Curriculum Vitae

Dr. Jayaprakash P
Senior Joint Director (ECS),
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Content

Curriculum Vitae

1. Name — Dr. Jayaprakash P
2. Designation — Senior Joint Director (ECS),
   Directorate of Technical Education,
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3. Date of Birth — 08-05-1975
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6. Online Information:
   - Present Institution: www. dtekerala.gov.in
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   - Google website: https://sites.google.com/view/jayaprakashp/home.
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     - [Citations- 1761, h index- 17, i10 index-30] as on 15th March 2025.
7. Education:

Degree	Class	Institute/University	Year	Specialization
B.Tech.	First class (Honours)	Govt. College of Engineering, Kannur. (University of Calicut), Kerala.	1996	Electrical and Electronics Engg.,
M.Tech	CGPA 9.388	Indian Institute of Technology Delhi	2003	Energy Studies
Ph.D.	-	Indian Institute of Technology Delhi	2009	Power Electronics

8. Employment Record:

Period	Institute	Designation
1997-98	Integrated Rural Technology Centre, Palakkad	Research Associate
1998-99	National Hydroelectric Power Corporation, Faridabad, New Delhi.	Engineer

1999- 2009	Govt. College of Engineering, Kannur	Assistant Professor
2009-2014	Govt. College of Engineering, Kannur	Associate Professor
2014-2023	Govt. College of Engineering, Kannur,/ Govt. Engineering College, Wayanad	Professor/ HoD (EEE)
2023-24	Govt. College of Engineering, Kannur	Principal
2024-Till date	Directorate of Technical Education	Senior Joint Director (ECS)

9. Summary of Other Achievements:

1. **Awards:**

   01. "Outstanding Researcher Award 2023" by IEEE Kerala section for the research contributions, Awarded on 13 Jan 2024.
   02. "DAAD" Scholarship for M Tech thesis work at Technical University, Dresden, Germany during the period from May 2002 to March 2003.

2. **Professional Membership**

   01. Member, Indian Society for Technical Education, (LM28442), Since 2000.
   02. Senior Member, IEEE, USA (90340302), Since 2008.

3. **PhD Guided:**

   01. Nirmal Mukundan "COntrol, design and analysis of multilevel inverter based solar energy conversion systems" APJ Abdul Kalam Technological University, Kerala, 18 Aug 2021.
   02. Teena George, "Analysis and control of Type IV wind energy conversion systems", APJ Abdul Kalam Technological University, Kerala, 04 July 2022.

4. **PhD Guide:**

   01. Sooraj Suresh Kumar "Power electronic controllers for fuel cell systems" APJ Abdul Kalam Technological University, Kerala, Registered in Apr **2018**.
   02. Sruthi M, "Analysis of PV-fuel cell hybrid systems" APJ Abdul Kalam Technological University, Kerala, Registered in **Aug 2020**.

5. **Book and Patents:**

   01. Book on "Power Quality and Distributed Generation " Jayaprakash P and D P Kothari, Narosa Publishing house Pvt. Ltd, New Delhi, October 2022.
   02. Applied for an Indian Patent on "Integrated H-bridge VSC with a zig-zag transformer based three-phase four-wire DSTATCOM", 2011, submitted to TIFAC, IIT Delhi.
   03. Applied for Indian Patent on "A novel transformer configuration for neutral current compensation". 2011, submitted to TIFAC, IIT Delhi.
   04. Applied for Indian patent on "Binary hybrid multilevel inverter for three phase grid connected solar PV system with maximum power point tracking and power quality improvement " submitted to KSCSTE, Govt. of Kerala.

