

## **PUBLICATION DETAILS OF PROPOSED DC MEMBERS**

**Name** : Dr. Palanisamy K  
**Designation** : Associate Professor  
**Department** : Energy and Power Electronics  
**University/Institute** : Vellore Institute of Technology  
**Place & Pincode** : Vellore-632014  
**Mobile** : 9894718720  
**E-Mail** : kpalanisamy@vit.ac.in

### **Journal Publications:**

1. Ramesh Pandurangan, K Palanisamy, S Paramasivam(2020), "Effects of Current Distortion on DC Link Inductor and Capacitor Lifetime in Variable Frequency Drive connected to Grid with Active Harmonic Filter", IEEE Transactions on Industry Applications, 10.1109/TIA.2020.3028555
2. Kamala Sarojini Ratnam, K Palanisamy, Guangya Yang(2020). "Future low-inertia power systems: Requirements, issues, and solutions-A review", Renewable and Sustainable Energy Reviews, Volume 124, May 2020, 109773.
3. Amjed Hina Fathima and Kaliannan Palanisamy (2019), "Integration and energy management of a hybrid Li-VRB battery for renewable applications", Renewable Energy Focus, Elsevier, Vol. 30, pp. 13-20.
4. Prabakaran N, Zainal Salam, Carlo Cecati and Palanisamy K (2019), "Design and implementation of new multilevel inverter topology for trinary sequence using unipolar pulse width modulation", IEEE Transactions on Industrial Electronics (Early Access), pp. 1-1, DOI: 10.1109/TIE.2019.2914636.
5. Natarajan Prabakaran, Pietro Elia Campana, Amalorpavaraj Rini ann Jerin, Kaliannan Palanisamy (2019), "A new approach for grid integration of solar photovoltaic system with maximum power point tracking using multi-output converter", Energy Procedia, Elsevier, Vol. 159, pp. 521-526.
6. Ragam Rajagopal, K Palanisamy, S Paramasivam (2019), "Shunt Active Filter Based on 7-Level Cascaded Multilevel Inverter for Harmonic and Reactive Power Compensation", Journal of Electrical Engineering & Technology, Springer, pp. 1-9.
7. Brahmendra Kumar G V, Ratnam Kamala Sarojini, Palanisamy K, Sanjeevikumar Padmanaban, and Jens Bo Holm-Nielsen (2019), "Large Scale Renewable Energy Integration: Issues and Solutions", Energies, Vol. 12, Issue 10, Article No. 1996.
8. Hina Fathima A, Kaliannan Palanisamy, Sanjeevikumar Padmanaban and Umashankar Subramaniam (2018), "Intelligence-based battery management and economic analysis of an optimized dual-Vanadium Redox Battery (VRB) for a Wind-PV Hybrid System", Energies, Vol. 11, Issue 10, Article No. 2785.

