

**Dr. K.PALANISAMY** Ph. D  
Associate Professor, Energy and Power  
Electronics  
School of Electrical Engineering  
Vellore Institute of Technology,  
Vellore (Dt)

Phone No: 9894718720.  
Email Id: [kpalanisamy79@gmail.com](mailto:kpalanisamy79@gmail.com)

---

## **DETAILS OF PUBLICATIONS:**

### **List of Inter- National Journals**

1. N. Prabakaran, Z. Salam, C. Cecati and K. Palanisamy, "Design and implementation of new multilevel inverter topology for trinary sequence using unipolar pulse width modulation," in *IEEE Transactions on Industrial Electronics*.
2. Kumar, G.V.B.; Sarojini, R.K.; Palanisamy, K.; Padmanaban, S.; Holm-Nielsen, J.B. Large Scale Renewable Energy Integration: Issues and Solutions. *Energies* **2019**, *12*, 1996.
3. Rajagopal, R., Palanisamy, K. & Paramasivam, S. Shunt Active Filter Based on 7-Level Cascaded Multilevel Inverter for Harmonic and Reactive Power Compensation, *J. Electr. Eng. Technol.* (2019).
4. Amalorpavaraj Rini Ann Jerin, Palanisamy Kaliannan, Umashankar Subramaniam, Mohammed Shawky El Moursi, "Review on FRT solutions for improving transient stability in DFIG-WTs", **IET Renewable Power Generation**, 2018, 12,15, 1786-1799.
5. A Fathima, Kaliannan Palanisamy, Sanjeevikumar Padmanaban, Umashankar Subramaniam, "Intelligence-Based Battery Management and Economic Analysis of an Optimized Dual-Vanadium Redox Battery (VRB) for a Wind-PV Hybrid System", **Energies**, 2018, 11,10, 2785-2804.
6. Popavath, L.N, Kaliannan, P. Photovoltaic-STATCOM with Low Voltage Ride through Strategy and Power Quality Enhancement in a Grid Integrated Wind-PV System. **Electronics** 2018, 7, 51.

7. Prabaharan, N., Arun, V., Chinnadurai, T., Arulkumar, K., Jerin, A.R.A., Palanisamy, K. Analysis of symmetric multilevel inverter using unipolar pulse width modulation for photovoltaic application (2018) **Comptes Rendus de L'Academie Bulgare des Sciences**, 71 (2), pp. 252-260.
8. Rini Ann Jerin, A., Thomas, M., Palanisamy, K., Umashankar, S. Enhancing low voltage ride through capability in utility grid connected single phase solar photovoltaic system (2018) *Journal of Engineering Science and Technology*, 13 (4), pp. 1016-1033.
9. Arulkumar, K., Vijayakumar, D., Palanisamy, K. Design of optimal LLCL filter with an improved control strategy for single phase grid connected PV inverter (2018) *International Journal of Power Electronics and Drive Systems*, 9 (1), pp. 114-125.
10. Popavath, L.N., Palanisamy, K. A DSTATCOM for enhancement of power quality in distribution systems (2018) *International Journal of Pure and Applied Mathematics*, 119 (12), pp. 363-373.
11. Prabaharan, N., Arun, V., Palanisamy, K., Sanjeevikumar, P. A new pulse width modulation technique with hybrid carrier arrangement for multilevel inverter topology (2018) *Lecture Notes in Electrical Engineering*, 443, pp. 37-44.
12. Rameshkumar, K., Indragandhi, V., Sakthivel, A., Palanisamy, K. FPGA implementation and analysis of model predictive current control for three-phase voltage source inverter (2018) *International Journal of Power Electronics*, 9 (1), pp. 29-51.
13. Rini Ann A. Jerin and Palanisamy Kaliannan and Umashankar Subramaniam, "Improved Fault Ride Through Capability in DFIG based Wind Turbines using Dynamic Voltage Restorer with Combined Feed-Forward and Feed-Back Control", 5,8030991, pp. 20494-20503, **IEEE Access**, 2017.
14. Rini Ann A. Jerin and Palanisamy Kaliannan and Umashankar Subramaniam, "Improved Fault Ride Through Capability of DFIG based Wind Turbines using Synchronous Reference Frame Control based Dynamic Voltage Restorer", Vol-70, **ISA Transactions**, pp - 465-474, 2017.