6. **List of Journal Publications:**

01. V. Sukanya, B. Bijukumar, C. M. Nirmal Mukundan, and **Jayaprakash P**, "Quadratic source sequence-based multi-input 17-level inverter with closed-loop control for thermoelectric energy grid integration," *Computers and Electrical Engineering*, Vol. 122, 2025. (Impact factor: 4.0)
02. C. M. Nirmal Mukundan, Ahmed Al-Durra, Vineeth K., Jayaprakash P, Tarek EL-Fouly, and Hatem Zeineldin "New Multilevel Inverter with Reduced Component Count for a Standalone Solar Energy Conversion System," *IEEE Transactions on Industry Applications,* vol. 60, no. 2, pp. 3247-3262, March- April 2024. (Impact factor: 4.2)
03. C. M. Nirmal Mukundan, S. B. Q. Naqvi, Bhim Singh and Jayaprakash P, Multi-Functional Grid Integrated Solar Power Transfer System With Improved FAGI Based Control for Enhanced Performance at Non-Ideal Load Conditions," *Electric Power Systems Research*, Elsevier, Volume 225, 2023, 109885. (Impact factor: 3.3)
04. Nirmal Mukundan C M, Sangeetha V, Jayaprakash P, Asokan O V, Ahmed Al-Durra, Tarek EL-Fouly and Hatem Zeineldin "A New Multilevel Inverter Based Grid Connected Reliable Solar Power Transfer Unit with Power Quality Enhancement," *IEEE Transactions on Industrial Applications***,** vol. 59, no. 2, pp. 1887-1900, March-April 2023. (Impact factor: 3.488)
05. Teena George, Jayaprakash P, Tinu Francis, and Christopher E, "Wind Energy Conversion System Based PMSG for Maximum Power Tracking and Grid Synchronization Using Adaptive Fuzzy Logic Control", Journal of Applied Research and Technology, 20(6), 703-717, December 2022. (Impact factor: 0.167).
06. Sooraj Suresh Kumar, Nirmal M C M and Jayaprakash P, "Modified LMS Control for a Grid Interactive PV - Fuel Cell - Electrolyzer Hybrid System with Power Dispatch to the Grid", in *IEEE Transactions on Industry Applications,* vol. 56, no. 6, pp. 1887-1900, Nov-Dec 2022. (Impact factor: 3.488)
07. Renuka Varma P C, Nirmal Mukundan C M, P. Jayaprakash., Al-Durra, A.: "Grid integrated solar energy transfer system with a two-layer complex coefficient filter-based control". *IET Power Electronics.* 15, 168–185 (2022). https://doi.org/10.1049/pel2.12224.
08. Nirmal Mukundan C M, Vineeth Kallaveetil, Sooraj Suresh Kumar, Jayaprakash P "An Improved H-Bridge Multilevel Inverter-Based Multi-Objective Photovoltaic

Power Conversion System," in *IEEE Transactions on Industry Applications*, vol.57, no.6, 2021. (Impact factor: 3.488)

09. C. M. Nirmal Mukundan, Syed Bilal Qaiser Naqvi, Yashi Singh, Bhim Singh, and P. Jayaprakash, "A Cascaded Generalized Integral Control for Multi-Objective Grid-Connected Solar Energy Transfer System," in *IEEE Transactions on Industrial Electronics,* vol.68, no.12, 2021. (Impact factor: 7.515)
10. Nirmal Mukundan C. M., and Jayaprakash P, "Realization of Cascaded H-bridge Multilevel Inverter based Grid Integrated Solar Energy System with Band Stop Generalized Integral Control" *IEEE Transactions on Industrial Applications*, vol.57, no.1, 2021. (Impact factor: 3.488)
11. Nirmal Mukundan C. M., Syed Bilal Qaiser Naqvi, Bhim Singh, and P. Jayaprakash, "Single Layer Decoupled Multiple Order Generalized Integral Control for Single-Stage Solar Energy Grid Integrator with Maximum Power extraction", *IEEE Transactions on Industrial Informatics,* vol.17, no.1, 2021.. (Impact factor: 9.112)
12. Nirmal Mukundan C M, Jayaprakash Pychadathil, Umashankar Subramaniam, and Dhafer J. Almakhles, "Trinary Hybrid Cascaded H-bridge Multilevel Inverter Based Grid-Connected Solar Power Transfer System Supporting Critical Load" *IEEE Systems Journal*, vol.15, no. 3, 2021.(Impact factor: 3.987)
13. Nirmal Mukundan C. M., Yashi Singh, Syed Bilal Qaiser Naqvi, Bhim Singh, and Jayaprakash Pychadathil, "Multi-Objective Solar Power Conversion System with MGI Control for Grid Integration at Adverse Operating Conditions" *IEEE Transactions on Sustainable Energy, vol.11, no.4, 2020.* (Impact factor: 7.440)
14. C. M. Nirmal Mukundan, P. Jayaprakash, Umashankar Subramaniam, and Dhafer J. Almakhles, "Damped SOGI Controlled Binary Hybrid Multilevel Inverter for Three-Phase Grid Connected Solar Energy Conversion System with Power Quality Improvement" *IEEE Access, vol.8, 2020.* (Impact factor: 3.745)
15. C. M. Nirmal Mukundan and P. Jayaprakash, "DSOGI with PR Controlled CHB Inverter based Two Stage Exalted Photovoltaic Integration in Power System with Power Quality Enhancement" *IET Renewable power generation*, 2020. (Impact factor: 3.981)
16. Vivek Narayanan, Bhim Singh and Jayaprakash P., "A New Two Leg Converter Based Multifunctional TPFW Grid Tied Single Stage Solar PV System", *Journal of the Institution of Engineers (India): Series B*, Nov. 2020. (Impact factor: 0.390)

