussain, M.H., Musirin, I., Rahim, S.R.A.," Prediction of overcurrent relay miscoordination time using urtificial neural network", Indonesian Journal of Electrical Engineering and Computer Science, 2019, 14(1), pp. 319-326.

[184] Mohd Nasir, S.C., Mansor, M.H., Musirin, I., Kamil, K., Abdullah, M.N., "Multistage artificial immune system for static VAR compensator planning", Indonesian Journal of Electrical Engineering and Computer Science, 2019, 14(1), pp. 346-352.

[185] Shaaya, S.A., Musirin, I., Sulaiman, S.I., Mansor, M.H., Syed Mustaffa, S.A., "Performance comparison of distributed generation installation arrangement in transmission system for loss control", Bulletin of Electrical Engineering and Informatics, 2019, 8(1), pp. 39-45.

[186] Jeman, A.A.J., Hannoon, N.M.S., Hidayat, N., Musirin, I., Vijayakumar, V., "Small signal fault analysis for renewable energy (wind) power system distributed generation by using MATLAB software (simulink)", Indonesian Journal of Electrical Engineering and Computer Science, 2019, 13(3), pp. 1337-1344.

[187] Jeman, A.A.J., Hannoon, N.M.S., Hidayat, N., Musirin, I., Vijayakumar, V., "Active and reactive power management of grid connected photovoltaic system", Indonesian Journal of Electrical Engineering and Computer Science, 2019, 13(3), pp. 1324-1331.

[188] Jeman, A.A.J., Hannoon, N.M.S., Hidayat, N., Musirin, I., Vijayakumar, V., "Fault analysis for renewable energy power system in micro-grid distributed generation", Indonesian Journal of Electrical Engineering and Computer Science, 2019, 13(3), pp. 1117-1123.

[189] Shahbudin, I.S., Musirin, I., Suliman, S.I., Suyono, H., Ghani, N.A.M., "FACTS device installation in transmission system using whale optimization algorithm", Bulletin of Electrical Engineering and Informatics, 2019, 8 "(1), pp. 30-38.

[190] Sulaiman, M.H., Mustaffa, Z., Saari, M.M., Musirin, I., Daud, M.R., "Barnacles mating optimizer: An evolutionary algorithm for solving optimization", Proceedings - 2018 IEEE International Conference on Automatic Control and Intelligent Systems, I2CACIS 2018, 2019, pp. 99-104.

[191] Kamari, N.A.M., Rahmat, N.A., Musirin, I., "Optimal power scheduling strategy in power systems using swarm optimization technique", International Journal of Advanced Trends in Computer Science and Engineering, 2019, 8(1.6 Special Issue),37, pp. 246-251.

[192] Mohamad, N.Z., Abidin, A.F., Musirin, I., "Detection of fault during power swing in test system interconnected with DG", International Journal of Advanced Trends in Computer Science and Engineering, 2019, 16(2), pp. 577-585.

[193] Mohd Ali, N.Z., Musirin, I., Mohamad, H., "Clonal evolutionary particle swarm optimization for congestion management and compensation scheme in power system", International Journal of Advanced Trends in Computer Science and Engineering, 2019, 16(2), pp. 591-598.

[194] Zamani, M.K.M., Musirin, I., Suliman, S.I., Othman, M.M.," Chaotic immune symbiotic organisms search for SVC installation in voltage security control", International Journal of Advanced Trends in Computer Science and Engineering, 2019, 16(2), pp. 623-630.

[195] Kamari, N.A.M., Musirin, I., Zamani, M.K.M., Halim, S.A., "Oscillation stability enhancement using multi-objective swarm based technique for SMIB system", International Journal of Advanced Trends in Computer Science and Engineering, 2019, 16(2), pp. 631-639.

[196] Kamaruddin, S.B.A., Ghani, N.A.M., Rahim, H.A., Musirin, I., "Killer whale-backpropagation (KW-BP) algorithm for accuracy improvement of neural network forecasting models on energy-efficient data", IAES International Journal of Artificial Intelligence, 2019, 8(3), pp. 270-277.

[197] Zamani, M.K.M., Musirin, I., Mustaffa, S.A.S., Suliman, S.I., "Optimal SVC allocation via symbiotic organisms search for voltage security improvement", Telkomnika (Telecommunication Computing Electronics and Control), 2019, 17(3), pp. 1267-1274.

[198] Mohd Din, N.A., Salimin, R.H., Musirin, I., Honnoon, N.M.S., Aminuddin, N., "Solving economic load dispatch for power generation using genetic algorithm techniques", International Journal of Advanced Trends in Computer Science and Engineering", 2019, 8(1.3 S1),61, pp. 337-344.

[199] Hamid, Z.B.A., Jipinus, S., Musirin, I., Othman, M.M., Salimin, R.H., "Optimal sizing of distributed generation using firefly algorithm and loss sensitivity for voltage stability improvement", Indonesian Journal of Electrical Engineering and Computer Science, 2019, 17(2), pp. 720-727.

[200] Shaaya, S.A., Musirin, I., Sulaiman, S.I., Mansor, M.H., Mustaffa, S.A.S., "Effect of optimal multi-DG siting and sizing in transmission system using hybrid optimization technique for voltage control", Indonesian Journal of Electrical Engineering and Computer Science, 2019, 17(2), pp. 646-653.

[201] Suhaimi, H., Suliman, S.I., Musirin, I., Harun, A.F., Mohamad, R., "Network intrusion detection system by using genetic algorithm", Indonesian Journal of Electrical Engineering and Computer Science, 2019, 16(3), pp. 1593-1599.

[202] Razali, N.S., Roslan, N., Mansor, M.H., Shaaya, S.A., Jelani, S., "Optimal reactive power control using compensating capacitor based on artificial immune system", Indonesian Journal of Electrical Engineering and Computer Science, 2019, 8(1.3 S1),67, pp. 381-386.

[203] Majid, W.N.A.W.A., Johari, D., Musirin, I., Othman, Z., Baharudin, Z.A., "Comparative study between structure bonding method and conventional method for lightning protection system", International Journal of Advanced Trends in Computer Science and Engineering, 2019, 8(1.3 S1),63, pp. 352-355.

[204] Mansor, N.N., Shaaya, S.A., Musirin, I., Mohamed, Z., Zamani, M.K.M., "Embedded flower pollination evolutionary programming based technique for voltage stability enhancement with distributed generation installation", International Journal of Advanced Trends in Computer Science and Engineering, 2019, 8(1.3 S1),68, pp. 387-393.

[205] Shukor, S.F.A., Musirin, I., Hamid, Z.A., Zellagui, M., Suyono, H., "Intelligent based technique for under voltage load shedding in power transmission systems", Indonesian Journal of Electrical Engineering and Computer Science, 2019, 17(1), pp. 110-117.

[206] Jeman, A.A.J., Hannoon, N.M.S., Hidayat, N., Musirin, I., Vijayakumar, V., "Simulation on microgrid connected PV system under balance and unbalance fault", Indonesian Journal of Electrical Engineering and Computer Science, 2019, 13(3), pp. 1332-1336.

[207] Ahmad, J., Musirin, I., Zamani, M.K.M., Shaaya, S.A., Suyono, H., "Evolutionary programming based technique for plug-in-hybrid electric vehicle charging system", Indonesian Journal of Electrical Engineering and Computer Science, 2019, 8(1.3 S1),73, pp. 425-430.

[208] Suhaimi, H., Suliman, S.I., Musirin, I., Kassim, M., Shahbudin, S., "Network intrusion detection system using immune-genetic algorithm (IGA)", Indonesian Journal of Electrical Engineering and Computer Science, 2019, 17(2), pp. 1060-1065.

[209] Salimin, R.H., Musirin, I., Hamid, Z.A., Suyono, H., Hasanah, R.," Multi cases optimal reactive power dispatch using evolutionary programming", Indonesian Journal of Electrical Engineering and Computer Science, 2019, 17(2), pp. 662-670.

[210] Suyono, H., Hasanah, R.N., Mudjirahardjo, P., Musirin, I., Awalin, L.J., "Enhancement of the power system distribution reliability using ant colony optimization and simulated annealing methods", Indonesian Journal of Electrical Engineering and Computer Science, 2019, 17(2), pp. 877-885.

[211] Lokman, M.H., Musirin, I., Suliman, S.I., Mustafa, S.A.S., Zellagui, M., "Multi-verse optimization based evolutionary programming technique for power scheduling in loss minimization scheme", IAES International Journal of Artificial Intelligence, 2019, 8(3), pp. 292-298.

[212] Adnan, N.A., Mansor, M.H., Roslan, N., Jelani, S., Zuhdi, A.W.M., "Multi-objective evolutionary programming for solving economic dispatch problem", International Journal of Advanced Trends in Computer Science and Engineering, 2019, 8(1.6 Special Issue),44, pp. 296-302.

[213] Farid, N.M.M., Musirin, I., Hannon, N.H.S., Zamani, M.K.M., Aminuddin, N., "Evolutionary symbiotic organisms search technique in power scheduling for loss control in power transmission system", International Journal of Advanced Trends in Computer Science and Engineering, 2019, 8(1.3 S1),74, pp. 431-437.

INTERNATIONAL CONFERENCES

[1]   **Ismail Musirin**, Mustafar Kamal Hamzah, "Development of High Voltage Solid Pulse Generator Incorporated with Cockcroft-Walton Stack", *National Power Engineering Conference, Universiti Malaya`94, Mei 1994.*

[2]   **Ismail Musirin,** "The Use of Solid State Devices in Pulsed Generation System", *Kongres Sains & Teknologi Malaysia`94*, 15 – 18 August 1994.

[3]   **Ismail Musirin,** "Generation of High Voltage Using Solid State Inverter Technique", International Power Engineering Conference (IPEC`95)   27 Feb – 1 Mac 1995.

[4]   **Ismail Musirin** The Use of "Resoanace-Cockcroft Technique in High DC Generation", *International Conference of Advanced Strategic Technologies (ICAST`95)   12 – 15, Jun 1995.*

[5]   **Ismail Musirin,** "Possibility of Generating High DC Voltage Using Double Cockcroft-Walton Technique", *The 14th Conference of Asean Federation of Engineering Organisations CAFEO`96*, 25 - 27 Nov 1996.

[6]   **Ismail Musirin,** Wahidah Mansor dan Kartini Salam, "Perlaksanaan Pendaftaran Bagi Sesi Dis 98 – April 99 : Satu Penilaian Semula", *Bengkel Ko-Korikulum dan Pendaftaran Mata Pelajaran FKE*, 3 – 5 Disember 1998.

[7]   **Ismail Musirin, "**Development of Ultrasonic Receiver for Short Distance Detection", *International Wireless and Telecommunications Symposium and Exhibition IWTS*, 1998 1 – 15, Mei 1998.

[8]   **Ismail Musirin**, "High DC Voltage Generation Technique for Laser System", *1999 International Wireless and Telecommunications Symposium and Exhibition IWTS 1999 -* UiTM, Mei 1999.

[9]   **Ismail Musirin** "Generation of High DC Voltage Through Forward Mode Switching Regulator Technique for Laser System", *World Renewable Energy Congress`99 –* The Palace of Golden Horses – Kementerian Sains Teknologi dan Alam Sekitar, Jun 1999.

[10]   **Ismail Musirin** , "The Use of Solid State Tesla Coil in High AC Generation" , *World Renewable Energy Congress`99 –* The Palace of Golden Horses- Kementerian Sains Teknologi dan Alam Sekitar, Jun 1999.

[11]   **I. Musirin** and T. K. Abdul Rahman, "On-Line Voltage Stability Index for Voltage Collapse Prediction. in Power System," *Proceeding of Brunei International Conference on Engineering and Technology 2001 (BICET2001),* Brunei, 2001, pp. 451- 462.

[12]   **I. Musirin** and T. K. A. Rahman, "Computer Application for Voltage Stability Analysis in Power System", in *Proceedings International Conference in Information Technology and Multimedia 2001 (ICI☐ U2001) –* Malaysia, August 2001, pp. 118 – 123.

[13]   **I. Musirin** and T. K. A. Rahman, "Computer Simulation for Contingency Analysis in Power System", in *Proceedings International Conference in Information Technology and Multimedia 2001 (ICI☐ U2001) –* Malaysia, August 2001, pp. 118 – 123.

[14]   **I. Musirin** and T. K. A. Rahman, "Simulation Technique for Voltage Collapse Prediction and Contingency Ranking in Power System", in *Proceedings IEEE International Student Conference of Research and Development 2002 (SCOReD2002)*, July 2002, pp. 188 – 191.

[15]   **I. Musirin** and T. K. A. Rahman, "Novel Fast Voltage Stability Index (FVSI) for Voltage Stability Analysis in Power Transmission System", in *Proceedings IEEE International Student Conference of Research and Development 2002 (SCOReD2002)*, July 2002, pp. 265 – 268.

[16]   **I. Musirin** and T. K. A. Rahman, "A Novel Fast Voltage Stability Index (*FVSI*) for Voltage Collapse Prediction in Power System", in *Proceedings 2nd World Engineering Congress (WEC2002)*, Sarawak, *Malaysia*, July 2002, pp. 79-84.

[17] **I. Musirin** and T. K. A. Rahman, "On-Line Voltage Stability Based Contingency Ranking Using Fast Voltage Stability Index (*FVSI*)", in *Proceedings IEEE/Power Engineering Society (Asia Pacific) Transmission and Distribution Conference – IEEE Asia Pacific (Region 10)*, Yokohama, Japan, October 2002, pp. 1183-1188.

[18] **I. Musirin** and T. K. A. Rahman, "Fast Voltage Stability Index (FVSI) for On-Line Stability Monitoring in Distribution System", *Proceedings of the Regional Symposium and Exhibition on Electricity Distribution (CIRED2002)*, Sunway Pyramid, Bandar Sunway, 5-8 Aug. 2002. pp. PS2-4: 1-7.

[19] **I. Musirin** and T. K. A. Rahman , "A New Voltage Stability Analysis Technique for Predicting System Violation", in *Proceedings IASTED International Conference of European Power and Energy Systems (EuroPES2002)*, Crete Island, Greece, Jun 2002, pp. 216 - 221.

[20] **I. Musirin** and T. K. A. Rahman, "Implementation of FVSI for Contingency Ranking in Power System", in *Proceedings Australasian University Power Engineering Conference (AUPEC2002), Monash University, Melbourne, Australia*, Oct. 2002.

[21] **I. Musirin** and T. K. A. Rahman, "The Development Voltage Stability Index for Power System Analysis", *Bureau of Research and Consultancy (BRC), UiTM Research Conference*, 24-25 August 2002.

[22] **I. Musirin** and T. K. A. Rahman, "Fast Algorithm for Generator Outage Contingency Analysis in Power System" *International Conference on Advances in Strategic Technologies (ICAST2003)*, Renaissance Hotel, Kuala Lumpur, 12-14 Aug. 2003, pp. 877-882.

[23] **I. Musirin** and T. K. A. Rahman, "Line Outage Security Assessment Using Combinatorial Form Neural Network Topology (CFNNT)", *IASTED International Conference of European Power and Energy Systems (EUROPES 2003)*, Marbella, Spain, pp. 609-614.

[24] **I. Musirin** and T. K. A. Rahman, "Fast Automatic Contingency Analysis and Ranking Technique for Power System Security Assessment", *IEEE Student Conference on Research and Development (SCOReD2003)*, Malaysia, 21-22 April 2003.

[25] **I. Musirin** and T. K. A. Rahman, "Contingency Analysis for Power Security Assessment", *Conference on Scientific and Social Science Research (CSSR2003),* The Palace of Golden Horses, Kuala Lumpur, 2003.

[26] **I. Musirin** and T. K. A. Rahman, "Hybrid Neural Network Topology (HNNT) for Line Outage Contingency Ranking", *IEEE National Power Engineering Conference (PECon)*, Malaysia, 15-16 Sept. 2003, pp. 220-224.

[27] **I. Musirin** and T. K. A. Rahman, "Evolutionary Programming Based Technique for Reactive Power Dispatch in Power System", *Australasian Universities Power Engineering Conference (AUPEC2003)*, Christchurch New Zealand.

[28] **I. Musirin** and T. K. A. Rahman, "Evolutionary Programming Based Optimization Technique for Maximum Loadability Estimation in Electric Power System", *IEEE National Power Engineering Conference (PECon)*, Malaysia 2003, 15-16 Sept. 2003, pp. 205-210.