15. Rini Ann A. Jerin and Palanisamy Kaliannan and Umashankar Subramaniam, "Testing of Low Voltage Ride Through Capability Compliance of Wind Turbines- A Review", International Journal of Ambient Energy, Pp: 1-20, 2017
16. Prabaharan, N., Palanisamy, K. Analysis of cascaded H-bridge multilevel inverter configuration with double level circuit. **IET Power Electronics** (2017);
17. Prabaharan, N., Palanisamy, K. A comprehensive review on reduced switch multilevel inverter topologies, modulation techniques and applications (2017) **Renewable and Sustainable Energy Reviews**, 76, pp. 1248-1282.
18. Lakshman Naik, P., Palanisamy, K. Design and performance of a PV-STATCOM for enhancement of power quality in micro grid applications (2017) International Journal of Power Electronics and Drive Systems, 8 (3), pp. 1408-1415.
19. Prabaharan N, Palanisamy K. Analysis and integration of multilevel inverter configuration with boost converters in a photovoltaic system. **Energy Conversion and Management** (2016); 128(C):327-342. DOI:10.1016/j.enconman. 2016. 09088.
20. Prabaharan N, Palanisamy K. Comparative analysis of symmetric and asymmetric reduced switch MLI topologies using unipolar pulse width modulation strategies. **IET Power Electronics** (2016); DOI:10.1049/iet-pel.2016.0283.
21. N. Prabaharan, K. Palanisamy, A Single Phase Grid Connected Hybrid Multilevel Inverter for Interfacing Photo-voltaic System, Energy Procedia, Volume 103, December 2016, Pages 250-255, ISSN 1876-6102.
22. N. Prabaharan, K. Palanisamy, Modeling and Analysis of a Quasi-linear Multilevel Inverter for Photovoltaic Application, Energy Procedia, Volume 103, December 2016, Pages 256-261, ISSN 1876-6102.
23. Rini Ann Jerin, A., Palanisamy, K., Umashankar, S., Thirumoorthy, A.D. Power quality improvement of grid connected wind farms through voltage restoration using dynamic voltage restorer (2016) International Journal of Renewable Energy Research, 6 (1), pp. 53-60.

24. K. Arulkumar, K. Palanisamy, D. Vijayakumar “Recent Advances and Control Techniques in Grid Connected Pv System – A Review,” International Journal of Renewable Energy Research, Vol.6,No.3,pp. 1037-1049,2016.
25. Lakshman naik popavath, K Palanisamy, A Dual Operation of PV-Statcom as Reactive Power Compensator and Active Power Injector in Grid Tie System: Power Quality, (2015) International Journal of Renewable Energy Research, 5 (4), pp. 973-982.
26. Hina Fathima and K. Palanisamy, “Optimized Sizing, Selection, and Economic Analysis of Battery Energy Storage for Grid-Connected Wind-PV Hybrid System,” Modelling and Simulation in Engineering, vol. 2015, Article ID 713530, 1-16 pages, 2015. doi:10.1155/2015/713530.
27. Meikandasivam, S., Vijayakumar, D., Palanisamy, K., Umashankar, S. Performance of D-STATCOM and DVR on system voltage regulation by SVPWM technique (2015) International Journal of Applied Engineering Research, 10 (10), pp. 9678-9881.
28. A. Hina Fathima, K. Palanisamy, Optimization in microgrids with hybrid energy systems – A review, **Renewable and Sustainable Energy Reviews**, Volume 45, May 2015, Pages 431-446, ISSN 1364-0321.
29. Prabaharan, N., Palanisamy, K. Investigation of single phase reduced switch count asymmetric Multilevel Inverter using Advanced Pulse Width Modulation Technique (2015) International Journal of Renewable Energy Research, 5 (3), pp. 879-890.
30. Arulkumar, K., Vijayakumar, D., Palanisamy, K. Modeling and control strategy of three phase neutral point clamped multilevel PV inverter connected to the grid (2015) Journal of Building Engineering, 3, pp. 195-202.
31. Rini Ann Jerin, A., Jayakumar, J., Prabaharan, N., Palanisamy, K., Umashankar, S., Thirumoorthy, A.D. Frequency control of a stand alone hybrid wind and solar based distributed generation system through an optimized energy storage (2015) International Journal of Applied Engineering Research, 10 (10), art. no. A9982, pp. 9982-9988.
32. Prabaharan, N., Palanisamy, K., Rini Ann Jerin, A. Asymmetric multilevel inverter structure with hybrid PWM strategy (2015) International Journal of Applied Engineering Research, 10 (55), pp. 2672-2676.