17. Teena George and Jayaprakash P "Maximum Power Tracking and Power Sharing in Grid Connected WECS using Modified PFC Rectifier and PR controlled Inverter**,"** *Electric Power Components and systems,* Nov 2020. (Impact factor: 0.821)
18. Teena George, Jayaprakash P., Umashankar Subramaniam, and Dhafer J. Almakhles, "Frame-Angle Controlled Wavelet Modulated Inverter and Self-Recurrent Wavelet Neural Network Based Maximum Power Point Tracking for Wind Energy Conversion System," *IEEE Access*, August 2020. (Impact factor: 3.745)
19. Bhim Singh, Jayaprakash P, and D P Kothari, "A T-Connected transformer and three-leg VSC based DSTATCOM for power quality improvement," *IEEE Transactions on Power Electronics*, vol. 23, no. 6, pp. 2710-2718, Nov 2008. (Impact factor: 4.728)
20. Bhim Singh, Jayaprakash P, and D P Kothari, "Comprehensive Study of DSTATCOM Configurations", *IEEE Transactions on Industrial Informatics,* 2014. (Impact factor: 9.112)
21. Bhim Singh, Jayaprakash P, D P Kothari "Implementation of neural network controlled VSC and a transformer as three phase four wire DSTATCOM," ***I****EEE Transactions on Industrial Applications*, vol.47, no.4, August 2011. (Impact factor: 3.488)
22. Bhim Singh, Jayaprakash P, D P Kothari "Reduced rating VSC with a zig-zag transformer for current compensation in three-phase four-wire distribution system," *IEEE Transactions on Power Delivery,* vol. 24, no. 1, pp. 249-259, Jan 2009. (Impact factor: 3.681)
23. Bhim Singh, Jayaprakash P, D P Kothari "New Control Approach for Capacitor Supported DSTATCOM in Three-Phase Four Wire Distribution System Under Non-Ideal Supply Voltage Conditions Based on Synchronous Reference Frame Theory," *International Journal on Electric Power and Energy Systems*, vol.5, 2012. (Impact factor: 3.588)
24. Bhim Singh, Jayaprakash P, D P Kothari "New Control Algorithm for Capacitor Supported Dynamic Voltage Restorer," *International Journal of Electromagnetic Analysis and Application***,** vol. 9, Oct 2011. (Impact factor: 0.52)
25. Bhim Singh, Jayaprakash P, D P Kothari "PFC and PQ improvement in the distribution system," *Electrical India*, pp. 40-48, April 2008. (Impact factor: 10.1937).