[29] **I. Musirin** and T. K. A. Rahman, "Evolutionary Programming Based Technique for Voltage Stability Improvement in Electric Power System", *The 46th IEEE International Midwest Symposium on Circuits and Systems,* 27- 29 Dec. 2003. Cairo, Egypt.

[30] **I. Musirin** and T. K. A. Rahman, "Acceleration Search Technique Based on Evolutionary Programming for Estimating Maximum Loadability in Power System", in *Proceedings Artificial Intelligence Application in Industry Malaysia-Japan Seminar (AIAI2003)*, Malaysia, May 2003.

[31] **I. Musirin**, T.K.A Rahman and M. K. Idris "Voltage Stability Improvement Technique by Optimal Transformer Tap Changer Setting Using Evolutionary Programming Technique", *The IASTED International European Conference of Power and Energy Systems (EUROPES 2004)*, Rhodes, Greece, 28-30 June 2004. pp. 319-324.

[32] **I. Musirin**, T.K.A Rahman and M. K. Idris, "Optimal Reactive Power Dispatch for Voltage Instability Alleviation Using Evolutionary Programming Technique", *International Conf. of Power Systems and Electromagnetic Compatibility (ICOPEMC'04)*, Izmir, Turkey, 14-16 Sept 2004.

[33] M. F. M. Kamal, T. K. A. Rahman and **I. Musirin**, "Improved Genetic Algorithms (IGA) for Optimal Reactive Power Planning in Loss Minimization Scheme", *International Conf. of Power Systems and Electromagnetic Compatibility (ICOPEMC04)*, Izmir, Turkey, 14-16 Sept 2004.

[34] **I. Musirin**, T. K. A. Rahman, "Application of Artificial Neural Network for Automatic Contingency Analysis in Power Security Assessment", *Conference of Scientific and Social Science Research (CSSR2004)*, Riverside Hotel, Kuching Sarawak, May 2004.

[35] **I. Musirin**, T. K. A. Rahman and M. K. Idris, "Reactive Power Dispatch for Loss Minimisation in Power System Based on Evolutionary Computation Technique", *International Conference on Artificial Intelligent in Engineering and Technology (ICAIET)*, Sutera Beach Resort, Kota Kinabalu Sabah, 4 – 5 Aug 2004.

[36] T. K. A. Rahman and **I. Musirin**, "Artificial Immune System Based for Solving Economic Dispatch in Power System", *International Conference on Artificial Intelligent in Engineering and Technology (ICAIET)*, Sutera Beach Resort, Kota Kinabalu Sabah, 4 – 5 Aug 2004.

[37] **I. Musirin** and T. K. A. Rahman, "Artificial Neural Network Based Prediction Technique for Voltage Collapse Assessment", *International Conference on Artificial Intelligent in Engineering and Technology (ICAIET2004)*, Sutera Beach Resort, Kota Kinabalu Sabah, 4 – 5 Aug 2004.

[38] S. R. A. Rahim, T. K. A. Rahman and **I. Musirin**, "Optimal Allocation and Sizing of Embedded Generators", *IEEE National Power Engineering Conference (PeCon)*, Malaysia, 29-30 Nov. 2004.

[39] M.S.A. Abdul Wahab, **I. Musirin**, T.K.A. Rahman, M.F.A. Latip, "Genetic Algorithm Based Optimal On Load Transformer Tap Setting For Loss Minimization in Power Transmission System", *IEEE National Power Engineering Conference (PECon)*, Malaysia, 29-30 Nov. 2004.

[40] M. F. M. Kamal, T. K. A. Rahman and **I. Musirin**, "Optimal Reactive Power Planning Using Improved Genetic Algorithms (IGA) for Loss Minimization in Power System", *IEEE National Power Engineering Conference (PECon)*, Malaysia, 29-30 Nov. 2004.

[41] **I. Musirin** and T. K. A. Rahman, "Voltage Stability Based Weak Area Clustering Technique in Power System", *IEEE National Power Engineering Conference (PECon)*, Malaysia, 29-30 Nov. 2004.

[42] **I. Musirin** and T. K. A. Rahman, "Novel Evolutionary Programming for Reactive Power Dispatch in Voltage Stability Improvement", Proceedings of Conference on Scientific and Social Science, Trengganu, Malaysia, 9-12 May, 2005.

[43] M.F. Mohd Kamal, T. K. A. Rahman, **I. Musirin** "Tandem Application of Exploration Factors and Variant Spin Mechanism on Steady State Genetic Algorithms for Loss Minimisation in Power System", WSEAS International Conference of Evolutionary Computation, Lisbon Portugal, 16-18 June 2005, pp. 245-250.

[44] **I. Musirin** and T. K. A. Rahman, "Evolutionary Programming Optimization Technique for Solving Reactive Power Planning in Power System", Proceedings of WSEAS International Conference of Evolutionary Computation, Lisbon Portugal, 16-18 June 2005, pp. 239-244.

[45] T. K. A. Rahman, S. I. Sulaiman and **I. Musirin**, "Clonal Selection-Based Artificial Immune System Optimization Technique for Solving Economic Dispatch in Power System", WSEAS International Conference of Evolutionary Computation, Lisbon Portugal, 16-18 June 2005, pp. 275-280.

[46] **I. Musirin** and T. K. A. Rahman, "New Technique for Weak Area Clustering in Power System Network", WSEAS International Conference on Power Engineering Systems, Rio de Janerio, Brazil, 25-27 April 2005, pp. 68-74.

[47] **I. Musirin**, M. H. Ismail, T. K. A. Rahman, S. F. A. Shukor, "Optimisation of Reactive Power Dispatch via Artificial Immune System for Voltage Stability Enhancement", Accepted for presentation at the Australasian Universities Power Engineering Conference (AUPEC05) at Tasmania University, Australia, 25-28 Sept. 2005.

[48] Saiful Izwan Suliman, Titik Khawa Abdul Rahman and **Ismail Musirin**, "Artificial Immune System (AIS) Based Technique for Optimal Reactive Power Dispatch", Proceedings of Colloquium of SIGNAL PROCESSING and its APPLICATIONS, Pangkor Perak. 28-30 May 2005.

[49] **I. Musirin**, S. Sabri and T. K. A. Rahman, "Development of Automatic Voltage Stability Analysis Algorithm for Power System Security Assessment", Proceedings of Colloquium of SIGNAL PROCESSING and its APPLICATIONS, Pangkor Perak. 28-30 May 2005.

[50] **I. Musirin**, M. H. Ismail, T. K. A. Rahman, "Optimisation of Reactive Power Dispatch via Artificial Immune System for Voltage Stability Enhancement", Proceedings of Colloquium of SIGNAL PROCESSING and its APPLICATIONS, Pangkor Perak. 28-30 May 2005.

[51] Saiful Izwan Suliman, Titik Khawa Abdul Rahman, **Ismail Musirin**, "Application of Artificial Immune System for Voltage Stability Prediction in Power System", Proceedings of International Conference on Robotics, Vision, Information & Signal Processing (ROVISP2005), Penang, Malaysia. 20 – 22 July 2005.

[52] Saiful Izwan Suliman, Titik Khawa Abdul Rahman, **Ismail Musirin**, "Artificial Immune System Optimization Technique for Solving Economic Dispatch in Power System", Proceedings of International Conference on Robotics, Vision, Information & Signal Processing (ROVISP2005), Penang, Malaysia. 20 – 22 July 2005.

[53] Saiful Izwan Suliman, Titik Khawa Abdul Rahman and Ismail Musirin, "Application of Artificial Immune System for Voltage Stability Prediction in Power System", *International Symposium of Bio-Inspired Computing (BIC) 2005*, Johor Bahru, Malaysia, 5-7 September 2005.

[54] Titik Khawa Abdul Rahman, Saiful Izwan Suliman, **Ismail Musirin**, "Artificial Immune-Based Optimization Technique for Solving Economic Dispatch in Power System*", International Workshop on Natural and Artificial Immune Systems (NAIS 2005) Vietri sul Mare, Salerno, Italy,* 9-10 June 2005.

[55] Siti Shafini Yusof, **Ismail Musirin**, Abdul Rahman Minhat and Titik Khawa Abdul Rahman, "Series Compensation Technique for Voltage and Angle Stability Improvement", *Colloquium on Signal Processing and its Application CSPA2006, 11 – 13 March 2006, Cherating, Pahang, Malaysia,* pp. 123– 127.

[56] Mohd. Zaki Mohd. Idrus, **Ismail Musirin** and Zulkarnain Zainuddin, "Biological Computing Technique for Optimal Reactive Power Dispatch", *Colloquium on Signal Processing and its Application CSPA2006, 11 – 13 March 2006, Cherating, Pahang, Malaysia,* pp. 112 – 118.

[57] **I. Musirin** and T. K. A. Rahman, "Evolutionary Programming Based Optimal Reactive Power Planning for Voltage Stability Improvement and Loss Minimization in Power System", *Submitted to the International Journal of Electric Power and Energy Systems, Canada.*

[58] Mohd. Rozely Kalil, **Ismail Musirin** and Muhammad Murtadha Othman, "Ant Colony Based Optimization Technique for Voltage Stability Control", *The 6th WSEAS International Conference on POWER SYSTEMS* **(PE '06**), 22-24 September, 2006, Lisbon Portugal, pp. 149 – 154.

[59] Faizal Izham Hj Hassim, **Ismail Musirin** and Titik Khawa Abdul Rahman, "Voltage Stability Margin Enhancement Using Evolutionary Programming (EP)", *IEEE Student*

Conference on Research and Development (SCOReD2006), 25-26 June, 2006, Concorde Hotel, Shah Alam, Malaysia.

[60]   Azmi Murad Abdul Aziz @ Joned, **Ismail Musirin** and Titik Khawa Abdul Rahman, "Solving Dynamic Economic Dispatch Using Evolutionary Programming", *IEEE 1ˢᵗ International Power and Energy Conference (PECon2006), Marriott Hotel, Putra Jaya, Kuala Lumpur, 28-29 November 2006*, pp. 144-149.

[61]   Mohd. Rozely Kalil, **Ismail Musirin** and M. M. Othman, "Ant Colony Optimization For Maximum Loadability Search In Voltage Control Study", *IEEE 1ˢᵗ International Power and Energy Conference (PECon2006), Marriott Hotel, Putra Jaya, Kuala Lumpur, 28-29 November 2006*, pp. 240-245.

[62]   **Ismail Musirin**, Zailani Ab. Ghani, Titik Khawa Abdul Rahman, "ANN Based Technique for Voltage Stability and Transmission Loss Prediction in Power Security Assessment", *ICGST International Conference on Artificial Intelligence and Machine Learning (AIML)*, Cairo, Egypt, 13-15 June, 2006.

[63]   Saiful Izwan, Titik Khawa Abdul Rahman, **Ismail Musirin**, "Artificial Immune-Based for Voltage Stability Prediction in Power System .",*ICGST International Conference on Artificial Intelligence and Machine Learning (AIML)*, Cairo, Egypt, 13-15 June, 2006.

[64]   <mark>Ismail Musirin</mark>, Muhamad Amir Mat Wajer, Muhammad Khayat Idris, Siti Rafidah Abdul Rahim, Omar Aliman*, "***Evolutionary Programming Technique for Simultaneous Load Increase in Voltage Stability Assessment Scheme",** *First International Power Engineering and Optimization Conference (PEOCO2007)*, 6ᵗʰ June, 2007, Shah Alam, Malaysia. pp. 131-136.

[65]   Mohd Rozely Kalil, <mark>Ismail Musirin</mark> , Muhammad Murtadha Othman, "**Ant Colony Optimization Approach for Loss Minimization in Optimal Reactive Power Dispatch",** *First International Power Engineering and Optimization Conference (PEOCO2007)*, 6ᵗʰ June, 2007, Shah Alam, Malaysia. pp. 179-184.

[66]   Abdul Rahman Minhat, <mark>Ismail Musirin</mark>, Muhammad Murtadha Othman, "**Application of Voltage Stability Index in Load-Shedding Scheme",** *First International Power Engineering and Optimization Conference (PEOCO2007)*, 6ᵗʰ June, 2007, Shah Alam, Malaysia. pp. 179-184. pp. 116-120.

[67]   Mohd Zamri Laton, <mark>Ismail Musirin</mark>, Mohd Wazir Mustafa, Titik Khawa Abdul Rahman, *"***MCPF Based Technique for Bifurcation Point Identification Considering Voltage Stability",** *First International Power Engineering and Optimization Conference (PEOCO2007)*, 6ᵗʰ June, 2007, Shah Alam, Malaysia. pp. 179-184. pp. 39-44.

[68]   Sarizan Bin Ilias, Muhammad Murtadha Othman, **Ismail Bin Musirin**, Azah Mohamed and Aini Hussain, "**Determination of Available Transfer Capability Using Pareto Based Evolutionary Programming Technique",** *First International Power Engineering and Optimization Conference (PEOCO2007)*, 6ᵗʰ June, 2007, Shah Alam, Malaysia. pp. 179-184. pp. 89-93.

[69]   Norziana Aminudin, Titik Khawa Abdul Rahman, **Ismail Musirin**, "Optimal Power Flow for Load Margin Improvement Using Evolutionary Programming", *submitted for* IEEE Student Conference on Research and Development (SCOReD2007), November 2007, Bangi, Malaysia.

[70]   Dalina Johari, Titik Khawa Abdul Rahman, **Ismail Musirin**, "Artificial Neural Network Based Technique for Lightning Prediction", *submitted for* IEEE Student Conference on Research and Development (SCOReD2007), November 2007, Bangi, Malaysia.

[71]   Mohd Fatihi Mustafar, **Ismail Musirin**, Mohd. Rozely Kalil, Mohamad Khayat Idris,"Ant Colony Optimization (ACO) Based Technique for Voltage Control Using Transformer Tap Setting", *submitted for* IEEE Student Conference on Research and Development (SCOReD2007), November 2007, Bangi, Malaysia.

[72] Kahardi Muhammad Talib, **Ismail Musirin**, Mohamad Khayat Idris, "Evolutionary Programming Technique for Solving Power Flow Problems", *submitted for* IEEE Student Conference on Research and Development (SCOReD2007), November 2007, Bangi, Malaysia.

[73] Nur Dianah Mohd. Radzi, **Ismail Musirin**, Mohamad Khayat Idris, Abdul Rahman Minhat and Muhammad Murtadha Othman, **"**Voltage Control Study Using UPFC Based on Biological Computing Optimization Technique**",** The 6th WSEAS Int. Conf. on COMPUTATIONAL INTELLIGENCE, MAN-MACHINE SYSTEMS and CYBERNETICS (CIMMACS '07) Tenerife, Spain, December 14-16, 2007.

[74] N. Mat, M.M. Othman, I. Musirin, A. Mohamed and A. Hussain, "Determination of Available Transfer Capability (ATC) Considering Integral Square Generator Angle (ISGA)", *The 6th WSEAS Int. Conf. on COMPUTATIONAL INTELLIGENCE, MAN-MACHINE SYSTEMS and CYBERNETICS (CIMMACS '07)* Tenerife, Spain, December 14-16, 2007.

[76] Ismail Musirin, Mohd Rozely Kalil, **"**Ant Colony Optimization Technique for Optimal Transformer Tap Changer Setting in Voltage Stability Improvement", *Information Science and Engineering Seminar (ICSE), Management and Science University,* 8 May 2008.

[77] *S.I. Sulaiman, T.K. Abdul Rahman, I. Musirin, S. Shaari, "ANN-Based Technique with Embedded Data Filtering Capability for Predicting Total AC Power from Grid-Connected Photovoltaic System", 2nd International Power Engineering and Optimization Conference (PEOCO2008), 4-5 June 2008.*

[78] *Khairul Amir Abd Rahman, Muhammad Murtadha Othman, Ismail Musirin, Azah Mohamed, Aini Hussain, "Short-Term Load Forecasting Using Autoregressive Box-Jenkins Model", 2nd International Power Engineering and Optimization Conference (PEOCO2008), 4-5 June 2008.*

[79] *Siti Rafidah Abdul Rahim , Titik Khawa Abdul Rahman, Ismail Musirin, Syahrul Ashikin Azmi, Mohd Fayzul Mohammed, Muhd Hatta Hussain, M.Faridun, "Performance Improvement in Distribution Network with Distributed Generation", 2nd International Power Engineering and Optimization Conference (PEOCO2008), 4-5 June 2008.*

[80] *Siti Rafidah Abdul Rahim , Titik Khawa Abdul Rahman, Ismail Musirin, Syahrul Ashikin Azmi, Zainuddin Mat Isa, Omar Aliman, Ismail Daut, "Optimal Allocation and Sizing of DG in Distribution System using Evolutionary Programming Technique", 2nd International Power Engineering and Optimization Conference (PEOCO2008), 4-5 June 2008.*

[81] *S. N. Syed Mohd Sharer, M. R. Adzman, O Aliman, I Musirin, "Sensitive Home Appliances Susceptibility to Voltage Sag", 2nd International Power Engineering and Optimization Conference (PEOCO2008), 4-5 June 2008.*

[82] *N.Z. Mohd Ali, O Aliman, M.R. Adzman, I Musirin, M.H.Sulaiman* "Voltage Sag Interruptions in a Distribution System", 2nd International Power Engineering and Optimization Conference (PEOCO2008), 4-5 June 2008.