33. Arulkumar, K., Vijayakumar, D., Palanisamy, K. Estimating future site of grid PV system with optimal shade analysis (2015) *International Journal of Renewable Energy Research*, 5 (1), pp. 308-316.
34. K. Palanisamy, D. P. Kothari, M. K. Mishra, S. Meikandasivam and I. J. Raglend, "Power Quality Improvement and PV Modules Interconnection using UPQC", **Australian Journal of Electrical & Electronics Engineering**, Vol. 10, No. 2. 2013.
35. K. Palanisamy, D. P. Kothari, M. K. Mishra, S. Meikandasivam and I. J. Raglend, "Effective Utilisation of UPQC for Interconnecting PV Modules to Grid Using Power Angle Control Method", **International Journal of Electrical Power & Energy Systems**, Volume 48, June 2013, Pages 131-138
36. Asish ranjan, S.Prabhakar Karthikeyan, Ankur Ahuja, K.Palanisamy , I.Jacob Raglend, D.P. Kothari, 2009. Impact of Reactive Power in Power Evacuation from Wind Turbines .Journal of Electro Magnetic Analysis and Applications (JEMAA) (www.Scirp.org/journal/jemaa) issue 1, Volume 1, 2009.Page No: 15-23.
37. S.Prabhakar karthikeyan, K.Palanisamy, C.Rani, I.Jacob Raglend, D.P.Kothari, 2009. "Security Constrained Unit Commitment Problem with Operational, Power Flow and Environmental Constraints", (www.wseas.org), wseas transactions on power systems, issue 2, Volume 4, February 2009, Page No 53- 66.
38. S.Prabhakar karthikeyan, K.Palanisamy, I. Jacob Raglend and D. P. Kothari, 2009. "Security Constrained UCP with Operational and Power Flow Constraints" *International Journal of Recent Trends in Engineering* (<http://www.academypublisher.com/ijrte/>), Volume 1, No 3, May 2009.Page No.106-114.
39. I. Jacob Raglend, S. Prabhakar Karthikeyan, K.Palanisamy & D. P. Kothari, "Security and Emission Constrained Unit Commitment Problem with Peak Load Variations". Scientific Engineering Research Corporation (SERC) publication, *Emerging Journal of Engineering Science and Technology*, ISSN 0974-2050 ([www.serc.org.in](http://www.serc.org.in))
40. Shanmuga Sundari A, Sudhakar N, Palanisamy K and Umashankar S, "Conducted EMI Suppression in DC-DC Boost Converter Using Labview" *Global Journal of Pure and Applied Mathematics*, Volume 10, Number 3 (2014), pp. 401-412.
41. Arutselvan, V., Viswanathan, A.S., Palanisamy, K. Effective sag/swell and unbalance supply voltage compensation using DVR (2015) *International Journal of Applied Engineering Research*, 10 (6), pp. 15059-15070.

42. Shanmuga Sundari, A., Sudhakar, N., Palanisamy, K., Umashankar, S. Conducted emi suppression in DC-DC boost converter using labview (2014) International Journal of Applied Engineering Research, 9 (21), pp. 9353-9364.
43. R. Rajaram, K. Palanisamy, Sudha Ramasamy and Prabhu Ramanathan, "Selective Harmonic Elimination in PWM Inverter Using Fire Fly and Fire Works Algorithm" International Journal of Innovative Research in Advanced Engineering (IJIRAE), Volume 1, Issue 8, September 2014, Pp. 55-62.