9. Amalorpavaraj Rini Ann Jerin, Palanisamy Kaliannan, Umashankar Subramaniam, Mohammed Shawky El Moursi (2018), "Review on FRT solutions for improving transient stability in DFIG-WTs", *IET Renewable Power Generation*, Vol. 12, Issue 15, pp. 1786-1799.
10. Rini Ann Jerin A, Palanisamy Kaliannan and Umashankar Subramaniam (2018), "Testing of low-voltage ride through capability compliance of wind turbines—a review", *International Journal of Ambient Energy*, Vol. 39, Issue 8, pp. 891-897.
11. Rini Ann Jerin A, Manu Thomas, Palanisamy K and Umashankar S (2018), "Enhancing low voltage ride through capability in utility grid connected single phase solar photovoltaic system", *Journal of Engineering Science and Technology*, Vol. 3, Issue 4, pp. 1016-1033.
12. Rini Ann Jerin A, Palanisamy K and Umashankar S (2018), "Grid Integration of Wind Turbines: Issues and Solutions", *Smart Grid Systems: Modeling and Control*, pp. 59-82.
13. Lakshman Naik Popavath and Palanisamy Kaliannan (2018), "Photovoltaic-STATCOM with low voltage ride through strategy and power quality enhancement in a grid integrated Wind-PV system", *Electronics*, Vol. 7, Issue 4, Article No. 51.
14. Arulkumar K, Vijayakumar D and Palanisamy K (2018), "Design of Optimal LLCL Filter with an Improved Control Strategy for Single Phase Grid Connected PV Inverter", *International Journal of Power Electronics and Drive Systems (IJPEDS)*, Vol. 9, Issue 1, pp. 114-125.
15. Amalorpavaraj Rini Ann Jerin, Natarajan Prabakaran, Nallapaneni Manoj Kumar, Kaliannan Palanisamy, Subramaniam Umashankar and Pierluigi Siano (2018), "Smart grid and power quality issues", *Hybrid-Renewable Energy Systems in Microgrids*, pp. 195-202.
16. Natarajan Prabakaran, Amalorpavaraj Rini Ann Jerin, Ehsan Najafi and Kaliannan Palanisamy (2018), "An overview of control techniques and technical challenge for inverters in micro grid", *Hybrid-Renewable Energy Systems in Microgrids*, pp. 97-107.
17. Amjed Hina Fathima and Kaliannan Palanisamy (2018), "Renewable systems and energy storages for hybrid systems", *Hybrid-Renewable Energy Systems in Microgrids*, pp. 147-164.
18. Natarajan Prabakaran, Vijayakumar Arun, Thangam Chinnadurai, Kalyanasundaram Arulkumar, Amalorpavaraj Rini Ann Jerin and Kaliannan Palanisamy (2018), "Analysis of symmetric multilevel inverter using unipolar pulse width modulation for photovoltaic application", *Comptes rendus de l'Academie bulgare des Sciences*, Vol. 71, No. 2, pp.252-260.
19. Rameshkumar K, Indragandhi V, Sakthivel A and Palanisamy K (2018), "FPGA implementation and analysis of model predictive current control for three-phase voltage source inverter", *International Journal of Power Electronics*, Vol. 9, Issue 1, pp. 29-51.
20. Rini Ann Jerin A, Palanisamy K, Umashankar S and Padmanaban Sanjeevikumar (2018), "Comparative Analysis of Feed-Forward and Synchronous Reference Frame

Control-Based Dynamic Voltage Restorer", *Advances in Power Systems and Energy Management*, Springer, pp. 411-420.