[83] Mohd Rozely Kalil, Ismail Musirin, *"*Optimal Transformer Tap Changer Setting Using Ant Colony Optimization for Voltage Stability Improvement", 2nd International Power Engineering and Optimization Conference (PEOCO2008), 4-5 June 2008.

[84] Abdul Rahman Minhat, Ismail Musirin, Muhammad Murtadha Othman, Noraliza Hamzah, Zuhaina Zakaria, Mohamad Khayat Idris, "Multi-Step Load Shedding Scheme for Voltage Security Assessment Considering System Disturbances", *7th WSEAS International Conference on Applications of Electrical Engineering (AEE '08),* Trondheim, Norway, July 2-4, 2008.

[85] Shahril Irwan Sulaiman, Ismail Musirin, Titik Khawa Abdul Rahman, "Prediction of Total AC Power Output from a Grid-Photovoltaic System Using Multi-Model ANN", *7th WSEAS International Conference on Applications of Electrical Engineering (AEE '08),* Trondheim, Norway, July 2-4, 2008.

[86] *N. Mat, M.M. Othman, I. Musirin, A. Mohamed and A. Hussain, "Determination of available transfer capability (atc) considering integral square generator angle (ISGA)"*, Proceedings of the 2nd WSEAS International Conference on CIRCUITS, SYSTEMS, SIGNAL and TELECOMMUNICATIONS (CISST'08), Acapulco, Mexico, January 25-27, 2008, pp. 126-131.

[87] Ismail Musirin, Nur Hazima Faezaa Ismail, Mohd. Rozely Kalil, Muhammad Khayat Idris, Titik Khawa Abdul Rahman, Mohd Rafi Adzman, "Ant Colony Optimization (ACO) Technique in Economic Power Dispatch Problems", *International Multi-Conference of Engineers and Computer Scientists IMECS 2008*, Hong Kong, 19-21 March, 2008. pp. 1387-1392.

[88] Mohd Hafez Hilmi Harun, M. Murtadha Othman and Ismail Musirin, "Short Term Load Forecasting (STLF) Using Artificial Neural Network Based Multiple Lags of Time Series", *15th International Conference on Neural Network Assembly, APNNA (ICONIP08),* Auckland, New Zeland, 25-28 November 2008.

[89] M. Nazree Che Othman, M. Murtadha Othman, Ismail Musirin, Azah Mohamed and Aini Hussain, "Fast Computation of Available Transfer Capability Using Ralston's Method Incorporating Cubic-Spline Interpolation Technique", *Australasian Universities Power Engineering Conference (AUPEC'08)*, Sydney, 14-17 December, 2008.

[90] Shahril Irwan Sulaiman, Titik Khawa Abdul Rahman, **Ismail Musirin** and Sulaiman Shaari, "Assessment of Different Training Algorithms in ANN Model for Grid-photovoltaic System Output Prediction", Progress on Solar Energy Research and Development, Pusat Tenaga Malaysia (PTM), Bangi, 21-22 October 2008, pp. 101-107. ISBN: 978-967-5048-31-9.

[91] Shahril Irwan Sulaiman, Titik Khawa Abdul Rahman and **Ismail Musirin**, "Semi-automatic Design of Two-hidden Layer Feedforward ANN for Grid-Photovoltaic System Output Prediction", *Accepted for publications in Proceedings of International Graduate Conference on Engineering and Science (IGCES2008), UTM Skudai, 23-24 Dec 2008.*

[94] Shahril Irwan Sulaiman, Titik Khawa Abdul Rahman, Ismail Musirin, "Prediction of Grid-connected Photovoltaic System Output Using Evolutionary Programming-ANN Models", *8th WSEAS International Conference on Artificial Intelligence, Knowledge and Data Bases (AIKED2009), 21- 23 Feb. 2009, Cambridge, UK,* pp. 176-180.

[95] D. Johari, T. K. A. Rahman, I. Musirin, n. Aminuddin, "Hybrid Meta-EP-ANN Technique for Lightning Prediction under Malaysia Environment", *8th WSEAS International Conference on Artificial Intelligence, Knowledge and Data Bases (AIKED2009), 21- 23 Feb. 2009, Cambridge, UK,* pp. 224-229.

[96] N. Aminudin, t. K. A. Rahman, I. Musirin, D. Johari, "Multiagent Immune Evolutionary Programming Based Technique for Power System Loadability Improvement Using ORPP", *8th WSEAS International Conference on Artificial Intelligence, Knowledge and Data Bases (AIKED2009), 21- 23 Feb. 2009, Cambridge, UK,* pp. 236-241.

[97] M.F. Mohd Kamal, I. Musirin, T. K. A. Rahma, "Explorative Steady State Genetic Algorithms and Elitist Genetic Algorithms for Optimal Reactive Power Planning", *8th WSEAS International Conference on Artificial Intelligence, Knowledge and Data Bases (AIKED2009), 21- 23 Feb. 2009, Cambridge, UK,* pp. 241-247.

[98] N. R. H. Abdullah, I. Musirin, M. M. Othman, T. K. A. Rahman, "Solving Reactive Power Control Problems in a Stressed Power System Network Using Evolutionary Computation Technique", *8th WSEAS International Conference on Artificial Intelligence, Knowledge and Data Bases (AIKED2009), 21- 23 Feb. 2009, Cambridge, UK,* pp. 254-259.

[99] M. R. Kalil, I. Musirin, M. M. Othman and T. K. A. Rahman, "Ant Colony Technique for Transformer Tap Changer Setting Optimization", *8th WSEAS International Conference on*

Artificial Intelligence, Knowledge and Data Bases (AIKED2009), 21- 23 Feb. 2009, Cambridge, UK, pp. 248-253.

[100] N.R.H. Abdullah ,I. Musirin, M. M. Othma, "Active Power Rescheduling in Power Transmission System", 3rd International Power Engineering and Optimization Conference (PEOCO2009), 3-4 June 2009, Shah Alam, Selangor, Malaysia.

[101] R. Jamein, I. Musirin, R. H. Salimin, M. M. Othman, T. K. A. Rahman, "Risk Assessment of Power System Due to Transmission Line Outage", 3rd International Power Engineering and Optimization Conference (PEOCO2009), 3-4 June 2009, Shah Alam, Selangor, Malaysia.

[102] M. Jayaraju1, M. R. Adzman, M. H. Sulaiman1, O. Aliman, I. Musirin, N.H.Hanafi, "Design and Simulation of Oscillating Switching Surge Generators Using MATLAB", 3rd International Power Engineering and Optimization Conference (PEOCO2009), 3-4 June 2009, Shah Alam, Selangor, Malaysia.

[103] M. Z. A. Baharuddin, I. Musirin, M. M. Othman, D. Johari, M.. R. Adzma, "Transient Protection in Distribution System Using ZnO", 3rd International Power Engineering and Optimization Conference (PEOCO2009), 3-4 June 2009, Shah Alam, Selangor, Malaysia.

[104] K. R. Mansor, I. Musirin, M. F. A. Latip, M. M. Othman, D. Jooshi, T. K. A. Rahman, "Modelling of Microturbine Generation System Using Matlab/Simulink", 3rd International Power Engineering and Optimization Conference (PEOCO2009), 3-4 June 2009, Shah Alam, Selangor, Malaysia.

[105] Z. Baharudin, N. Kamel, I. Musirin, "MFBLP Method Forecast for Regional Load Demand" System, 3rd International Power Engineering and Optimization Conference (PEOCO2009), 3-4 June 2009, Shah Alam, Selangor, Malaysia.

[106] M. R. M. Hussain, I. Musirin, M. S. M. Yusni, M. M. Othman, N. F. N. Ismail, "Particle Swarm Optimization Technique for Loss Minimization in Power Transmission Network", 3rd International Power Engineering and Optimization Conference (PEOCO2009), 3-4 June 2009, Shah Alam, Selangor, Malaysia.

[107] S. R. Kasim, M. M. Othman, N. F. A. Ghani, I. Musirin, M. F. A. Latip, A.Mohammed, A. Hussain, "Power System Risk Assessment Using Fuzzy Set and Monte Carlo Simulation Technique", 3rd International Power Engineering and Optimization Conference (PEOCO2009), 3-4 June 2009, Shah Alam, Selangor, Malaysia.

[108] F. Hashim, I. Musirin, R. H. Salimin, N. Aminuddin, T. K. A. Rahman, "Particle Swarm Optimization Technique in Economic Dispatch Problems", 3rd International Power Engineering and Optimization Conference (PEOCO2009), 3-4 June 2009, Shah Alam, Selangor, Malaysia.

[109] N. F. A. Ghani, M. M. Othman, S. R. Kasim, I. Musirin, M. F. A. Latip, A. Mohammed, A. Hussain, "Composite Power System Expansion Planning", 3rd International Power Engineering and Optimization Conference (PEOCO2009), 3-4 June 2009, Shah Alam, Selangor, Malaysia.

[110] Nor Rul Hasma Abdullah, Ismail Musirin and Muhammad Murtadha Othman, "Constrained Reactive Power Control Using Evolutionary Computation Technique for Static Security Enhancement", IACSIT 2nd International Conference on Computer and Electrical Engineering, 28-30 Dec 2009, Dubai, pp. 612-616.

[111] S.Busan, M.M. Othman, I. Musirin, A. Mohammed and A. Hussain, "Available Transfer Capability Assessment Considering Steady-State and Transient Stability Constraints", 3rd International Power Engineering and Optimization Conference (PEOCO2009), 3-4 June 2009, Shah Alam, Selangor, Malaysia. pp. 405-421.

[112] A. Ramasamy Member, R. Verayiah, H. I. Zainal Abidin, I. Musirin, and A. A. Rahim, "Performance of Fast Voltage Stability Index (FVSI) as an indicator for Under Voltage

Load Shedding Scheme in a Bulk Power System Network", 3rd International Power Engineering and Optimization Conference (PEOCO2009), 3-4 June 2009, Shah Alam, Selangor, Malaysia. pp. 349-353.

[113] Stendley Busan, M. Murtadha Othman, Ismail Musirin, Azah Mohamed and Aini Hussain,"Dynamic Steady State Security Constraints in the Transfer Capability Assessment", IEEE Complexity in Engineering (Compeng 2010), Rome, Italy, 22-24 February 2010.

[114] Nor Rul Hasma Abdullah, Ismail Musirin and M. Murtadha Othman, "Constrained Active Power Schedule Using Immune System Technique for Static Security Enhancement" IEEE Complexity in Engineering (Compeng 2010), Rome, Italy, 22-24 February 2010.

[115] Nor Azwan Mohamed Kamari; Ismail Musirin; Muhammad Murtadha Othman, "Application of Evolutionary Programming in the Assessment of Dynamic Stability", 4th International Power Engineering and Optimization Conference (PEOCO2010), 23-24 June 2010, Shah Alam, Malaysia. pp. 43 – 48.

[116] Siti Rohani Kasim; Muhammad Murtadha Othman; Ismail Musirin; Nor Fadhilawati Abd Ghani,"Application of Bootstrap Technique in Power System Risk Assessment", International Power Engineering and Optimization Conference (PEOCO2010), 23-24 June 2010, Shah Alam, Malaysia. pp. 82-88.

[117] Muhammad Jamhuri Yusoff; Nik Fasdi Nik Ismail; Dr. Ismail Musirin; Norazlan Hashim; Dalina Johari, "Comparative Study of Fuzzy Logic Controller and Proportional Integral Derivative Controller on DC-DC Buck Converter", International Power Engineering and Optimization Conference (PEOCO2010), 23-24 June 2010, Shah Alam, Malaysia. pp. 142-148.

[118] Zulkiffli Abdul Hamid; Ismail Musirin; Muhammad Murtadha Othman; Mohd Rozely Khalil, "Optimum Tuning of Unified Power Flow Controller via Ant Colony Optimization (ACO) Technique", International Power Engineering and Optimization Conference (PEOCO2010), 23-24 June 2010, Shah Alam, Malaysia. pp. 170-177.

[119] Muhammad Norazam Abdul Rahim; Ismail Musirin; Izham Zainal Abidin; Muhammad Murtadha Othman; Dheeraj Joshi, "Congestion Management Problem Using Bee Colony Optimization", International Power Engineering and Optimization Conference (PEOCO2010), 23-24 June 2010, Shah Alam, Malaysia. pp. 184-188.

[120] Nor Rul Hasma Abdullah; Ismail Musirin; Muhammad Murtadha Othman, "Computational Intelligence Technique for Solving Power Scheduling Optimization Problem", International Power Engineering and Optimization Conference (PEOCO2010), 23-24 June 2010, Shah Alam, Malaysia. pp. 201 – 206.

[121] Norhalida Othman; Ismail Musirin; Mohd Nor Azam Rahim; Zulkifli Othman, "Bees Algorithm Technique for Loss Minimization in Power Transmission Network by Using Static VAR Compensator", International Power Engineering and Optimization Conference (PEOCO2010), 23-24 June 2010, Shah Alam, Malaysia. pp. 164 – 169.

[122] Azlan Jaini; Ismail Musirin; Norziana Aminudin; Muhammad Murtadha Othman; Titik Khawa Abdul Rahman; Norazlan Hashim, "Particle Swarm Optimization Technique In Economic Dispatch Problem", International Power Engineering and Optimization Conference (PEOCO2010), 23-24 June 2010, Shah Alam, Malaysia. pp. 308 – 312.

[123] Stendley Busan; Muhammad Murtadha Othman; Ismail Musirin, "Transfer Capability Computation Considering Steady-State and Transient Stability Algorithm", International Power Engineering and Optimization Conference (PEOCO2010), 23-24 June 2010, Shah Alam, Malaysia. pp. 331-336.

[124] Nurulazmi Abd Rahman; Muhammad Murtadha Othman; Ismail Musirin, "Capacity Benefit Margin Assessment Incorporating Tie-Line Reliability", International Power

Engineering and Optimization Conference (PEOCO2010), 23-24 June 2010, Shah Alam, Malaysia. pp. 337 – 344.

[125] Mohd Hafez Hilmi Harun, Muhammad Murtadha Othman, Ismail Musirin, "Short Term Load Forecasting (STLF) Using Artificial Neural Network Based Multiple Lags and Stationary Time Series", International Power Engineering and Optimization Conference (PEOCO2010), 23-24 June 2010, Shah Alam, Malaysia. pp. 363 – 370.

[126] Zuhaila Mat Yasin; Titik Khawa Abdul Rahman; Ismail Musirin; Siti Rafidah Abd Rahim, "Optimal Sizing of Distributed Generation by using Quantum-Inspired Evolutionary Programming", International Power Engineering and Optimization Conference (PEOCO2010), 23-24 June 2010, Shah Alam, Malaysia. pp. 468 – 473.

[127] Siti Rafidah Abdul Rahim; Titik Khawa Abdul Rahman; Ismail Musirin; Muhamad Hatta Hussain; Mohd. Herwan Sulaiman, "Implementation of DG for Loss Minimization and Voltage Profile in Distribution System", International Power Engineering and Optimization Conference (PEOCO2010), 23-24 June 2010, Shah Alam, Malaysia. pp. 490 – 494.

[128] Nurul Arina Abdull Razak; Muhammad Murtadha Othman; Ismail Musirin, "Optimal Sizing and Operational Strategy of Hybrid Renewable Energy System Using HOMER", International Power Engineering and Optimization Conference (PEOCO2010), 23-24 June 2010, Shah Alam, Malaysia. pp. 468 – 473.