26. Bhim Singh, Jayaprakash P, D P Kothari "Star/hexagon transformer and non-isolated three-leg VSC based three-phase four-wire DSTATCOM," Int. *Journal of Power and Energy Conversion*, vol. 1, no. ⅔, April 2009. (Impact factor:)
27. Bhim Singh, Jayaprakash P, D P Kothari "Three-leg voltage source converter integrated with T-connected transformer as three-phase four-wire DSTATCOM for power quality improvement," *Electric Power Components and Systems*, vol. 3, March 2009. (Impact factor: 0.821)
28. Bhim Singh, Jayaprakash P, D P Kothari "Adaline based control of capacitor supported dynamic voltage restorer for voltage compensation in distribution system," *Journal of Power Electronics*, vol. 2, Jan. 2009. (Impact factor: 0.789)
29. Bhim Singh, Jayaprakash P, D P Kothari "Star-hexagon transformer based three phase four wire DSTATCOM for power quality improvement," *International Journal of Emerging Electric Power Systems*, vol.9, no.8, Article 1, Dec. 2008.(Impact factor: 0.850)
30. Bhim Singh, Jayaprakash P, D P Kothari "Three-phase four-wire DSTATCOM with reduced switches for power quality improvement," *Asian Power Electronics Journal*, vol. 2, no.2, Nov. 2008. (Impact factor: 0.789)
31. Bhim Singh, Jayaprakash P, D P Kothari "A three-phase four-wire DSTATCOM for power quality improvement," *Journal of Power Electronics*, Korea, vol. 8, no.3, pp. 249-255, July 2008. (Impact factor: 0.789)
32. Jayaprakash P, Bhim Singh, D P Kothari "Control of Reduced Rating Dynamic Voltage Restorer with Battery Energy Storage System," *IEEE Transactions on Industrial Applications***,** 2014. (Impact factor: 3.488)
33. Jayaprakash P, Bhim Singh, D P Kothari "Digital signal processor Implementation of isolated reduced rating voltage source converter using a zig-zag transformer for three-phase four-wire distribution static compensator," *Electric Power Components and systems***,** vol.1, 2012. (Impact factor: 0.821)

7. International Conferences Attended outside India:

01. Presented two papers at the IEEE International Conference on Sustainable Energy Technology (ICSET'08), Singapore, **24-27 Nov 2008, Singapore. (Funded by DST, Govt. of India)**
02. Presented a paper at the International Conference on National Capacity Building Strategy for Sustainable Development and Poverty Alleviation (NCBSSDPA), "SRF control of grid interfaced solar PV generation system with power quality

improvement," 24-30 May 2015, **American University in the Emirates, Dubai.(Funded by TEQIP II, GCE Kannur).**

03. Presented a paper at the International Conference on Industrial Electronics (IECON'12), "Isolated Wind Energy Conversion System for Three-Phase Four Wire Loads Employing Adaline based Voltage-Frequency Controller," **October 2012, Montreal, Canada. (Funded by TEQIP II, GCE Kannur).**

8. List of International Conference Proceedings:

01. B. Singh, Jayaprakash P, and D. P. Kothari, "Indirect control of capacitor supported DVR for power quality improvement in distribution system," in *Proc. of IEEE Power Engineering Society Annual General Meeting*, Pittsburgh, USA, July 2008, pp.1-7.
02. B. Singh, Jayaprakash P, and D. P. Kothari, "Integrated zigzag transformer and 3-leg VSC for power quality improvement in three-phase four-wire system," in *Proc. of IEEE IECON'08*, Florida, USA, July 2008, pp. 796-801.
03. B. Singh, Jayaprakash P, and D. P. Kothari, "Control of reduced rating dynamic voltage restorer with battery energy storage system," in *Proc. of IEEE POWERCON'08*, Delhi, India, Oct. 2008, pp. 1-8.
04. B. Singh, Jayaprakash P, and D. P. Kothari, "DSTATCOM with reduced switches using two-leg VSC and zig-zag transformer for power quality improvement in three-phase four-wire distribution system," in *Proc. of IEEE TENCON'08*, Hyderabad, India, Nov. 2008.
05. B. Singh, Jayaprakash P, and D. P. Kothari, "Three-phase four-wire DSTATCOM with H-bridge VSC and star/delta transformer for power quality improvement," in *Proc. of IEEE International Conference on Sustainable Energy Technology (ICSET'08)*, Singapore, Nov. 2008, pp. 366-371.
06. B. Singh, Jayaprakash P, and D. P. Kothari, "Three-phase four-wire DSTATCOM based on H-bridge VSC with a star/hexagon transformer for power quality improvement in distribution systems," in *Proc. of IEEE ICIIS'08*, Kharagpur, Dec. 2008, pp.1-6.
07. B. Singh, Jayaprakash P, and D. P. Kothari, "Star/delta transformer and three-leg VSC based three-phase four-wire DSTATCOM for power distribution system," in *Proc. of National Power System Conference (NPSC'08)*, Bombay, Dec. 2008, pp. 602-607.