21. Prabaharan N, Arun V, Palanisamy K and Sanjeevikumar P (2018), "A New Pulse Width Modulation Technique with Hybrid Carrier Arrangement for Multilevel Inverter Topology", *Advances in Electronics, Communication and Computing*, Springer, pp. 37-44.
22. Rameshkumar Kanagavel, Indragandhi V R, Palanisamy K and Ramani Kannan (2017), "A Novel Current Control Technique for Photo Voltaic Integrated Single Phase Shunt Active Power Filter", *International Journal of Renewable Energy Research (IJRER)*, Vol. 7, Issue 4, pp. 1709-1722.
23. Prabaharan N, Rini Ann Jerin A, Palanisamy K and Umashankar S (2017), "Integration of single phase reduced switch multilevel inverter topology for grid connected photovoltaic system", *Energy Procedia*, Elsevier, Vol. 138, pp. 1177-1183.
24. Rini Ann Jerin A, Prabaharan N, Palanisamy K and Umashankar S (2017), "FRT Capability in DFIG based Wind Turbines using DVR with Combined Feed-Forward and Feed-Back Control", *Energy Procedia*, Elsevier, Vol. 138, pp. 1184-1189.
25. Rini Ann Jerin A, Palanisamy K and Umashankar S (2017), "Improved fault ride through capability of DFIG based wind turbines using synchronous reference frame control based dynamic voltage restorer", *ISA Transactions*, Elsevier, Vol. 70, pp. 465-474.
26. Lakshman Naik P and Palanisamy K (2017), "Design and Performance of a PV-STATCOM for Enhancement of Power Quality in Micro Grid Applications", *International Journal of Power Electronics and Drive Systems*, Vol. 8, Issue 3, pp. 1408-1415.
27. Natarajan Prabaharan and Kaliannan Palanisamy (2017), "A comprehensive review on reduced switch multilevel inverter topologies, modulation techniques and applications", *Renewable and Sustainable Energy Reviews*, Elsevier, Vol. 76, pp. 1248-1282.
28. Natarajan Prabaharan, Subramani Saravanan, Amalorpavaraj Rini Ann Jerin and Kaliannan Palanisamy (2017), "A reduced switch asymmetric multilevel inverter topology using unipolar pulse width modulation strategies for photovoltaic application", *Recent Developments on Power Inverters*, pp. 29-48.
29. Rameshkumar K, Indragandhi V, Palanisamy K and Arunkumari T (2017), "Model Predictive Current Control of Single Phase Shunt Active Power Filter", *Energy Procedia*, Elsevier, Vol. 117, pp. 658-665.
30. Natarajan Prabaharan and Kaliannan Palanisamy (2017), "Analysis of cascaded H-bridge multilevel inverter configuration with double level circuit", *IET Power Electronics*, Vol. 10, Issue 9, pp. 1023-1033.
31. Rini Ann Jerin A, Prabaharan N, Palanisamy K and Umashankar S (2017), "FRT Capability in DFIG based Wind Turbines using DVR with Combined Feed-Forward and Feed-Back Control", *Energy Procedia*, Elsevier, Vol. 138, Issue 1, pp. 1184-1189.
32. Rini Ann Jerin Amalorpavaraj, Palanisamy Kaliannan, Sanjeevikumar Padmanaban, Umashankar Subramaniam and Vigna K. Ramachandaramurthy (2017), "Improved fault ride through capability in DFIG based wind turbines using dynamic voltage

restorer with combined feed-forward and feed-back control", IEEE Access, Vol. 5, pp. 20494-20503.

33. Mallakuntla Rajesh, Palanisamy K, Umashankar S, Meikandasivam S and Paramasivam S (2017), "Analysis of Power Quality in Hostel and Academic Buildings of Educational Institute", Artificial Intelligence and Evolutionary Computations in Engineering Systems, Springer, pp. 713-729.
34. Natarajan Prabaharan and Kaliannan Palanisamy (2016), "Comparative analysis of symmetric and asymmetric reduced switch MLI topologies using unipolar pulse width modulation strategies", IET Power Electronics, Vol. 9, Issue 15, pp. 2808-2823.
35. Prabaharan N and Palanisamy K (2016), "Modeling and analysis of a quasi-linear multilevel inverter for photovoltaic application", Energy Procedia, Elsevier, Vol. 103, pp. 256-261.
36. Prabaharan N and Palanisamy K (2016), "A single phase grid connected hybrid multilevel inverter for interfacing photo-voltaic system", Energy Procedia, Elsevier, Vol. 103, pp. 250-255.
37. Prabaharan N and Palanisamy K (2016), "Analysis and integration of multilevel inverter configuration with boost converters in a photovoltaic system", Energy Conversion and Management, Elsevier, Vol. 128, pp. 327-342.
38. Arulkumar K, Vijayakumar D and Palanisamy K (2016), "Recent advances and control techniques in grid connected PV system—A review", International Journal of Renewable Energy Research (IJRER), Vol. 6, Issue 3, pp. 1031-1049.
39. Amjed Hina Fathima and Kaliannan Palanisamy (2016), "Energy storage systems for energy management of renewables in distributed generation systems", Energy Management of Distributed Generation Systems, IntechOpen.
40. Rini Ann Jerin Amalorpavaraj, Palanisamy K, Umashankar S and Thirumoorthy A D (2016), "Power quality improvement of grid connected wind farms through voltage restoration using dynamic voltage restorer", International Journal of Renewable Energy Research (IJRER), Vol. 6, Issue 1, pp. 53-60.
41. Lakshman Naik Popavath, Palanisamy K and Kothari D P (2016), "Research and Topology of Shunt Active Filters for Quality of Power", Information Systems Design and Intelligent Applications, Springer, pp. 167-180.
42. Prabaharan Natarajan and Palanisamy K (2015), "Investigation of single phase reduced switch count asymmetric multilevel inverter using advanced pulse width modulation technique", International Journal of Renewable Energy Research (IJRER), Vol. 5, Issue 3, pp. 879-890.
43. Arulkumar K, Vijayakumar D and Palanisamy K (2015), "Modeling and control strategy of three phase neutral point clamped multilevel PV inverter connected to the grid", Journal of Building Engineering, Elsevier, Vol. 3, pp. 195-202.
44. Hina Fathima A and Palanisamy K (2015), "Optimization in microgrids with hybrid energy systems—A review", Renewable and Sustainable Energy Reviews, Vol. 45, pp. 431-446.
45. Arulkumar K, Vijayakumar D and Palanisamy K (2015), "Estimating Future Site of Grid PV System with Optimal Shade Analysis", International Journal of Renewable Energy Research, Vol. 5, Issue 1, pp. 308-316.