[129] Dheeraj Joshi; Amit Kumar Sharma; Kanwarjit Singh Sandhu; Ismail Musirin, "Effect of Drive Parameters on Field Oriented Controlled Induction Motor Drive", International Power Engineering and Optimization Conference (PEOCO2010), 23-24 June 2010, Shah Alam, Malaysia. pp. 502 – 506.

[130] Nor Rul Hasma Abdullah, Ismail Musirin, Muhammad Othman, *Thyristor Controlled Series Compensator Planning Using Evolutionary Programming for Transmission Loss Minimization for System Under Contingencies*, 2010 IEEE International Conference on Power and Energy (PECon2010), Kuala Lumpur, 29 Nov – 1 Dec 2010. pp. 18-23. ISBN: 978-1-4244-8945-9

[131] Mohd Syahmin Mohamed Othman, Dalina Johari, Ismail Musirin, Titik Khawa Abdul Rahman , Nik Fasdi Nik Ismail, "Artificial Neural Network-based Forecast for Electricity Consumption in Malaysia", 2010 IEEE International Conference on Power and Energy (PECon2010), Kuala Lumpur, 29 Nov – 1 Dec 2010. pp. 24-28. ISBN: 978-1-4244-8945-9

[132] Nik Fasdi Nik Ismail ,Dalina Johari, Rahimi Baharom, Ismail Musirin, *Fuzzy Logic Controller on DC/DC Boost Converter*, 2010 IEEE International Conference on Power and Energy (PECon2010), Kuala Lumpur, 29 Nov – 1 Dec 2010. pp. 661-666. ISBN: 978-1-4244-8945-9

[133] M. A Rahim , Ismail Musirin, Izham ZainalAbidin, Muhammad Murtadha Othman, "Contingency Based Congestion Management and Cost Minimization Using Bee Colony Optimization Technique", 2010 IEEE International Conference on Power and Energy (PECon2010), Kuala Lumpur, 29 Nov – 1 Dec 2010. pp. 891-896. ISBN: 978-1-4244-8945-9

[134] Shahril Irwan Sulaiman, Titik Khawa Abdul Rahman, Ismail Musirin, "Design of Grid-connected Photovoltaic System Using Evolutionary Programming", 2010 IEEE International Conference on Power and Energy (PECon2010), Kuala Lumpur, 29 Nov – 1 Dec 2010. pp. 947-952. ISBN: 978-1-4244-8945-9

[135] Norziana Aminudin, Titik Khawa Abdul Rahman, Ismail Musirin, Zuhaina Haji Zakaria, *Optimal Reactive Power Planning for Load Margin Improvement using Multi Agent Immune EP*, In proceedings of IEEE Congress on Evolutionary Computation (IEEE CEC 2010), Barcelona, Spain. ISSN: 978-1-4244-6910-8.

[136] Z. Hamid1, I. Musirin2, M. M. Othman3, M. N. A. Rahim, "Reactive Generation Tracing By Means of Evolutionary Programming Technique", 2011 International Conference on Electrical Engineering and Informatics, 17-19 July 2011, Bandung, Indonesia. E5-5.

[137] Omar Aliman, Ismail Musirin, Murtadha & Mohd Herwan , "Heuristic Based Placement Technique for Distributed Generation", The 5th International Power Engineering and Optimization Conference (PEOCO2011), Shah Alam, Selangor, Malaysia : 6-7 June 2011, pp. 83-87.

[138] S.A. Jumaat, Ismail Musirin, Muhammad Murtadha Othman & Hazlie Mokhlis, "PSO Based Technique for Loss Minimization Considering Voltage Profile and Cost Function", The 5th International Power Engineering and Optimization Conference (PEOCO2011), Shah Alam, Selangor, Malaysia : 6-7 June 2011, pp. 36-41.

[139] Norziana Aminudin, Norazlan Hashim, Dalina Johari & Ismail Musirin, "Reactive Power Planning for Transmission Loss Minimization", The 5th International Power Engineering and Optimization Conference (PEOCO2011), Shah Alam, Selangor, Malaysia : 6-7 June 2011, pp. 116-120.

[140] Nor Azwan Mohamed Kamari, Ismail Musirin & Muhammad Murtadha Othman, "Improving Power System Damping Using EP Based PI Controller", The 5th International Power Engineering and Optimization Conference (PEOCO2011), Shah Alam, Selangor, Malaysia : 6-7 June 2011, pp. 121-126.

[141] Baharin Abu Bakar, Ismail Musirin, Muhammad Murtadha Othman & Mohd Nur Azam Rahim, "Mathematical Model of Sea Wave Energy in Electricity Generation", The 5th International Power Engineering and Optimization Conference (PEOCO2011), Shah Alam, Selangor, Malaysia : 6-7 June 2011, pp. 154-158.

[142] Halimatun Hashim, Izham Z. Abidin, Yap Keem Siah & Ismail Musirin Ridzuwan Zulkepali, "Optimization of Mechanical Input Power to Synchronous Generator Based on Transient Stability Center-of-Inertia: COI Angle and COI Speed", The 5th International Power Engineering and Optimization Conference (PEOCO2011), Shah Alam, Selangor, Malaysia : 6-7 June 2011, pp. 249-254.

[143] Nur Zahirah Mohd Ali, Ismail Musirin, Zulkeflee Khalidin & Mohd Redzuan Ahmad, "Index-Based Placement and Distributed Generation Sizing Based on Heuristic Search", The 5th International Power Engineering and Optimization Conference (PEOCO2011), Shah Alam, Selangor, Malaysia : 6-7 June 2011, pp. 364-368.

[144] Nik Fasdi Nik Ismail, Dalina Johari, Ismail Musirin & Norazlan Hashim, "Thunderstorm Forecasting by Using Artificial Neural Network", The 5th International Power Engineering and Optimization Conference (PEOCO2011), Shah Alam, Selangor, Malaysia : 6-7 June 2011. pp. 369-374.

[145] Zulkiffli Abdul Hamid, Ismail Musirin, Muhammad Murtadha Othman & Mohd Nur Azam Rahim, "A Novel Technique for Generation Tracing via Evolutionary Programming", The 5th International Power Engineering and Optimization Conference (PEOCO2011), Shah Alam, Selangor, Malaysia : 6-7 June 2011, pp. 381-386.

[146] Z. Hamid, I. Musirin, M. N. A. Rahim & N. A. M. Kamari, "Effective Power Scheduling via Blended Crossover Continuous Ant Colony Optimization", Accepted for ICT & KE, Bangkok, Nov. 2011

[147] Z. Hamid, I. Musirin, M. M. Othman & M. N. A. Rahim, "Reactive Power Load Tracing via Blended Crossover Continuous Ant Colony Optimization", Submitted to MySEC2011, Johor Bahru.

[148] Zulkiffli Abdul Hamid & Ismail Musirin, "Generator Selection For Power Scheduling Via Stability Index Based Generation Tracing", Submitted to ICCEE 2011, Singapore.

[149] Zulkiffli Abdul Hamid, Ismail Musirin & Muhammad Murtadha Othman "New reactive power tracing technique:An Application via Blended Crossover Continuous Ant Colony Optimization", Accepted by WSEAS Conference, France 2011.

[150] Zulkiffli Abdul Hamid, Ismail Musirin & Muhammad Murtadha Othman, "Reactive Generation Tracing by Means of Blended Crossover Continuous Ant Colony Optimization", 2011 IEEE Conference on Sustainable Utilization and Development in EngiNeering and Technology (2011 IEEE STUDENT), Venue: The University of Nottingham, Malaysia Campus, 20-21 October 2011

[151] Sheikh Kamar B. Sheikh Abdullah, Nik Sofizan B. Nik Yusuf, Danial B. Mohd Nor, Ismail B. Musirin, and Izham B. Zainal Abidin, "Overview of Voltage Control and Potential Applications of Secondary Voltage Regulations in Malaysia Tenaga Nasional Berhad Grid System", European Power and Energy Systems Conference, June 22 – 24, 2011, Crete, Greece.

[152] Siti Amely Jumaat, Ismail Musirin, Muhammad Murtadha Othman, Hazlie Mokhlis, "Transmission loss minimization using SVC based on Particle Swarm Optimization", 2011 IEEE International Symposium Industrial Electronics and Applications (ISIEA2011), 25-28 September 2011, Langkawi, Malaysia. pp. 419-424.

[153] Siti Amely Jumaat, Ismail Musirin, "Static VAR Compensator for Minimizing Transmission Loss and Installation Cost Calculation via Particle Swarm Optimization", 4th Engineering Conference Kuching, Sarawak, Malaysia . pp. 1-6.

[154] Siti Amely Jumaat, Ismail Musirin, Muhammad Murtadha Othman, Hazlie Mokhlis, "Optimal Location and Sizing of SVC Using Particle Swarm Optimization Technique", First International Conference on Informatics and Computational Intelligence (ICI2011), Bandung, pp. 312 - 317.

[155] S. K. S. Abdullah, I. Musirin, I. Z. Abidin, D. M. Noor, "A Feasibility Study of Applying Coordinated Voltage Control in Malaysia TNB's Transmission Network", IEEE TENCON 2011 Conference – Bali, Indonesia, November 21 - 24, 2011.

[156] Mohd Fadhil Mohd Kamal & Ismail Musirin, "Comparative Study of Various Steady State Genetic Algorithms Equipped with Two Point Cross Breeding Method for Optimal Reactive Power Planning in Loss Minimisation Scheme", 2011 4th International Conference on Computer and Electrical Engineering (ICCEE 2011), October 14-16, 2011, Singapore.

[157] S. I. Sulaiman, Member, T.K.A. Rahman, I. Musirin, "Artificial Immune System for Sizing Gridconnected Photovoltaic System", The 5th International Power Engineering and Optimization Conference (PEOCO2011), Shah Alam, Selangor, Malaysia : 6-7 June 2011, pp. 398 - 403.

[158] S. I. Sulaiman, T. K. A. Rahman, I. Musirin, and S. Shaari, "Sizing grid-connected photovoltaic system using genetic algorithm," in Proceedings of the International Symposium on Industrial Electronics & Applications (ISIEA2011), Langkawi, 2011, pp. 504-508.

[159] Othman, M.M., Kasim, S.R., Salim, N.A., Musirin, I., "**Risk based uncertainty (RibUt) assessment of a power system using bootstrap technique**", *2012 IEEE International Power Engineering and Optimization Conference, PEOCO 2012 - Conference Proceedings* , art. no. 6230908 , pp. 460-464.

[160] Sulaiman, S.I., Rahman, T.K.A.,Musirin, I., Shaari, S., "**Fast evolutionary programming-based Hybrid Multi-Layer Feedforward Neural Network for predicting Grid-Connected Photovoltaic system output**", *Proceedings - 2012 IEEE 8th International Colloquium on Signal Processing and Its Applications, CSPA 2012* , art. no. 6194688 , pp. 44-47.

[161] Rahim, S.R.A., Musirin, I., Sulaiman, M.H., Hussain, M.H., Azmi, A., "**Assessing the performance of DG in distribution network**", *2012 IEEE International Power Engineering and Optimization Conference, PEOCO 2012 - Conference Proceedings* , art. no. 6230904 , pp. 436-441.

[162] Jumaat, S.A., Musirin, I., Othman, M.M., Mokhlis, H., "**Placement and sizing of thyristor controlled series compensator using PSO based technique for loss minimization**", *2012 IEEE International Power Engineering and Optimization Conference, PEOCO 2012 - Conference Proceedings* , art. no. 6230876 , pp. 285-290.

[163] Jumaat, S.A., Musirin, I., Othman, M.M., Mokhlis, H., "**Particle swarm optimization techniques for optimal location and sizing of thyristor controlled series capacitor**", *ICIMTR 2012 - 2012 International Conference on Innovation, Management and Technology Research* , art. no. 6236474 , pp. 640-645.

[164] Jumaat, S.A., Musirin, I., Othman, M.M., Mokhlis, H., "Application of PSO Technique to Optimal Location and Sizing of Static Var Compensator "; In Proceedings of 2012 IEEE Symposium on Computer & Informatics (ISCI2012); 19-20 March 2012, Park Royal Hotel, Penang, Malaysia. pp 170 - 175

[165] Othman, M.M., Abd Rahman, N.,Sasi, D.S., Musirin, I., "**Optimal flexible solutions of capacity benefit margin considering interconnected system reliability**", *2012 IEEE International Power Engineering and Optimization Conference, PEOCO 2012 - Conference Proceedings* , art. no. 6230910 , pp. 470-474.

[166] Othman, M.M., Abd Rahman, N.,Sasi, D.S., Musirin, I., "**Inter-area transfer capability assessment considering optimal flexible solutions of capacity benefit margin**", *2012 IEEE International Power Engineering and Optimization Conference, PEOCO 2012 - Conference Proceedings* , art. no. 6230911 , pp. 475-479.

[167] Aliman, O., Musirin, I., Sulaiman, M.H., "**DG sizing impact for loss minimization considering cost factor**", *2012 IEEE International Power Engineering and Optimization Conference, PEOCO 2012 - Conference Proceedings* , art. no. 6230895 , pp. 389-394.

[168] Mohd Ali, N.Z., Musirin, I., Khalidin, Z., Ahmad, M.R., "**Distributed generation sizing and placement using computational intelligence**", *2012 IEEE International Power Engineering and Optimization Conference, PEOCO 2012 - Conference Proceedings* , art. no. 6230922 , pp. 527-532.

[169] Samat, S.S., Musirin, I., Kusim, A.S., "**The effect of supply voltage on partial discharge properties in solid dielectric**", *2012 IEEE International Power Engineering and Optimization Conference, PEOCO 2012 - Conference Proceedings* , art. no. 6230914 , pp. 490-495.

[170] Rahmat, N.A., Musirin, I., "**Differential Evolution Ant Colony Optimization (DEACO) technique in solving economic load dispatch problem**", *2012 IEEE International Power Engineering and Optimization Conference, PEOCO 2012 - Conference Proceedings* , art. no. 6230872 , pp. 263-268.

[171] Rahim, M.N.A., Musirin, I., Hamid, Z.A., Kamari, N.A.M.. "**BCO based technique for line outage identification in congestion management**", *2012 IEEE International Power Engineering and Optimization Conference, PEOCO 2012 - Conference Proceedings* , art. no. 6230896 , pp. 395-400.

[172] Abdul Latip, M.F., Othman, M.M.,Zaini, N.M., Musirin, I., "**Enhancement of branch and bound method in a distributed generation expansion planning using multithreading technique**", *2012 IEEE International Power Engineering and Optimization Conference, PEOCO 2012 - Conference Proceedings* , art. no. 6230926 , pp. 548-553.

[173] Othman, M.M., Harun, M.H.H.,Musirin, I., "**Short term load forecasting using artificial neural network with feature extraction method and stationary output**", *2012 IEEE*

International Power Engineering and Optimization Conference, PEOCO 2012 - Conference Proceedings , art. no. 6230912 , pp. 480-484.

[174] Othman, M.M., Harun, M.H.H.,Musirin, I., "**Forecasting short term electric load based on stationary output of artificial neural network considering sequential process of feature extraction methods**", *2012 IEEE International Power Engineering and Optimization Conference, PEOCO 2012 - Conference Proceedings* , art. no. 6230913 , pp. 485-489.

[175] Mohamed Kamari, N.A., Musirin, I.,Hamid, Z.A., Rahim, M.N.A.,Othman, M.M., "**Computational intelligence approach for SVC-PID controller in angle stability improvement**", *2012 IEEE International Power Engineering and Optimization Conference, PEOCO 2012 - Conference Proceedings* , art. no. 6230905 , pp. 442-447.

[176] Hamid, Z., Musirin, I., Rahim, M.N.A.,Mohamed Kamari, N.A., "**Stability index tracing for determining FACTS devices placement locations**", *2012 IEEE International Power Engineering and Optimization Conference, PEOCO 2012 - Conference Proceedings* , art. no. 6230828 , pp. 17-22.

[177] Rahim, M.N.A., Musirin, I., Hamid, Z.A., Kamari, N.A.M., "**Fuzzy bee colony approach to mitigate congestion problems through TCSC installation for voltage corrective strategy**", *ICIMTR 2012 - 2012 International Conference on Innovation, Management and Technology Research* , art. no. 6236490 , pp. 727-732.

[178] Kamari, N.A.M., Musirin, I., Hamid, Z.A., Rahim, M.N.A., "**An evolutionary algorithm approach to design SVC-PI controller for angle stability improvement**", *ICIMTR 2012 - 2012 International Conference on Innovation, Management and Technology Research* , art. no. 6236491 , pp. 733-738.