### **List of Papers in Inter-National Conferences**

1. Karthigeyan, V., Aswin, M., Priyanka, L., Dileep Sailesh, K.N., Palanisamy, K. A comparative study of lithium ion (LFP) to lead acid (VRLA) battery for use in telecom power system (2018) 6th International Conference on Computation of Power, Energy, Information and Communication, ICCPEIC 2017, 2018-January, pp. 742-748.
2. Shrinath, K., Paramasivam, S., Palanisamy, K. An intelligent self-tuning fuzzy logic controller for pitch angle control for a wind turbine fed induction generator (2018) 2017 Innovations in Power and Advanced Computing Technologies, i-PACT 2017, 2017-January, pp. 1-5.
3. Rajesh, M., Kumar, P.V., Palanisamy, K., Umashankar, S., Meikandasivam, S., Paramasivam, S. Power quality analysis on academic and hostel buildings of educational institute - Part I (2016) 2016 International Conference on Energy Efficient Technologies for Sustainability, ICEETS 2016, art. no. 7583882, pp. 932-941.
4. Kumar Reddy, P.V., Rajesh, M., Palanisamy, K., Umashankar, S., Meikandasivam, S., Paramasivam, S. Power quality survey and analysis at educational institution loads (2016) Proceedings of IEEE International Conference on Circuit, Power and Computing Technologies, ICCPCT 2016, art. no. 7530238.
5. Popavath, L.N., Palanisamy, K., Kothari, D.P. Research and topology of shunt active filters for quality of power (2016) Advances in Intelligent Systems and Computing, 433, pp. 167-180.
6. Fathima, A.Hina; Prabaharan, N.; Palanisamy, K., "Sizing of a VRB battery based on max-min method of power dispatch in a wind-PV hybrid system," in *Energy Conversion (CENCON), 2015 IEEE Conference on*, vol., no., pp.221-226, 19-20 Oct. 2015 doi: 10.1109/CENCON.2015.7409543
7. Prabaharan, N.; Fathima, A.Hina; Palanisamy, K., "New hybrid multilevel inverter topology with reduced switch count using carrier based pulse width modulation

- technique," in *Energy Conversion (CENCON), 2015 IEEE Conference on* , vol., no., pp.176-180, 19-20 Oct. 2015 doi: 10.1109/CENCON.2015.7409535
8. Arulkumar, K.; Vijayakumar, D.; Palanisamy, K., "Efficient control design for single phase grid tie inverter of PV system," in *Advances in Electronics, Computers and Communications (ICAEECC), 2014 International Conference on* , vol., no., pp.1-6, 10-11 Oct. 2014. doi: 10.1109/ICAEECC.2014.7002461
  9. K. Palanisamy, Sukumar Mishra, D. P. Kothari, I. Jacob raglend , "Instantaneous Power Theory Based Unified Power Quality Conditioner (UPQC)" in PEDES 2010 POWER INDIA national conference organized by IEEE and IIT Delhi.
  10. A. Hina Fathima, K. Palanisamy. "Battery Energy Storage Applications in Wind Integrated Systems – A Review", IEEE co-sponsored International Conference on Smart Electric Grid 2014, KLU University, Vijayawada.
  11. Jenifernisha S, Yogesh M, K. Palanisamy, Integrated Renewable Energy Sources With Storage Based Smart Power Distribution System, ICAEE, 2014
  12. Karthik D, Sheik Barideen S., K. Palanisamy, Power Quality Improvement Using 3-Phase Unified Power Quality Conditioner With Minimum VA Rating, ICAEE, 2014
  13. S.Prabhakar Karthikeyan, K.Palanisamy, Jacob Raglend, D.P.Kothari 2009. "Impact of Fault and its Effect on Reactive Power in Power Evacuation from Wind Turbines". (Paper ID: 80793). Paper accepted in the Asia Pacific-Power and Energy Engineering Conference APPEEC 2009, sponsored by IEEE Power & Energy Society (PES) and Wuhan University, China March 28-30 2009.
  14. S.Prabhakar Karthikeyan, K.Palanisamy I.Jacob Raglend, L. Jacob Varghese, D.P.Kothari. 2009. "Comparison of Intelligent Techniques to Solve Economic Load Dispatch Problem with Line Flow Constraints". Paper presented in IEEE International Advance Computing Conference (IACC '09) March 6-7, 2009, Patiala – India. Page No.446-452
  15. S.Prabhakar Karthikeyan, Asish ranjan, Ankur Ahuja, K.Palanisamy, I. Jacob Raglend, D.P. Kothari, "Impact of Grid and Fault ride through capability in Power Evacuation from Wind Turbines" Paper presented in International Conference on Electrical Energy Systems & Power Electronics in Emerging Economies (ICEESPEEE) 16th and 17th April 2009, SRM University, Chennai, Tamil Nadu, India
  16. S.Prabhakar Karthikeyan, K.Palanisamy, I.Jacob Raglend, D.P.Kothari, "Impact of Fault and its Effect on Reactive Power in Power Evacuation from Wind Turbine", Asia Pacific Power and Energy Engineering Conference, March 28-30, 2009.