46. Prabaharan N and Palanisamy K (2015), "Investigation of single phase reduced switch count asymmetric multilevel inverter using advanced pulse width modulation technique", International Journal of Renewable Energy Research (IJRER), Vol. 5, Issue 3, pp. 879-890.
47. Prabaharan N, Palanisamy K and Rini Ann Jerin A (2015), "Asymmetric multilevel inverter structure with hybrid PWM strategy", International Journal of Applied Engineering Research, Vol. 10, Issue 55, pp. 2672-2676.
48. Lakshman Naik Popavath and Palanisamy K (2015), "A Dual Operation of PV-STATCOM as Active Power Filter and Active Power Injector in Grid Tie Wind-PV System", International Journal of Renewable Energy Research, Vol. 5, pp. 978-982.
49. Hina Fathima and Palanisamy K (2015), "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.
50. Rajaram R, Palanisamy K, Sudha Ramasamy and Prabhu Ramanathan (2014), "Selective harmonic elimination in PWM inverter using fire fly and fireworks algorithm", International Journal of Innovative Research in Advanced Engineering (IJIRAE), Vol. 1, Issue 8, pp. 55-62.

### **Conference Publications:**

1. G Anilkumar, A Chakradhar, GV Brahmendra Kumar, K Palanisamy(2020), "Resource assessment and energy yield estimation for 160 MW solar-wind hybrid project using system advisory model, IOP Conference Series: Materials Science and Engineering.
2. Ramesh P, Palanisamy K, Paramasivam S and Govarthan R (2018), "Current Distortion Effects on Front End of Variable Frequency Drive Under Shunt Active Filter Connected Grid", IEEE International Conference on Power Electronics, Drives and Energy Systems (PEDES), IEEE, 18-21 Dec. 2018, Indexed in IEEE Explorer, DOI: 10.1109/PEDES.2018.8707871.
3. Ragam Rajagopal, Palanisamy K and Paramasivam S (2018), "A Technical Review on Control Strategies for Active Power Filters", International Conference on Emerging Trends and Innovations In Engineering and Technological Research (ICETIETR), DOI: 10.1109/ICETIETR.2018.8529008.
4. Rameshkumar Kanagavel, Indragandhi V and Palanisamy K (2018), "Design and Analysis of Model Predictive Control based Direct and Indirect Current strategy for Single Phase Shunt Active Power Filter", MATEC Web of Conferences, Vol. 225, Article No. 05017.
5. Prabaharan N, Zainal Bin Salam and Palanisamy K (2017), "A hybrid multilevel inverter with reduced power electronic components with unipolar trapezoidal pulse width modulation", IEEE Conference on Energy Conversion (CENCON), 30-31 October 2017, Indexed in IEEE Explorer, DOI: 10.1109/CENCON.2017.8262499.
6. Shrinath K, Paramasivam S and Palanisamy K (2017), "An intelligent self-tuning fuzzy logic controller for pitch angle control for a wind turbine fed induction