[179] Hamid, Z., Musirin, I., Rahim, M.N.A.,Kamari, N.A.M.. "**Hybrid ant colony technique for reactive power tracing in deregulated power system**", *ICIMTR 2012 - 2012 International Conference on Innovation, Management and Technology Research* , art. no. 6236485 , pp. 700-705.

[180] M. M. Othman, I. Musirin, A. Mohemed, A. Hussein, "Optimal Flexible Solutions of Transfer Capability Assessment", In Proceedings of The 12th International Conference on Probabilistic Methods Applied to Power Systems (PMAPS), 10-14 June 2012 in Istanbul, Turkey.

[181] Munim, W.N.B.W.A. , "Switching Technique for Multiphase Voltage Source Inverter" Symposium on Humanities, Science and Engineering Research (SHUSER), 24-27 June 2012. pp. 589 - 593.

[182] Shahril Irwan Sulaiman, Titik Khawa Abdul Rahman & Ismail Musirin, "A Genetic Algorithm-Based Hybrid Multi-Layer Feedforward Neural Network for Predicting Grid-Connected Photovoltaic System Output; In Proceedings of 2012, 4th International Conference on Machine Learning and Computing (ICMLC 2012), 10th to 12th March 2012, Hong Kong, China.

[183] Othman, M.M., Kasim, S.R., Salim, N.A., Musirin, I., "**Risk based uncertainty (RibUt) of power system considering the increased of load demand**", *2012 IEEE International Power Engineering and Optimization Conference, PEOCO 2012 - Conference Proceedings* , art. no. 6230907 , pp. 454-459.

[184] Siti Amely Jumaat, Ismail Musirin, Muhammad Othman, Hazlie Mokhlis, Optimal Placement and Sizing of Multiple FACTS Devices Installation", 2012 IEEE International Conference on Power and Energy (PeCon2012), 2-5 December 2012, Kota Kinabalu Sabah. pp. 147-152.

[185] N. A. Rahmat, I. Musirin, Z. Othman,"Effect of Ant Parameters on DEACO in Economic Load Dispatch Problem", 2012 IEEE International Conference on Power and Energy" (PeCon2012), 2-5 December 2012, Kota Kinabalu Sabah. pp. 170-175.

[186] Siti Amely Jumaat, Ismail Musirin, Muhammad Othman, Hazlie Mokhlis, "Evolutionary Particle Swarm Optimization (EPSO) Based Technique for Multiple SVCs Optimization ", 2012 IEEE International Conference on Power and Energy (PeCon2012), 2-5 December 2012, Kota Kinabalu Sabah. pp. 185-190..

[187] Abdul Rahman Minhat, Mohd Wazir Mustaffa & Ismail Musirin, "Transmission Line Loss and Load Allocation via Artificial Bee Colony Algorithm", 2012 IEEE International Conference on Power and Energy (PeCon2012), 2-5 December 2012, Kota Kinabalu Sabah. pp. 240-245.

[188] Nur Ashida Salim, Muhammad Murtadha Othman, Ismail Musirin, Salleh Serwan, "Risk Assessment of Cascading Collapse Considering the Effect of Hidden Failure", 2012 IEEE International Conference on Power and Energy (PeCon2012), 2-5 December 2012, Kota Kinabalu Sabah. pp. 772-777.

[189] N. A. M. Kamari, I. Musirin, M. M. Othman, Z. A. Hamid, M. N. A. Rahim, "**Optimal Design of SVC-PI Controller for Damping Improvement Using New Computational Intelligence Approach**", 3rd International Conference on Energy, Environment, Devices, Systems, Communications, Computers (INEEE '12). pp. 184-189.

[190] Z. Hamid, I. Musirin, M. N. A. Rahim," FACTS Devices Installation via Stability Index Tracing and Blended Crossover Continuous Ant Colony Optimization", **3rd International Conference on Energy, Environment, Devices, Systems, Communications, Computers (INEEE '12). pp. 123-`128.**

[191] M.H. Hussain, S.R.A. Rahim, A. Azmi, I. Musirin, A.F. Abidin, "Optimal Overcurrent Relay Coordination Using Particle Swarm Optimization", 2013 2nd International Conference on Electrical, Control and Computer Engineering, Pahang, Malaysia, August 27-28, 2013. pp. 42-47.

[192] Nor Rafidah Mhd Saad; Zulkifli Othman; Syed Abdul Mutalib Al Junid; Nabil Hidayat; Khairul Khaizi Mohd Shariff; Ismail Musirin, "Switching Strategy for Neutral Point Type Converter", 2013 IEEE 7th International Power Engineering and Optimization Conference (PEOCO2013), 3-4 June, Langkawi, Malaysia. pp. 578-582.

[193] Zulkiffli Abdul Hamid; Ismail Musirin; Muhammad Murtadha Othman; Nor Azwan Mohamed Kamari, "Meta-heuristic optimization for non-discriminatory losses charge allocation", 2013 IEEE 7th International Power Engineering and Optimization Conference (PEOCO2013), 3-4 June, Langkawi, Malaysia. pp. 540-545.

[194] Nurulddin Ameir Ahmad; Ismail Musirin; Shahril Irwan Sulaiman, "Loss Minimization of Distribution System with Photovoltaic Injection Using Swarm Evolutionary Programming", 2013 IEEE 7th International Power Engineering and Optimization Conference (PEOCO2013), 3-4 June, Langkawi, Malaysia. pp. 752-757.

[195] Siti Amely Jumaat; Ismail Musirin; Muhammad Othman; Hazlie Mokhlis, "Cluster Identification for Optimal Placement of Static Var Compensator", 2013 IEEE 7th International Power Engineering and Optimization Conference (PEOCO2013), 3-4 June, Langkawi, Malaysia. pp. 546-551.

[196] Mohd. Redzuan Ahmad,; I. Musirin. ; M.M. Othman, "Profit determination for vehicle-to-grid (V2G) operation in smart grid environment", 2013 IEEE 7th International Power Engineering and Optimization Conference (PEOCO2013), 3-4 June, Langkawi, Malaysia. pp. 758-763.

[197] Ahnaf Ab Qais; Muhammad Othman; Ismail Musirin, "Optimal Sizing and Operational Strategy of PV and Hydro", 2013 IEEE 7th International Power Engineering and Optimization Conference (PEOCO2013), 3-4 June, Langkawi, Malaysia. pp. 714-717.

[198] Siti Amely Jumaat; Ismail Musirin; Muhammad Othman; Hazlie Mokhlis, "MOPSO Approach for FACTS Device Installation in Power System", 2013 IEEE 7th International

Power Engineering and Optimization Conference (PEOCO2013), 3-4 June, Langkawi, Malaysia. pp. 564-569.

[199] Fathiah Zakaria; Dalina Johari; Ismail Musirin, "The Taguchi-Artificial Neural Network Approach for the Detection of Incipient Faults in Oil-Filled Power Transformer, ", 2013 IEEE 7th International Power Engineering and Optimization Conference (PEOCO2013), 3-4 June, Langkawi, Malaysia. pp. 518-522.

[200] Nur Azzammudin Rahmat; Ahmad Farid Abidin; Ismail Musirin, "Fuzzy Unit Commitment for Cost Minimization in Power System Planning", 2013 IEEE 7th International Power Engineering and Optimization Conference (PEOCO2013), 3-4 June, Langkawi, Malaysia. pp. 680-685.

[201] Omar ALiman, Ismail Musirin, "Overcurrent Relays Coordination for Industrial Radial System", 2013 IEEE 7th International Power Engineering and Optimization Conference (PEOCO2013), 3-4 June, Langkawi, Malaysia. pp. 608-612.

[202] Nor Azwan Mohamed Kamari; Ismail Musirin; Zulkiffli Abdul Hamid; Muhammad Norazam Rahim, "PSS-LL Based Power System Enhancement Using IPSO Approach", 2013 IEEE 7th International Power Engineering and Optimization Conference (PEOCO2013), 3-4 June, Langkawi, Malaysia. pp. 658-663.

[203] Nur Izzati Abdul Aziz; Shahril Irwan Sulaiman; Sulaiman Shaari; Ismail Musirin, "Assessment of Evolutionary Programming Models for Single-Objective Optimization", 2013 IEEE 7th International Power Engineering and Optimization Conference (PEOCO2013), 3-4 June, Langkawi, Malaysia. pp. 304-308.

[204] Nor Rul Hasma Abdullah; Ismail Musirin; Muhammad Othman, "Operating Generator Selection Applied for Reactive Power Dispatched Using Evolutionary Programming", 2013 IEEE 7th International Power Engineering and Optimization Conference (PEOCO2013), 3-4 June, Langkawi, Malaysia. pp. 583-587.

[205] Siti Rafidah Abdul Rahim; Ismail Musirin; Muhammad Othman; Muhamad Hatta Hussain; Mohd Herwan Sulaiman; Azralmukmin Azmi, "Effect of Population Size for DG Installation Using EMEFA", 2013 IEEE 7th International Power Engineering and Optimization Conference (PEOCO2013), 3-4 June, Langkawi, Malaysia. pp. 746-751.

[206] Nur Ashida Salim; Muhammad Othman; Md Salleh Serwan; Ismail Musirinm, "An Effective Approach to Determine the Sensitive Transmission Lines Due tothe Effect of Hidden Failure in a Protection System", ", 2013 IEEE 7th International Power Engineering and Optimization Conference (PEOCO2013), 3-4 June, Langkawi, Malaysia. pp. 746-751.

[207] N. A. Salim, M. M. Othman, I. Musirin, and M. S. Serwan, "Determination of Severe Loading Condition at Critical System Cascading Collapse Considering the Effect of Protection System Hidden Failure", World Academy of Science, Engineering and Technology 77 2013, pp. 349-352.

[208] N. A. Rahmat, I. Musirin, A. F. Abidin, "Differential Evolution Immunized Ant Colony Optimization (DEIANT) Technique in Solving Economic Emission Dispatch", 2013 International Conference on Technology, Informatics, Management, Engineering & Environment (TIME-E 2013), Bandung, Indonesia, June 23-26, 2013. pp. 198-202.

[209] Siti Amely Jumaat; Ismail Musirin; Muhammad M. Othman; Hazlie Mokhlis, "Cluster Identification Through FACTS Device Installation in Bulk Power System", 2013 International Conference on Technology, Informatics, Management, Engineering & Environment (TIME-E 2013), Bandung, Indonesia, June 23-26, 2013. pp. 192-197.

[210] N. A. Salim, M. M. Othman, I. Musirin, and M. S. Serwan, "Determination of Sensitive Transmission Lines Due to the Effect of Protection System Hidden Failure in a Critical System Cascading Collapse", World Academy of Science, Engineering and Technology 77 2013, pp. 1047-1052.

[211] S.I S.I. Suliman, G. Kendall, I. Musirin, "An effective AIS-based model for frequency assignment in mobile communication", Proceedings of the 2015 7th International Conference of Soft Computing and Pattern Recognition, SoCPaR 2015. pp. 253-259.

[212] Kerta, S. H. M., Hamid, Z. A. & Musirin, I. , "The Ant Colony-Pollinated Flower Algorithm: A new approach on losses allocation charge for deregulated power system", Jan 10 2017 2016 7th IEEE Control and System Graduate Research Colloquium, ICSGRC 2016 - Proceeding. Institute of Electrical and Electronics Engineers Inc., p. 119-124 6 p. 7813313

[213] Othman, Z., Sulaiman, S. I., Musirin, I., Omar, A. M. & Shaari, S, "Optimal design of stand alone photovoltaic system using evolutionary programming", May 5 2017 Proceedings - 2016 IEEE Conference on Systems, Process and Control, ICSPC 2016. Institute of Electrical and Electronics Engineers Inc., p. 196-201 6 p. 7920729

[214] Othman, Z., Sulaiman, S. I., Musirin, I., Omar, A. M. & Shaari, S.. "Optimal sizing stand alone photovoltaic system using evolutionary programming", Feb 18 2017 Proceedings of 2017 9th International Conference on Computer and Automation Engineering, ICCAE 2017. Association for Computing Machinery, Vol. Part F127852, p. 302-306 5 p.

[215] Mustaffa, S. A. S., Musirin, I., Othman, M. M. & Rosli, N. H, "Multi DGPV installation in transmission system for loss minimization", Jun 5 2017 2017 4th International Conference on Industrial Engineering and Applications, ICIEA 2017. Institute of Electrical and Electronics Engineers Inc., p. 350-354 5 p. 7939236

[216] Mansor, M. H., Musirin, I. & Othman, M. M., "Immune Log-Normal Evolutionary Programming (ILNEP) for solving economic dispatch problem with prohibited operating zones", Jun 5 2017 2017 4th International Conference on Industrial Engineering and Applications, ICIEA 2017. Institute of Electrical and Electronics Engineers Inc., p. 163-167 5 p. 7939199

[217] Mustaffa, S. A. S., Musirin, I., Othman, M. M. & Salimin, R. H., "Load management for Voltage Stability control in multi-area power system", Apr 5 2017 Proceedings - 6th IEEE International Conference on Control System, Computing and Engineering, ICCSCE 2016. Institute of Electrical and Electronics Engineers Inc., p. 502-506 5 p. 7893628

[218] S. I. Suliman; G. Kendall; I. Musirin, "Optimizing channel allocation in wireless communication using single-swap mutation based heuristic", 2013 15th International Conference on Advanced Communication Technology (ICACT). pp. 774-778.

[219] Suliman, S. I., Musirin, I., Mohamad, R., Kassim, M. & Idros, M. F. M,."An efficient constructive heuristic for optimizing frequency allocation in cellular network" Jun 5 2017 *2017 4th International Conference on Industrial Engineering and Applications, ICIEA 2017*. Institute of Electrical and Electronics Engineers Inc., p. 310-316 7 p.7939228

INTERNATIONAL AND NATIONAL CONTRIBUTIONS

INTERNATIONAL CONTRIBUTIONS:

1. Conference Chair - 2010 International Conference on Intelligent Network and Computing (ICINC 2010)
2. Keynote Speaker at the International Conference on Computing, Mathematics and Statistics (iCMS2013), Penang, Malaysia.

3. Keynote/Plenary Speaker at the *8th WSEAS International Conference on Artificial Intelligence, Knowledge and Data Bases (AIKED2009)* at Cambridge University, UK, 21-23 February 2009.
4. Organizing Chair – 4th International Power Engineering and Optimization Conference (PEOCO2010).
5. Organizing Chair – IEEE International Power and Energy Conference 2010 (PECon2010).
6. Session Chair in at the *8th WSEAS International Conference on Artificial Intelligence, Knowledge and Data Bases (AIKED2009)* at Cambridge University, UK, 21-23 February 2009.
7. Session Chair: WSEAS International Conference of Power Systems and Electromagnetic Compatibility (ICOPEMC2004), Izmir, Turkey.
8. International Reviewer: International Journal of Power and Energy Systems (Elsevier Science) - 2005
9. International Reviewer: IEEE Transaction on Power Systems – 2005 – now
10. International Programme Committee: WSEAS International Conference of Power Systems and Electromagnetic Compatibility (ICOPEMC05), Corfu, Greece: 2005
11. International Programme Committee: International Conference on Artificial Intelligence and Soft Computing, India. - 2005
12. International Reviewer: International Journal of Electrical Power and Energy Systems (Science Direct) - 2006
13. International Reviewer: World Scientific and Engineering Academy and Society (WSEAS) – Europe Based Society: 2004 – now.
14. International Reviewer: IEEE First International Power And Energy Conference (PECON206)- 2006
15. International Reviewer: IEEE Student Conference on Research and Development (SCOReD2007)
16. IEEE Transaction on Power Systems
17. International Reviewer : IEEE Transaction on Power Delivery: 2007 – now.
18. International Reviewer: IEEE Transaction on Energy Conversion: 2007 – now
19. Session Chair: The 2008 IAENG International Conference on Artificial Intelligence and Applications, Hong Kong, 19-21 March, 2008.
20. Session Chair: The 2008 IAENG International Conference on Electrical Engineering Hong Kong, 19-21 March, 2008.
21. Organizing Chair, 1st International Power Engineering and Optimization Conference (PEOCO2007).
22. Organizing Chair, 2nd International Power Engineering and Optimization Conference (PEOCO2008).
23. Organizing Chair, 3rd International Power Engineering and Optimization Conference (PEOCO2009).
24. Organizing Chair, 4th International Power Engineering and Optimization Conference (PEOCO2010).
25. Organizing Chair, 5th International Power Engineering and Optimization Conference (PEOCO2011).
26. Organizing Chair, 2012 IEEE International Power Engineering and Optimization Conference (PEOCO2012).
27. Organizing Chair, IEEE 2010 International Power and Energy Conference (PECon2010).
28. Organizing Co-Chair, IEEE 2012 International Power and Energy Conference (PECon2012).
29. Organizing Co-Chair, IEEE 2012 International Power and Energy Conference (PECon2012).
30. Organizing Chair, 2013 IEEE 7th International Power Engineering and Optimization Conference (PEOCO2013)

31. Organizing Chair, 2014 IEEE 8th International Power Engineering and Optimization Conference (PEOCO2014)
32. Editor-in-Chief: International Journal of Power, Energy and Artificial Intelligence (IJPEAI).
33. Editor: International Journal of Electrical and Electronics Systems Research (IJEESR).
34. International Reviewer for IEEE International Symposium on Industrial Electronics and Applications (ISIEA) 2009.
35. International Reviewer for World Scientific and Engineering, Academy and Society (WSEAS) Conferences and Journals, 2009.
36. International Reviewer for The 2nd International Multi-Conference on Engineering and Technological Innovation: IMETI 2009.