### **List of Papers in National Conferences:**

1. I Jacob Raglend, S Prabhakar Karthikeyan, K Palanisamy, D P Kothari.2009. Solutions to Economic Load Dispatch Problem with Line Flow Constraints using Various Intelligent Techniques. Paper presented in AICTE Sponsored National Conference on “Recent Trends in IT Applications to Engineering Problems” organized by “Gyan Ganga Institute of Technology and Management, Bhopal. India, November 14-15 2008.
2. S.Prabhakar Karthikeyan, Jacob Raglend, K.Palanisamy, Abhishek Kumar & Abhishek Chaubey. 2009. “Security Assessment Using Sensitivity Factor for a Distribution System” Paper presented in National Conference on Problems, Practices and Prospectus in Power Distribution System, Operation and Control (PPPPDSOC-2009), organized by Punjab Engineering College (Deemed University), Chandigarh-160012, (Union Territory), India.23rd -24th January 2009.
3. S.Prabhakar Karthikeyan, K.Palanisamy, A. Sreemathy, S. Nithi, I.Jacob Raglend & D.P.Kothari, 2009. “Short Term Unit Commitment Problem With Operational Constraints Using Back Propagation Neural Networks. Paper presented in National Conference on Advances in computational Intelligence Applications in Power, Control, Signal Processing and Telecommunications” (NCACI-2009), organized by Silicon Institute of Technology, Silicon Hills, Patia, Bhubaneswar, Orrisa.751024. 9th -11th January 2009.
4. Devina Verma, Pawan kumar, S.Prabhakar Karthikeyan, Abhimanyu Khatwani, K.Palanisamy, Jacob Raglend, 2009. “Quantitative and Qualitative Analysis on Loss Coefficients in Power Loss Calculation”. Paper presented in National Women’s Conference on Exploring Potentialities Of Women In Engineering (EPWIE), July 3-4, 2009, Charotar Institute of Technology (CIT), Changa, Gujarat.
5. I.Jacob Raglend, S.P.Karthikeyan, K.Palanisamy, N.P.Padhy, D.P.Kothari, “Solution to Profit Based Unit Commitment Problem using LR-GA Method”, GridTech, 2009
6. S.Prabhakar Karthikeyan, K. Palanisamy, I. Jacob Raglend, D.P.Kothari, “Solutions to Economic Load Dispatch Problem with Transmission Line Flow Constraints using Various Intelligent Techniques”, National Conference on Recent Trends in IT Applications to Engineering Problem”, Gyan Ganga Institute of Technology and Management.



7. Presented a paper “Design & Development of Low Cost Telemedicine Application Using Standard TV Set & Cellular Phone” in a National conference on IT for Rural development.
8. S.Prabhakar Karthieyan, K.Palanisamy, I.Jacob Raglend, D.P.Kothari, “Impact of Fault and its Effect on Reactive Power in Power Evacuation from Wind Turbine”, Asia Pacific Power and Energy Engineering Conference, March 28-30, 2009.
9. Presented a paper “Efficient Control Design for Single phase Grid tie inverter of PV System” National conference in Anna University Chennai
- 10.** Presented a paper “An Overview on different current controllers in Grid Connected Renewable Energy Systems” National conference in Anna University Chennai