- generator", Innovations in Power and Advanced Computing Technologies (i-PACT), 21-22 April 2017, Indexed in IEEE Explorer, DOI: 10.1109/IPACT.2017.8244881.
7. Prabakaran N and Palanisamy K (2016), "A new hybrid asymmetric multilevel inverter with reduced number of switches", IEEE International Conference on Power Electronics, Drives and Energy Systems (PEDES), 14-17 December 2016, Indexed in IEEE Explorer, DOI: 10.1109/PEDES.2016.7914437.
  8. Arulkumar K, Vijayakumar D and Palanisamy K (2016), "Investigation of PLL performance for utility connected systems under abnormal grid conditions", IEEE International Conference on Power and Energy (PECon), 28-29 November 2016, Indexed in IEEE Explorer, DOI: 10.1109/PECON.2016.7951538.
  9. Rajesh M, Vamsi Kumar P, Palanisamy K, Umashankar S, Meikandasivam S and Paramasivam S (2016), "Power quality analysis on academic and hostel buildings of educational institute-part I", International Conference on Energy Efficient Technologies for Sustainability (ICEETS), DOI: 10.1109/ICEETS.2016.7583882.
  10. Vamsi Kumar Reddy P, Rajesh M, Palanisamy K, Umashankar S, Meikandasivam S and Paramasivam S (2016), "Power quality survey and analysis at educational institution loads", International Conference on Circuit, Power and Computing Technologies (ICCPCT), 18-19 March 2016, Indexed in IEEE Explorer, DOI: 10.1109/ICCPCT.2016.7530238.
  11. Hina Fathima A, Prabakaran N and Palanisamy K (2015), "Sizing of a VRB battery based on max-min method of power dispatch in a wind-PV hybrid system", IEEE Conference on Energy Conversion (CENCON), 19-20 October 2015, Indexed in IEEE Explorer, DOI: 10.1109/CENCON.2015.7409543.
  12. Prabakaran N, Hina Fathima A and Palanisamy K (2015), "New hybrid multilevel inverter topology with reduced switch count using carrier based pulse width modulation technique", IEEE Conference on Energy Conversion (CENCON), 19-20 October 2015, Indexed in IEEE Explorer, DOI: 10.1109/CENCON.2015.7409535.
  13. Arulkumar K, Vijayakumar D and Palanisamy K (2014), "Efficient control design for single phase grid tie inverter of PV system", International Conference on Advances in Electronics Computers and Communications, 10-11 October 2014, Indexed in IEEE Explorer, DOI: 10.1109/ICAEECC.2014.7002461.
  14. Hina Fathima A and Palanisamy K (2014), "Battery energy storage applications in wind integrated systems—A review", International Conference on Smart Electric Grid (ISEG), 19-20 September 2014, Indexed in IEEE Explorer, DOI: 10.1109/ISEG.2014.7005604
  15. Jenifer nisha S, Yogesh M and Palanisamy K (2014), "Integrated renewable energy sources with storage based smart power distribution system", International Conference on Advances in Electrical Engineering (ICAEE), 9-11 January 2014, Indexed in IEEE Explorer, DOI: 10.1109/ICAEE.2014.6838538.
  16. Karthik D and Palanisamy K (2014), "Power Quality improvement using 3-phase Unified Power Quality Conditioner with minimum VA rating", International Conference on Advances in Electrical Engineering (ICAEE), 9-11 January 2014, Indexed in IEEE Explorer, DOI: 10.1109/ICAEE.2014.6838500.