EXPERT CONTRIBUTIONS

1. Ministry of Higher Education Fundamental Research Grant (FRGS) Panel
2. Panel for Technical Committee of Power Quality (TCPQ) SIRIM
3. External Examiner for Bachelor in Electrical Energy System, Universiti Malaysia Perlis (UNIMAP) - 2016.
4. Visiting Professor for Management and Science University, Malaysia.
5. External Examiner for Management and Science University, Malaysia.
6. External Examiner for Diploma Programme in Electrical Engineering, Universiti Malaysia Perlis (UniMAP)
7. External Examiner for Diploma in Electrical Engineering, UNITEN.
8. Academic Advisory Panel for Faculty of Electrical System Engineering, Universiti Malaysia Perlis (UniMAP).
9. Module/Program Evaluator for WIM – under Jabatan Pembangunan Kemahiran, Kementerian Sumber Manusia, Nov 2009.
10. Head of Judge, Innovation and Exhibition Competition, Institut Kemahiran Tinggi Belia Negara, Dusun Tua, Selangor.

POSTRAGUATE SUPERVISION: GRADUATED

PhD Graduated:
1. Nor Rul Hasma Abdullah:
   Thesis Title: Power Scheduling: Evolutionary Programming Based Technique Optimization and System Modelling.
2. Shahril Irwan Sulaiman:
   Thesis Title: Intelligent System for AC Power Prediction and Optimization from Grid-Connected Power System.
3. Halimatun Hashim:
   Thesis Title: New Power System Dynamic Stability Analysis and Control Techniques.
4. Yaakob Raja Omar:
   Thesis Title: Under Frequency Load Shedding (UFLS) and Adaptive Approach.
5. Zulkiffli Abdul Hamid.
   Thesis Title: Computational Intelligence Based Power Tracing for Nondiscriminatory Losses Charge Allocation and Voltage Stability Improvement.
6. Siti Amely Jumaat.
   Thesis Title: Particle Swarm Optimization Technique for FACTs Devices Installation Considering Economic Impact.

7. Saiful Izwan Suliman
   PhD (co-supervisor for Nottingham University, UK):
   Thesis Title: Meta-Search Technique in Solving Transmission Network Scheduling.
8. Nor Ashida Salim.
   Thesis Title: Power System Expansion Planning Considering Cascading Collapse
9. Nur Azzammudin Rahmat.
   Thesis Title: Computational Intelligence Based Technique for Solving Economic Dispatch Problem.
10. Nur Azwan Mohamed Kamari.
    Thesis Title: Computational Intelligence Based Technique for Angle Stability Assessment and Improvement in Power System.
11. Daw Salah (co-supervisor)
    Thesis Title: Demand Side Management in a Deregulated Power System.
12. Norzulaily Mohamad: (co-supervisor):
    Thesis Title; FST Unblocking Scheme for Distance Protection Relay for Symmetrical Detection during Power Swing Phenomenon.
13. Sheikh Kamar Sheikh Abdullah
    Thesis Title; Dynamic Stability Using Particle Swarm Optimization Technique for Integrated Voltage Control.
14. Muhammad Hatta Hussain:
    Thesis Title: Computational Intelligence Based Technique for Relay Optimization.
15. Nur Zahirah Mohd Ali:
    Thesis Title: Fuzzy-Swarm Based Technique for Congestion Management in Power System.
16. Mohd. Redzuan Ahmad:
    Thesis Tite: Static and Dynamic Impacts of Plug-in-Hybrid Electric Vehicle on Electrical Power System.
17. Siti Rafidah Abdul Rahim: (Writing up Thesis)
    Thesis Title: Hybrid EP-FA for Distributed Generation Optimization Considering Power Quality Effect.

MSc Graduated:
1. Mohd. Rozely Khalil:
   Thesis Title: Novel Ant Colony Optimization Technique for Reactive Power Planning Scheme in Power System Transmission.
2. Abdul Rahman Minhat:
   Thesis Title: Load Shedding Technique Incorporating Evolutionary Programming Approach in Voltage Stability Assessment.
3. Siti Rafidah Abd. Rahim:
   Thesis Title: Evolutionary Programming Based Technique for Embedded Generation Scheme in Distribution System for Voltage Stability Improvement.
4. Filzah Abdul Kadir:
   Thesis Title: An Artificial Neural Network Based Technique for Evaluating the Severity of Generator Outage Contingencies.
5. Dalina Johari:
   Thesis Title: Artificial Intelligence Technique for Lightning Protection System Modeling and Assessment.
6. Norziana Aminuddin:

Thesis Title: Voltage Stability Margin Enhancement Considering Contingencies Using Multi-Agent-Evolutionary Programming Technique.

7. Mohd. Fadhil Muhammad Kamal:
   Thesis Title: Advanced Genetic Algorithm Based Optimization Technique for Reactive Power Planning in Power System

8. Stendley Busan:
   Thesis Title: Dynamic Available Transfer Capability Calculation Using Ralston's Method Considering Generation Rescheduling.

9. Siti Rohani Kassim:
   Thesis Title: Risk-Based Uncertainty of Power System Using Bootstrap Technique.

10. Nurullazmi Bin Abdul Rahman:
    Thesis Title: Determination of Available Transfer Capability Based Capacity Benefit Margin Incorporating Interconnected System Reliability Using Pareto Based Evolutionary Programming.

11. Muhammad Norazam Abdul Rahim:
    Thesis Title: Bee Colony Optimisation with Fuzzy Rules for Solving Congestion Management Problem in Power System.

12. Mohd. Hafez Hilmi Bin Harun:
    Thesis Title: Short-Term Load Forecasting (STLF) Using Artificial Neural Network Based Multiple Lags of Time Series.

13. Nurulddin Ameir Ahmad **(Status: Final Draft Complete-will submit before April 2014).**
    Thesis Title: Distributed Generation Installation Using Extended Evolutionary Algorithm.

14. Baharin Abu Bakar
    Thesis Title: Modeling of Sea Wave in the Generation of Electricity Generation Incorporating Evolutionary Programming Technique.

15. Fatiah Zakaria: (co-supervisor)
    Thesis Title: Application of Taguchi's Method in Artificial Neural Network for Power Transformer Fault Detection by Using Dissolved Gas Analysis.

16. Siti Salwani Samat
    Thesis Title: Artificial Intelligence Based Technique for Prediction of Partial Discharge Inception Voltage in a Void of Solid Dielectric.

15. Muhd Azri Abdul Razak: (co-supervisor)
    Thesis Title: Optimal Capacitor Placement and Sizing in Unbalanced Distribution System Using Particle Swarm Algorithm.

16. Zilaila Hj. Zakaria **(Satus: Waiting for Viva)**
    Thesis Title: Energy Efficiency Based Optimal Capacitor Placement and Sizing using Artificial Bees Colony.

17. Nur Izzati Binti Abdul Aziz (co-supervisor)
    Thesis Title: Evolutionary Programming for Sizing Optimization in Stand-Alone Photovoltaic System.

18. Mohd Ainor Yahya: (co-supervisor)
    Thesis Title: Optimal Capacitor Placement for Two cases of Capacitor and Passive Filter Using Ant Colony Optimization (ACO) Technique.

POSTGRADUATE SUPERVISIONS

PhD Students: In Progress:

1. Sharifah Azma binti Syed Mustaffa:
   Title of Thesis: Multi-Objective Voltage Stability Assessment and Improvement Considering Renewable Energy.
2. Rahmatul Hidayah Salimin
   Title of Thesis: Meta-Heuristic Based Multi-Objective Multi-Area Voltage Stability Assessment in Power System.
3. Mohd. Helmi Mansor
   Title of Thesis: Hybrid Computational Intelligence in Economic Dispatch for Bulk Power System
4. Wan Nazirah Wan Md Adnan
   Title of Thesis: Optimization of ANN in Measurement and Verification (MnV)
5. Mohamed Amroune (Co-supervisor)- Setif University 1, Algeria.
   Title of Thesis: Contribution to the Stability Analysis of the Smart Power Grids
6. Zulkifli Othman (co-supervisor)
   Title of Thesis: Computational Intelligence for Sizing Stand Alone Photovoltaics System
7. Nur Fadhilah Abdullah (co-supervisor)
   Title of Thesis: Vehicles Classifictaion Based on Different Feature Extrcation with Neural Network (NN) Using Forward Scattering RADAR (FSR)
8. Mohd Helmi Mansor
9. Saiful Firdaus Abdul Shukor
10. Mohamad Khairuzzaman Mohamad Zamani
11. Sharifah Azwa Shaaya
12. Shahrizal Jelani
13. Nor Laili Ismail
14. Mohd Rohaimi Mohd Dahalan

MSc Students: In Progress:
1. Mohamed Reza Akbakhri
2. Muhamad Alif Mansor
3. Faisal Fauzi
4. Aainaa Binti Mohd Arriffin
5. Hamizan Suhaimi

Undergraduate Supervision since 2008

	YEAR/SEMESTER	STUDENTS NAME	PROJECT TITLES
1	Mac 2012/Feb 2013	MOHD SHAHMI SHAHRUNI BIN SAHRUL ANUA	Protection Coordination Strategy Using Back Tracking Algorithm for Distribution System
2	Mac 2012/Feb 2013	MUHAMMAD AMIRUL BIN RAMLI	Firefly Based Optimization Technique for Distributed Generation Installation
3	Mac 2012/Feb 2013	MOHAMAD FAQRULL IZRALL BIN MAT FIAH	Power Distribution Network System Stability Enhancement with Presence of Renewable Energy
4	Mac 2012/Feb 2013	MUHAMMAD HANIS HELMI BIN JOHARI	Loss Minimization in Power Transmission System Using Sensitivity Analysis
5	Mac 2012/Feb 2013	MUHAMMAD HANIS BIN CHE HALIM	Pursuit Algorithm for Optimal Load Scheduling
6	Mac 2012/Feb 2013	MOHD NAZMI BIN ADNAN	Multi-Poulation Traditional Evolutionary Programming Approach for DG Installation
7	Mac 2012/Feb 2013	LUKMAN HAKIM BIN HAMRON	Computational Intelligence for Optimal Load Scheduling
8	Jun 2011/Julai 2012	MOHAMAD AZIZI MOHAMAD ARIF	The Various Mutations Evolutionary Programming (EP) for Load Margin Enhancement Using Optimal Reactive Power Dispatch (ORPD)
9	Jun 2011/Julai 2012	HAMIM ZAKIMI ZAKI	MVAR Management on Load Bus for Meeting Voltage Stability Margin Criteria
10	Jun 2011/Julai 2012	SITI AMIRAH BINTI MOHAMED AZHAR	Transient Stability Prediction and Control Using Artificial Neural Network (ANN) – Fuzzy Logic (FL) Technique
11	Jun 2011/Julai 2012	MUHAMMAD AIMAN BIN ZAINALI	An Automatic Reset Circuit of Earth Leakage Relay (ELR) in Consumer Unit
12	Jun 2011/Julai 2012	NURDINI HAZAMI ISMAIL	Adequacy Assessment of Distributed Generation Using Monte Carlo Simulation
13	Jun 2011/Julai 2012	SYAZANA ABDUL HALIM	Voltage Stability Improvement by Using The Firefly Algorithm Method
14	Jun 2011/Julai 2012	MOHAMMAD TARIQ ZAKARIA	Load Forecasting Using ANN
15	Jun 2010/Mei 2011	MOHD ELMY SHAPIE	Partial Discharge Detectiion for Breakdown Identification

16	Jun 2010/Mei 2011	ROSAINY BAHAROM	Artificial Intelligence Based Technique for Partial Discharge Detection
17	Jun 2010/Mei 2011	NORMAIZA ZAINOL	Voltage Control Study of SVC with VAR Dispatch and Slope Setting
18	Jun 2010/Mei 2011	NOR AYUNI AHADIAH AB. WAHAB	Automatic Voltage Stability Analysis in the Presence of Contingency
19	Jun 2010/Mei 2011	ZULKIFFLI ABDUL HAMID	Optimum Tuning of Unified Power Flow Controller (UPFC) via Ant Colony Optimization (ACO) Technique.
20	Jun 2010/Mei 2011	NUR AFIQAH ROMAI NOR	Fuzzy Logic Application in DGA Methods to Classify Type of Faults in Oil Transformer
21	Jun 2010/Mei 2011	NOR HALIDA OTHMAN	Bees Algorithm Technique for Loss Minimization in Power Transmission Network By Using Static VAR Compensator
22	Jun 2010/Mei 2011	AHMAD KAMAL AHMED KHAIRUDDIN	Application of Particle Swarm Optimization o Economic Dispatch
23	Jun 2010/Mei 2011	NORAIN SAHARI	Optimally Sizing of Static VAR Compensation Using Bees Algorithm for Cost Minimization
24	Jan 2009/Dis 2009	AMZARI RAMLI	Loadability Margin Calculation of Power System with SVC Using Artificial Neural Network
25	Jan 2009/Dis 2009	MOHD ZULHELMI ON	Transient Stability Assessment in Multi-Machine Transmission System
26	Jan 2009/Dis 2009	DEEZEX NOOR AINIZA ABDULLAH	Offline Study on Loss Optimization in Distribution Networks Using Artificial Bee Colony Algorithm
27	Jan 2009/Dis 2009	NIK ASWANI NIK AHMAD	Hybrid Power System Model Components Development
28	Jan 2009/Dis 2009	MOHD ZAINUL ARIFIN BAHARUDDIN	Transient Protection in Distribution System Using Metal Oxide Varistor

29	Jan 2009/Dis 2009	JUNAINAH PARDI	Allocation and Sizing of Distributed Generation (DG) Using Particle Swarm Optimization Technique for Loss Minimization
30	Jan 2009/Dis 2009	FATHIAH HASHIM	Partcle Swarm Optimization (PSO) Technique in Economic Dispatch Problems
31	Jan 2009/Dis 2009	MOHD SAFRI MOKHTAR	Branch Outage solution Using Partcle Swarm Optimization
32	Jan 2009/Dis 2009	MOHD SHAMSUL SULAIMAN	The Effect of Distributed Generation Installation in a Microgrid System
33	Jan 2009/Dis 2009	MOHD NAZMI M. JALIANI	Breast Cancer Classification Using Artificial Neural Network
34	Jan 2009/Dis 2009	MOHD ZULAFFANDI ABDULLAH	Automatic Dirt Content Detection Using HumanMachine Interface
35	Jan 2009/Dis 2009	MOHD FARID MOHD RAWI	An Optimal Load Shedding Approach for Transmission Networks Using Particle Swarm Optimization Technique
36	Jan 2009/Dis 2009	KHAIRUL RAFFIQ MANSOR	Modelling of Microturbine Generation System Matlab/Simulink
37	Jan 2009/Dis 2009	ROHAIDI JAMEIN	Risk Assessment of Power System to Tranmission Line Outage
38	Jan 2009/Dis 2009	AZLINA ABDULLAH	Development of Simulink Model for a Microturbine System
39	Jan 2009/Dis 2009	MOHAMMAD HANIF ABDUL HAMID	High Temperature Superconductor (HTS) Fault Current Limiter Modeling
40	Jan 2008/Dis 2008	MUHAMMAD NORAZAM ABDUL RAHIM	Vulnerability Studies in Power System Transmission
41	Jan 2008/Dis 2008	MOHD ZUKHIRMAN BIN SALIM	Voltage Collapse Prediction Based on Minimum Singular Value Using Artificial Neural Network
42	Jan 2008/Dis 2008	ALISADIKIN MUHAMMAD ZAINAL	Load Shedding Technique for Loss and Voltage Profile Monitoring
43	Jan 2008/Dis 2008	MUKHTARUDDIN ABDULLAH	Optimal Sizing of TCSC Using Ant Colony Optimization Techniqe for Loss Minimization
44	Jan 2008/Dis 2008	MOHD HAIRY MOHAMAD	Optimal Sizing of Distributed Generators Using Ant Colony Optimization Tecnhique
45	Jan 2008/Dis 2008	MOHD SHAHRIZAL MOHD YUSNI	Optimal Sizing of Distributed Generators Using Particle Swarm Optimization Technique