08. B. Singh, Jayaprakash P, and D. P. Kothari, "H-bridge VSC with a T-connected transformer-based three-phase four-wire DSTATCOM for power quality improvement," in *Proc. of National Systems Conference (NSC'08)*, Roorkee, Dec. 2008.
09. B. Singh, Jayaprakash P, and D. P. Kothari, "Control strategies for series active filters for harmonic current compensation in voltage-fed nonlinear loads," in *Proc. of National Power Electronic Conference (NPEC'07)*, Bangalore, India, Dec. 2007.
10. B. Singh, Jayaprakash P, and D. P. Kothari, "Energy loss reduction in distribution system using distribution static compensators," in *Proc. of International Conference on Advances in Energy Research (ICAER'07)*, Bombay, India, Dec. 2007, pp. 550-556.
11. B. Singh, Jayaprakash P, and D. P. Kothari, "A current mode controlled dynamic voltage restorer," in *Proc. of IEEE Power and Energy Conference (PECon'08)*, Johor Bahru, Malaysia, Jan. 2009, pp. 301-306.
12. B. Singh, Jayaprakash P, and D. P. Kothari, "Implementation of neural network controlled VSC-based DSTATCOM," in *Proc. of IEEE IAS Annual General Meeting (IASGM'09)*, USA, Oct. 2009.
13. B. Singh, Jayaprakash P, and D. P. Kothari, "Three single-phase voltage source converter based DSTATCOM for three-phase four-wire systems," in *Proc. of IEEE International Conference on ICPS'09*, Kharagpur, India.
14. B. Singh, Jayaprakash P, and D. P. Kothari, "DSP implementation of three-leg VSC-based three-phase four-wire DSTATCOM for voltage regulation and power quality improvement," in *Proc. of IEEE International Conference on IECON'09*, Portugal.
15. B. Singh, Jayaprakash P, and D. P. Kothari, "Implementation of isolated three-leg VSC and star/hexagon transformer-based three-phase four-wire DSTATCOM," in *Proc. of IEEE International Conference on ICETET'09*, Nagpur, India.
16. B. Singh, Jayaprakash P, and D. P. Kothari, "Magnetics for neutral current compensation in three-phase four-wire distribution system," in *Proc. of IEEE International Conference on PEDES 2010*, New Delhi, India.
17. P. Kanjiya, B. Singh, and Jayaprakash P, "A robust control algorithm for self-supported dynamic voltage restorer (DVR)," in *Proc. of India International Conference on Power Electronics (IICPE'10)*, Delhi, 2010, DOI: 10.1109.
18. Jayaprakash P, B. Singh, and D. P. Kothari, "Reduction in rating of voltage source converter of DSTATCOM using a zig-zag transformer," in *Proc. of IEEE*

International Symposium on Industrial Electronics (ISIE'12), May 2012, pp. 1066-1071, China.

19. S. V, Jayaprakash P, B. Singh, and R. Uma, "Isolated wind energy conversion system for three-phase four-wire loads employing Adaline-based voltage-frequency controller," in *Proc. of IEEE International Conference on Industrial Electronics (IECON'12)*, October 2012, Montreal, Canada.
20. Jayaprakash P, B. Singh, and D. P. Kothari, "Icosøøø algorithm-based control of zig-zag transformer connected three-phase four-wire DSTATCOM," in *Proc. of IEEE International Conference on Power Electronics, Drives and Energy Systems (PEDES'12)*, Dec. 2012, Bangalore, India.
21. R. K. and Jayaprakash P, "Review on autonomous control of self-excited induction generator for isolated micro hydro power generation," in *Proc. of First National Conference on Emerging Technologies (NCET 2012)*, August 2012, Trivandrum, Kerala, India.
22. I. Ahmed and Jayaprakash P, "Topologies and control of unified power quality conditioner," in *Proc. of First National Conference on Emerging Technologies (NCET 2012)*, August 2012, Trivandrum, Kerala, India.
23. Jayaprakash P, "Simple and cost-effective controllers for isolated micro hydro power generation," in *Proc. of National Conference, NATCON 2013*, 1-2 March 2013, Kottayam, Kerala, India.
24. D. R. and Jayaprakash P, "Voltage and frequency controller for wind energy conversion system," in *Proc. of NCSEE 2013*, Kannur, India.
25. Jayaprakash P, N. P., D. Pallath, E. George, M. K., N. Rameshan, and R. R., "Z-source inverter-based solar photovoltaic powered street lighting system," in *Proc. of NATCON 2014*, GCE Wayanad, 20-21 Feb. 2014.
26. U. P. and Jayaprakash P, "DSTATCOM employed load compensation for power quality improvement," in *Proc. of NATCON 2014*, GCE Wayanad, 20-21 Feb. 2014.
27. S. K. T. and Jayaprakash P, "PMSG-based standalone wind energy conversion system for rural applications," in *Proc. of NATCON 2014*, GCE Wayanad, 20-21 Feb. 2014.
28. N. P. and Jayaprakash P, "Power quality improvement in a grid interfaced solar photovoltaic power generation system," in *Proc. of nCORETech'14*, L.B.S College of Engineering, Kasaragod, 25-26 Feb. 2014.