46	Jan 2008/Dis 2008	MD RAHMAT MD HUSSEIN	Optimal Sizing of TCSC Using Particle Swarm Optimization Technique in Loss Minimization in Power System
47	Jan 2008/Dis 2008	MOHD ZAIN MOHD SALLEH	Fast Active Power Rescheduling for Voltage Collapse Avoidance Scheme
48	Jan 2008/Dis 2008	MUHAMMAD RIDZWAN BADLI	Optimal Design of Distribution System Using Artificial Immune System Technique
49	Jan 2008/Dis 2008	MOHAMAT FAISOL ABDUL HAMID	Voltage Stability Improvement by Using Unified Power Flow Controller
50	Jan 2008/Dis 2008	AZNAIDI BAKAR	Voltage Stability Study in Presence of Microgrid System
51	Jan 2008/Dis 2008	MUHAMMAD HAFIZ AZIZAN	Power System Stabilizer in Dunamic Stability Assessment

POSTGRADUATE THESIS EXAMINER

PhD Thesis Examiner:
1. 2010, January PhD Thesis External Examiner,: Candidate: Nor Izzri Abdul Wahab, Universiti Kebangsaan Malaysia. Title: Transient Stability Assessment and Control of Power Systems Using Computational Intelligence, January 2010.
2. 2011, August: PhD Thesis Examiner. Title of Thesis: Diagnosis Kerosakan Dalam Rangkaian Agihan Kuasa Menggunakan Sistem Taabir Kabur Neuro Adaptif, Candidate: Rasli Bin Abd Ghani, Universiti Kebangsaan Malaysia.
3. 2011, September: PhD Thesis Examiner. Title of Thesis: Discrimination of Power Transformer Inrush and Internal Fault Currents Using Signal Processing and Soft Computing Techniques. Candidate: Sendilkumar S, Anna University, Chennai India.
4. 2011, October: PhD Thesis Examiner, Modeling, Analysis and Simulations of Induction Machine under Different Operating Models. Name of Candidate: Vivek Pahwa, National Institute of Technology, Kurukshetra, India.
5. 2012, January: PhD Thesis External Examiner, Candidate: Dalila Binti Mat Said, Universiti Teknologi Malaysia. Title: An Accurate Estimation of Power System Impacts on Transformers.
6. 2012, May: PhD Thesis External Examiner, Candidate: Nesrllah Salman Khelef, Title; Optimal Network Reconfiguration and DSTATCOM Placement for Voltage Sag Mitigation Using Gravitational Search Algorithm, Universiti Kebangsaan Malaysia.
7. 2012 May: PhD Thesis External Examiner, Chandra Sekaran. V. **Title:** Investigation on Reduced Order Modelling and Design of Controllers for Line Time Invariant Systems, Anna University of Technology, Coimbatore, India.
8. 2012, June. PhD Thesis External Examiner, Candidate: Ali Omar Al-Mathanani, Title: Development of an Efficient Dynamic Voltage Restorer for Voltage Sag Mitigation, Universiti Kebangsaan Malaysia.

9. 2012 July: PhD Thesis External Examiner, Ramesh K. **Title:** Investigation on Reduced Order Modelling and Design of Controllers for Line Time Invariant Systems, Anna University of Technology, Coimbatore, India.
10. 2012, August: PhD Thesis External Examiner, Narayanappa, Title: Improved Power Quality Solutions Using Photovoltaic Unified Compensation Technologies, Anna University of Technology, Coimbatore, India.
11. 2012, September: PhD Thesis External Examiner, Kannan P. **Title:** Power Quality Improvement in Multi Bus System Using Unified Power Flow Controller, Anna University of Technology, Coimbatore, India.
12. 2012, October: PhD Thesis Examiner. Tan Chia Kwang, UNITEN. Title: Fault Classification and Location in Radial Distribution Network Using Minjimal Power Quality Monitors.
13. 2012, October: PhD Thesis External Examiner, Candidate: Muhammad Irwanto Misrun, Universiti Malaysia Perlis (UniMAP). Title: Potential of Solar Radiation for Photovoltaic Power Generation in Perlis and Design of Transformerless Photovoltaic Inverter for Running High AC Load
14. 2012, November: PhD Thesis Examiner. Rosnazri Bin Ali, Title: Solar and Grid-Connected Hybrid Electricity for Homes and Buildings, Universiti Malaysia Perlis.
15. 2013 April: PhD Thesis External Examiner, (Second Submission). Narayanappa, Title: Improved Power Quality Solutions Using Photovoltaic Unified Compensation Technologies, Anna University of Technology, Coimbatore, India.
16. 2013 April PhD Thesis External Examiner, (Second Submission), Kannan P. **Title:** Power Quality Improvement in Multi Bus System Using Unified Power Flow Controller, Anna University of Technology, Coimbatore, India.
17. 2013, May: PhD Thesis External Examiner, Ms. SM Alamelu, Center for Research, Anna University Chennai, India. Title: Optimal Siting and Sizing of UPFC for Static Voltage Stability Enhancement.
18. 2013, June (Second Submission): PhD Thesis Examiner, Modeling, Analysis and Simulations of Induction Machine under Different Operating Models. Name of Candidate: Vivek Pahwa, National Institute of Technology, Kurukshetra, India.
19. 2013, July: PhD Thesis External Examiner, Universiti Kebangsaan Malaysia. Candidate: Abdulkareem Mokif Obais. Title: Conditioning of Shunt Static Var Compensator to be Continuously and Linearly Controlled Harmonic-Free Compensating Susceptance for Load and Power-Factor Correction Purposes.
20. 2013, November: PhD Thesis External Examiner, Aida Fazliana Abdul Kadir. Universiti Kebangsaan Malaysia. Title: Harmonic Impact of Inverter Based Distributed Generation and Optimal Harmonic Control Using Improved Gravitational Search Algorithm.
21. 2014, Oktober: PhD Universiti Malaysia Pahang. Candidate: Nadheer Abdulridha Shalash. Title: Multi-Agent Approach to Reliability Assessment of Power System Protection and Control Using Intelligent System.
22. 2014, Oktober: PhD Universiti Kebangsaan Malaysia. Candidate: Nor Aira Zambri. Title: Kawalan Dan Pengurusan Optimum Bagi Penjana Teragih Berasaskan Sel Fuel Menggunakan Logik Kabur Dan Rangkaian Neural.
23. 2014, July. PhD Universioti Teknologi MARA. Candidate; Nur Fadilah Ab. Aziz. Title; Biological Optimization Technique for Voltage Stability Evaluation and Improvement in Power System.
24. 2015, December. PhD Universiti Teknologi Malaysia. Candidate: Ahmad Sukri Ahmad. Title: A New Building Electrical Load Forecasting Method Using the Hybrid Intelligence Approach.

25. 2015, September. PhD Universiti Teknologi MARA. Candidate: Raseeda Hamzah. Title: Discriminative Classification Model of Filled Pause and Elongation in Spontaneous Speech.
26. 2015, July. PhD Universiti Teknologi Malaysia. Candidate: Rabia Shaakor. Title: A Novel Approach for Wind Farm Layout Optimization Using Combined Area Dimensions and Definite Point Selection Techniques.
27. 2016, September. PhD Universiti Teknologi Malaysia. Candidate: Mehdi Moradi. Title: Impacts of the Responsible Loads and Flexible Transmissions on the System Congestion.
28. 2016, July. PhD Universiti Tenaga Nasional. Candidate: Dhiaa Halboot Muhsen. Title: Optimal Modelling and Sizing of Photovoltaic Water Pumping System Using Differential Evolution Algorithm.
29. 2016, July. PhD Universiti Teknologi Malaysia. Candidate: Siti Maherah Hussin. Title: Coordinated Generation and Transmission Maintenance Scheduling Using Mixed Integer Linear programming.
30. 2016, June. PhD Universiti Tenaga Nasional. Candidate: Mohammed Reyasudin Bin Basir Khan. Title: Model for Standalone Microgrid with Renewable Energy Sources Supported by Multi-Agent Based Energy Management System.
31. 2016, May. PhD Universiti Malaysia Pahang. Candidate: Ali Mahmood Humada. Title: Modeling, Characterization, and Energy Extraction Improvement of Photovoltaic Solar System Under Mismatch Conditions.
32. 2016, April. PhD Universiti Kebangsaan Malaysia. Candidate: Azdiana Binti Md. Yusop. Title: Sistem Penuaian Tenaga Hibrid Termoelektrik-Solar Menggunakan Pembentuk Masukan Analisis Dinamik Songsang.
33. 2016, January. PhD Universiti Teknologi Malaysia. Candidate; Naila Zareen. Title: A Novel Real-Time Demand Side Management Scheme for the Addition of Electrical Vehicles to the Future Grid.
34. 2017 December. PhD Thesis UTM. Candidate: Isiyaku Abubakar. Residential Electrical Energy Management System Through Non-Intrusive Appliance Load Monitoring.
35. 2017 January PhD Thesis UTP. Candidate: Badar Ul Islam_UTP. Title: Modified Back-Propagation and Chaotically Improved Meta-Heuristic Technique for Short Term Load Forecasting.
36. 2017 November PhD Thesis Report UMP. Candidate: Mushtaq Najeeb Ahmed. Title: An Optimum Output Voltage Control Implementation Based Harmony Algorithm Application for Photovoltage Power Inverter System.
37. 2017 September PhD Thesis UTEM. Candidate: Hayfaa Mohammed. Title: System Stability Studies of Generators in Power System Fuzzy Logic Controller Based Power System Stabilizer.
38. 2017 August PhD Thesis Karunya University_India. Candidate: Ramya KC. Title: Certain Investigations on Soft Computing Techniques Based Controllers for Bidirectional DC-DC Converters.
39. 2017 June _UTM PhD Thesis 2nd Evaluation. Candidate: _Dhyia Aidroos_UTM. Title: New Simulation Tool for Future Planning of Renewable Energy in Yemen.
40. 2018 Jan _UTM PhD Thesis. Candidate: Mamunu Mustapha. Title: Modified Adaptive-Neuro-Fuzzy Inference System for Short-Term Load Forecasting.

MSc Thesis Examiner
1. 2017 April MSc Thesis Evaluation. Candidate: Mohammad Azhar Mat Daut. Title: An Improved Building Load Forecasting Method Using a Combined Least Square Support Vector Machine and Modified Artificial Bee Colony.

2. 2017 June MSc Thesis UTP. Candidate: Mohd Aizuddin Firdaus. Title: Design and Modelling of a Portable Pico Generator for Wave Energy Conversion.
3. 2017 November MSc__UM. Candidate: Pook Mei Foong. Title: The Anglerfish Algorithm: A Derivation of Random Incremental Construction Technique and Parallel Computation.
4. 2016 August. MSc Universiti Teknologi Petronas. Candidate: Muhammad Bilal Sarwar. Title: Design and Development of Wireless Robotic Stakeout System Based on Zigbee Transceiver Modules.
5. 2016 June. MSc Universiti Malaysia Pahang. Candidate: Nurul Ain Mohd Yusoff. Title: Study on Turbine Blade for Tidal Barrage System to be Implemented in the Breakwater in Malaysia.
6. 2016 January. MSc Universiti Kebangsaan Malaysia. Candidate: Md Mainul Islam. Title: Optimal Placement and Sizing of Rapid Charging Stations for Electric Vehicles Using Binary Lightning Search Algorithm.
7. 2015 February. MSc Universiti Teknikal Malaysia, Melaka. Candidate: Nur Qamarina Zainal Abidin (Second Submission). Title: Leakage Current Analysis for Insulator Surface Condition Monitoring System.
8. 2015 February. MSc Universiti Putra Malaysia. Candidate: Mohammad Reza Maghami. Title: The Effect of Dust on the Performance of Photovoltaic Arrays in Tropical Conditions.
9. 2015 March. MSc Universiti Teknologi Malaysia. Candidate: garry Soh. Title: Harmonic Measurement and Simulation on Isolation Transformer.
10. 2015 April . MSc Universiti Malaysia Pahang. Candidate: Khor Ai Chia. Title: Investigation on Rhombus Electrode Compartment Design for Vanadium Redox Flow Battery (V-RFB) Cell Stack.
11. 2015 May. MSc Universiti Kebangsaan Malaysia. Candidate: Wong Li Ai (second Submission). Title: Optimum Sizing and Placement of Battery Energy Storage Systems in a PV Integrated Power System for Mitigating Voltage Fluctuation.
12. July 2015. MSc University of Malaya. Candidate: Koong Gia Ing. Title: Optimal Network Reconfiguration and Distributed Generation Sizing Considering Variable Load Profile and System Safety Margin.
13. 2014 January. MSc Universiti Teknologi Malaysia. Candidate: Husam Abdel-Rasoulyousef Foudeh. Title: Critical Current Method for Anti-Icing on the Overhead Line.
14. 2014 January. MSc Universiti Teknologi Malaysia. Candidate: Ahmed Mohamed Abdrabou Ahmed (Second Examination). Title: Voltage Sag Mitigation By Optimizing Location on Distributed Generation Using Genetic Algorithm for Three DG Types.
15. 2014 January. MSc Universiti Putra Malaysia. Candidate: Sharifah Sakinah Tuan Othman. Title: New Technique of Determining Switching Angle for Three Phase Neutral-Point-Clamped Multilevel Inverter.
16. 2014 July. MSc University of Malaya. Candidate: Shameem Ahmad. Title: Fuzzy Based Unified Power Flow Controller Placement in Power System Network to Enhance Dynamic Voltage Stability.
17. 2014 September. MSc Universiti Kebangsaan Malaysia. Candidate: Wong Li Ai. Title: Optimum Sizing and Placement of Battery Energy Storage Systems in a PV Integrated Power System for Mitigating Voltage Fluctuation.
18. 2014 August. MSc Universiti Teknologi Petronas. Candidate: Noor Hussain. Title: Frequency Dependence on Water Tree Degradation in XLPE Medium Voltage Power Cable.
19. 2014 April.MSc External Examiner, Universiti Teknologi Malaysia. Candidate: Ahmad Fuad Bin Abdul Aziz, Title of Thesis: Implementation of Distortion Power Factor into Smart Meter Using Walsh Fourier Transform.

20. 2014 April. MSc Thesis External Examiner, Candidate: Muhammad Qamar Raza. Title of Thesis: A Hybrid PSO and Neural Networks Based Short Term Load Forecast Model System/ Universiti Teknologi Petronas,.
21. 2014. May MSc External Examiner, Universiti Teknologi Malaysia. Candidate: Suhaila Binti Samsuri, Title of Thesis: Power Optimization Control of Small-Sized Wind Turbine for Malaysia Wind Condition.
22. 2014 May MSc Thesis External Examiner, Universiti Putra Malaysia, Candidate: Muhammad Azhar Omar, Title of Thesis: Lightning Severity Classification Utilizing the Metereogical Parameters: A Neural Network Approach,
23. 2013 March MSc External Examiner, Universiti Malaysia Perlis. Candidate: Saidatul Shema Binti Saad, Title of Thesis: An Evaluation of Push-Pull, Cascade Push-Pull and Cascade H-Bridge Single-Phase Inverter for Stand-Alone Photovoltaic System.
24. 2013 March MSc External Examiner, Universiti Teknologi Malaysia. Candidate: Ahmed Mohamed Abd-Rabou Ahmed, Title of Thesis: Voltage Sag Mitigation by Optimizing the Location of Distributed Generation Using genetic Algorithm for Three DG Types.
25. 2013 June MSc External Examiner, Universiti Teknologi Malaysia. Candidate: Husam Abdel-Rasoulyousef Foudeh, Title of Thesis: Critical Current Method for Anti-Icing on the Over Head Line,
26. 2012 December MSc External Examiner, Universiti Malaysia Perlis. Candidate: Khairul Anuar Mohd Nor. Title of Thesis: Study Effect of Harmonics Distortion on the Current Transformer Used for Differential Transformer Protection.
27. 2012 January MSc External Examiner, Universiti Malaysia Perlis. Candidate: Yong Wong Lye Yee, Title of Thesis: Optimal Distributed Generation Allocation Using Particle Swarm Optimization with Mutation Strategy.
28. 2012 January. MSc Thesis Examiner: Title of Thesis: Power Quality Classification with De-Noising Scheme Using Wavelet Transform and Rule-Based Method. Name of Candidate: Chuah Heng Keow, Universiti Teknologi Petronas.
29. 2012. July. MSc Thesis External Examiner, Candidate: Mohd Fatimie Irzaq Bin Khamis. Title of Thesis: A Study and Analysis for the Small-Scale Power Generation of Power System/ Universiti Malaysia Perlis,
30. 2012. August, MSc Thesis External Examiner, University of New South Wales, Canberra, Australia. Name of Candidate: Adnan Anwar: Distributed Generation Planning for Efficiency Enhancement of Power Distribution Systems.
31. 2012 June.MSc Thesis External Examiner, University of Malaya, Candidate: Javed Ahmed Laghari, Title of Thesis: A Fuzzy based Load Frequency Control and Load Shedding Scheme for Islanded Distribution Network Connected with Mini-Hydro.
32. 2012. September MSc Thesis External Examiner, Universiti Putra Malaysia, Candidate: Zawati Mohd Nawi. Title of Thesis: Lightning Performance Analysis for 33 kV Under Built Distribution Overhead Line,
33. 2011 March. MSc Thesis External Examiner for Nazri Bin Marzuki, Universiti Kebangsaan Malaysia. Title: Kesan Lendut Voltan Terhadap Beban Sensitif Dalam Sistem Agihan di Malaysia.
34. 2011 March.MSc Thesis External Examiner for Masoud Farhoodnea, Universiti Kebangsaan Malaysia. Title: Localization of Single and Multiple Harmonics Sources in Power Systems,
35. 2011 September. MSc Thesis Examiner: Title of Thesis: Improvement of Power Quality by Shunt Active Power Filter in a Three-Phase Four-Wire Distribution System. Name of Candidate: Izzeldin Idris Abdalla Yagoube, Universiti Teknologi Petronas.

36. 2011 August. MSc Thesis Examiner. Title of Thesis: Determining the Optimal Location in Power System by Means of Genetic Algorithm in Mitigating Voltage Collapse and Power Loss. Candidate Mahdi Karimi. Universiti Putra Malaysia.
37. MSc Internal Examiner for MSc in Electrical Engineering, Universiti Teknologi MARA – Wan Adnan Wan Chik, "Web Based Applications for Energy Management System in UiTM".
38. MSc Internal Examiner for MSc in Electrical Engineering, Universiti Teknologi MARA – Khairul Safuan Muhamad, "The Single-Phase Single-Stage High DC Voltage Multiplier Circuit".
39. MSc External Examiner for Norani Atan, Universiti Tenaga Nasional (UNITEN) Malaysia: Title: Evaluation of Reference Signal Estimation Techniques for the Control of Shunt Active Power Filter.
40. MSc External Examiner for Mohd. Redzuan Bin Ahmad, Universiti Teknologi Malaysia: Title: Static and Dynamic Impacts of Three to Six Phase Conversion of a Power Transmission System.
41. 2009 November MSc External Examiner for Mohd Hatta Mohammed, Universiti Putra Malaysia. Title: Surge Arrester Performance Analysis for 132 kV Substation Insulation Coordination Studies Using PSCAD,.
42. 2010 September MSc External Examiner for Mohamed A M Almaktar, Universiti Teknologi Malaysia, Malaysia. Title: Transmission Use of System Charge Scheme for Pool Electricity Market.
43. 2009. June MSc External Examiner for Junainah Sardi, Universiti Putra Malaysia. Title: Insulation Coordination Study for 132 kV Kuala Krai-Gua Musang Transmission Line,
44. 2009 August.MSc External Examiner for Ibrahem Salem Ali Ilsaeh, Universiti Teknologi Malaysia. Title: Static Security Assessment in Deregulated Power System,
45. MSc External Examiner for Herlanda Windiarti, Universiti Teknologi Malaysia: Title: Development of an On-line and Intelligent Energy Saving Scheme for Commercial Building.
46. MSc External Examiner for Chai Min Lee, Universiti Tenaga Nasional (UNITEN) Malaysia: Title: Partial Discharge Sources from Acoustic Emission Signals in the Time-Frequency Representation.
47. 2010 March. MSc External Examiner for Azlan Abdul Rahim, Universiti Tenaga Nasional. Title: Development of Dynamic Thermal Current Rating System for Overhead Transmission Line Using Weather Monitoring and Line Clearance Measurement Method.
48.

RESEARCH

No	Project Title	Start Date	End Date	Membership
1	Architecting Virality: Content Virality As Strategies and Opportunities in Information Penetration	01-01-2018	31-12-2019	Member
2	Formulating A Sustainable Adaptive Hybrid Meta-Heuristics Algorithm for Intrusion Detection in Scalable Computer Networks	01-01-2018	31-12-2019	Member
3	Pendekatan Kreatif Meningkatkan Visibiliti Dan Kolaborasi - ACC	01-08-2017	31-07-2018	Project Leader
4	Load Management for Voltage Control Study Using Parallel Immunized-Computational	01-03-2017	28-02-2019	Project Leader

	Intelligence Technique			
5	Genetic Algorithm for Bandwidth Spectrum Allocation in Wireless Communication	01-03-2017	28-02-2019	Member
6	Particle Swarm Optimization Based Technique for Solving Multi-Area Economic Dispatch	01-09-2016	31-08-2018	Project Leader
7	Determination of Transmission Reliability Margin Considering Composition of Uncertainty with Dissimilar Types of System Operating Condition	01-09-2016	31-08-2018	Member
8	A Lightweight Emotion Recognition Engine For M-Health Applications	01-09-2016	31-08-2018	Member
9	Chaotic Evolutionary Artificial Immune Algorithm Based Technique in Multi-Area Voltage Stability Model with Renewable Energy Consideration	01-08-2016	31-07-2019	Project Leader
10	Time-Frequency Analysis with Minimized Border Distortion Effect of Power Disturbance	01-08-2016	31-07-2019	Member
11	Improved Swarm Evolutionary-Programming Technique for Voltage Control in Power Distribution System	01-04-2016	31-03-2018	Project Leader
12	The Ascertainment of Sensitive Transmission Line Due to the Impact of System Cascading Collapse	01-12-2015	30-11-2017	Member
13	A Novel Framework of Transmission Line Fault Classification Based on Class-Dependent Feature and 2-Tier Neural Network	02-11-2015	01-05-2018	Member
14	Biomimetic Dolphin Search Algorithm Considering Ecogeography Feature of Tursiops Truncatus	02-11-2015	01-05-2018	Member
15	A Novel Algorithm for Optimal Unit Commitment in Smart Grid Systems	02-11-2015	01-11-2017	Member
16	Formulating Constructive Heuristic Algorithm in Frequency Assignment	01-12-2014	31-05-2017	Member
17	Determination of Transmission Reliability Margin Considering Uncertainty of Dynamic System Cascading Collapse	01-12-2014	30-05-2017	Member
18	Adaptive Embedded Clonal Evolutionary Programming Based Loss Minimisation	01-12-2014	31-05-2017	Member
19	Electricity Tracing Via Ant-Colony-Pollinated-Flower-Algorithm (ACP-FA) For Non-	01-12-2014	31-05-2017	Member

	Discriminatory Losses Charge Allocation and Power System Monitoring			
20	Long-Term Generation Expansion Planning in Liberalized Electricity Market Using Agent-Based Modelling	01-12-2014	30-05-2017	Member
21	Characterization of Distribution Under-frequency Load Shedding Based On Disturbance Power Magnitude	15-01-2014	15-07-2016	Member
22	Hybrid Fuzzy-Swarm Algorithm in Power System Congestion Management Characterization Part 2	01-12-2013	30-11-2015	Project Leader
23	Modified Firefly Algorithm in Over Current Relay Coordination Time Minimization Part 2	01-12-2013	30-11-2015	Project Leader
24	Modified Firefly Algorithm in Over Current Relay Coordination Time Minimization Part 3	01-12-2013	30-11-2015	Project Leader
25	Long-Term Optimum Generation Mix For Malaysia Power Generation Using The Improved Dynamic Programming Technique Part 2	01-12-2013	30-11-2015	Member
26	Long-Term Optimum Generation Mix For Malaysia Power Generation Using The Improved Dynamic Programming Technique Part 3	01-12-2013	30-11-2015	Member
27	Hybrid Fuzzy-Swarm Algorithm in Power System Congestion Management Characterization	15-11-2013	14-11-2015	Project Leader
28	Modified Firefly Algorithm in Over Current Relay Coordination Time Minimization	01-06-2013	30-11-2015	Project Leader
29	Epigenetic Robotics in Humanoid Robot Assistive Autism Therapeutic Modules	01-06-2013	31-05-2016	Member
30	Long-Term Optimum Generation Mix for Malaysia Power Generation Using the Improved Dynamic Programming Technique	01-06-2013	31-05-2015	Member
31	Differential Evolutionary Ant Colony Optimization in Economic Power Dispatch Characterisation	15-12-2012	14-12-2014	Member
32	Improved Firefly Algorithm Using Adaptive Light Absorption Coefficient	01-10-2012	30-09-2014	Member
33	Application of Taguchi's Method In ANN for the Detection of Power Transformer Incipient Faults Based on Dissolved Gas Analysis (DGA) Methods	01-09-2012	31-08-2014	Member
34	Flexible Optimal Solutions of Capacity Benefit Margin Using Pareto Based Evolutionary Programming Technique	01-07-2012	30-06-2015	Member

35	Evolutionary Programming for Sizing Optimization In Stand-Alone Photovoltaic System	15-04-2012	14-10-2014	Member
36	Inter-Area Transfer Capability Assessment Considering Capacity Benefit Margin with Reliability of Interconnected System	01-04-2012	31-03-2014	Member
37	Assessment of New Power Tracing Technique Based On Computational Intelligence Method	01-07-2011	30-06-2013	Project Leader
38	New Power Tracing Technique Based on Computational Intelligence Method	01-06-2011	20-09-2013	Project Leader
39	Characterization of Cable Defects Through Varied Frequency Dissipation Factor and Wavelet Transformed Partial Discharge Diagnostic	01-09-2010	16-01-2013	Member
40	Characterisation of Sea Wave Parameters in The Generation Of Electrical Energy	01-09-2010	01-02-2013	Member
41	Computational Performance of Artificial Immune System-Based Sizing Technique for Grid-Connected Photovoltaic System	01-03-2010	01-11-2012	Project Leader
42	Application of Sea Wave for Electricity Generation	01-01-2010	31-12-2011	Project Leader
43	Power Scheduling Scheme for Intelligent Power System Applications	01-01-2010	31-12-2011	Project Leader
44	Development of Novel Sizing Technique for Grid-Connected Photovoltaic System	01-01-2010	19-02-2013	Member
45	Determination of Transmission Reliability Margin by Means Of Parametric-Bootstrap Technique	01-08-2008	31-07-2010	Member
46	A Novel Approach for The Composite Power System Expansion Planning	01-07-2008	30-06-2010	Member
47	Voltage Stability Improvement in Power System Using Ant Colony Optimization Technique	01-09-2007	30-04-2009	Project Leader
48	Available Transfer Capability Assessment by Using Cubic-Spline Interpolation Technique Incorporating Rolstonï¿½S Method	01-09-2007	28-02-2009	Member
49	Application of Artificial Neural Network for Automatic Contingency Analysis in Power System Security Assessment	01-12-2002	01-02-2004	Member
50	Contingency Analysis for Power Security Assessment	01-10-2001	01-10-2002	Member
51	Development of Voltage Stability Index for Power System Analysis	02-01-2001	02-01-2002	Project Leader
52	Development of Power Supply for a Laser Technology Based Metal Cutting Machine	02-01-1995	02-05-1999	Member

SHORT-COURSE ORGANIZED/CONDUCTED:

1. Short-course on "Electrical Machines & its Applications" – given to technicians and engineers for local company: As speaker
2. Short-course on "Electrical Power Supply for Industries" – given to technicians and engineers for local company: As speaker
3. Short-course on "Electrical Installation and Wiring" – given to technicians and engineers for local company: As speaker
4. Short-course on "Artificial Neural Networks and Evolutionary Computation Techniques (ANNECT2007)" – given to local university lecturers: Organizer and speaker 2007.
5. Short-course on "Artificial Neural Networks and Evolutionary Programming (SCANNEP2007)" – given to local university lecturers: Organizer and speaker
6. Workshop on Black-Box Modelling and Optimization – Series I (April 2011) – as speaker and organizer.
7. Workshop on Black-Box Modelling and Optimization – Series II (July 2011) – as speaker and organizer.
8. Short Course on Optimization Techniques (SCOOT2011) – September 2011 – as speaker and organizer.
9. Short-Course on Evoluntionary Programming and Particle Swarm Optimization Series I: SCEPPSO2013-I).
10. Short-Course on Evoluntionary Programming and Particle Swarm Optimization Series II: SCEPPSO2013-II).
11. Short-Course on Artificial Neural Network for Non-Engineers Research (ANNFONER2013)

ACADEMIC EVENTS ORGANIZED (PAST/FUTURE)

1. Organizing Chair - First International Power Engineering and Optimization Conference (PEOCO2007) – 6th June 2007
2. Organizing Chair - Second International Power Engineering and Optimization Conference (PEOCO2008).
3. Organizing Chair - Third International Power Engineering and Optimization Conference (PEOCO2009).
4. Organizer and speaker - One Day Workshop of Artificial Neural Networks and Evolutionary Computation Techniques (ANNECT2007) – Participants: lecturers and postgraduate students from IPTA in Malaysia.
5. Organizer and speaker - One Day Short Course of Artificial Neural Networks and Evolutionary Programming (SCANNEP2007) – Participants: lecturers and postgraduate students from IPTA in Malaysia.
6. Talk given to lecturers and postgraduate students at Kolej Universiti Teknikal Kebangsaan Malaysia (KUTKM) in Mac 2006: Talk on Artificial Intelligence and its Applications in Electrical Engineering Research.

NON-ACADEMIC EXPERIENCES

1. Motivational Talk "Survive to Excel in the University" – Speaker: Given to UKM Engineering Students, 2006
2. Motivational Talk "To Excel in the University": Speaker - Given to UiTM Electrical Engineering New Students, 2006
3. Motivational Talk "To Excel in the University": Speaker - Given to Kolej Jati Students, 2006
4. Motivational Talk "To Excel in YOUR Academic World":- Speaker: Given to UTP New Students – PETRONAS Scholarship Holders.
5. Motivational Talk "To Excel in YOUR Academic World" – Speaker: Given to IPTA New Students – PETRONAS Scholarship Holders.
6. Motivational Talk "To Excel in YOUR Academic World" : Speaker - Given to UTP International Students – PETRONAS Scholarship Holders.
7. Motivational Talk "Kempen Budi Bahasa Budaya Kita": Speaker - Given to students in Sekolah Kebangsaan Puncak Alam Fasa 2 in conjunction to Kempen Budi Bahasa.
8. Career Talk at Pusat Teknologi & Pengurusan Lanjutan (PTPL): - Career in Electrical Engineering.

REFEREES:

Assoc, Prof. Ir. Dr. Juliana Johari
Dean,
Faculty of Electrical Engineering
Universiti Teknologi MARA
40450 Shah Alam
Selangor.
Tel: 03-55435051

Prof. Dr. Akhtar Kalam
Faculty of Electrical Engineering and Health Science
Victoria University,
Melbourne,
Australia

Prof. Dr. Mohd. Wazir Mustaffa
Chair
School of Electrical Engineering
Faculty of Engineering
Universiti Teknologi Malaysia
Skudai
Johor

Prof. Dr. Izham Zainal Abidin
Dean
School of Graduate Studies (COGS)
Universiti Tenaga Nasional
Jalan Kajang-Puchong
Selangor