29. A. J. and Jayaprakash P, “Power factor correction rectifier for standalone wind energy conversion system,” in *Proc. of nCORETech’14*, L.B.S College of Engineering, Kasaragod, 25-26 Feb. 2014.
30. Jayaprakash P and S. V., “SRF control of grid interfaced solar PV generation system with power quality improvement,” in *Proc. of International Conference on National Capacity Building Strategy for Sustainable Development and Poverty Alleviation (NCBSSDPA’15)*, American University in the Emirates, Dubai, UAE, May 2015.
31. J. B. G. and Jayaprakash P, “Sag and swell compensation using dynamic voltage restorer for a DC motor drive,” in *Proc. of National Conference on Technological Advancements in Engineering (NCTAE’15)*, SNGCET, Payyanur.
32. R. and Jayaprakash P, “Power quality improvement in a grid interfaced solar photovoltaic power generation system,” in *Proc. of NCTAE’15*, SNGCET, Payyanur.
33. R. and Jayaprakash P, “Real and reactive power injection and harmonic current compensation using grid-connected photovoltaic inverter,” in *Proc. of National Conference on Systems, Energy and Environment (NCSEE’15)*, March 2015, Kannur, India
34. A. J. and Jayaprakash P, “National Conference on Systems, Energy and Environment (NCSEE’15),” in *Proc. of NCSEE’15*, Govt. College of Engineering, Kannur, 1-2 Aug. 2015.
35. E. V. and Jayaprakash P, “Design and analysis of DSTATCOM and comparison of various control algorithms,” in *Proc. of nCORETech’16*, LBSCE, Kasaragod.
36. V. N. and Jayaprakash P, “SRF-based control of single-stage dual-purpose three-phase grid integrated solar PV system,” in *Proc. of National Conference on Challenges and Issues in Operation of Competitive Electricity Markets (CIOCEM-2016)*, Dec. 2016.
37. N. M. C. M. and Jayaprakash P, “Binary hybrid cascaded multi-level inverter for sensitive loads,” in *Proc. of International Conference on System Energy and Environment (ICSEE’16)*, Govt. Engineering College, Kannur, Aug. 2016.
38. N. M. C. M. and Jayaprakash P, “A new binary hybrid cascaded H-bridge multilevel converter for power quality application,” in *Proc. of IEEE Power India International Conference (PIICON’16)*, 25-27 Nov. 2016, Bikanir, India.
39. M. K. and Jayaprakash P, “Bidirectional buck-boost DC-DC converter applied to electric vehicles,” in *Proc. of National Conference on Innovative Power and Energy Technologies (NCIPEC’17)*, March 2017.

40. A. M. V. and Jayaprakash P, “Quasi Z-source inverter for photovoltaic power generation,” in *Proc. of 4th National Conference on Recent Advances in Engineering and Technology (nCORETech-2017)*, March 2017.
41. A. M. V. and Jayaprakash P, “Grid-connected quasi-Z source inverter,” in *Proc. of NCIPEC’17*, March 2017.
42. V. N. and Jayaprakash P, “LMF-based control of single-stage dual-purpose three-phase four-wire grid-connected SPV system with reduced rating VSC,” in *Proc. of nCORETech-2017*, March 2017.
43. V. N. and Jayaprakash P, “Modified SEPIC converter for solar photovoltaic applications,” in *Proc. of NCIPEC’17*, March 2017.
44. N. M. C. M. and Jayaprakash P, “Solar PV fed cascaded H-bridge multilevel inverter and SIMO-SEPIC based MPPT controller for 3-phase grid connected system with power quality improvement,” in *Proc. of the 8th National Power Electronics Conference (NPEC’17)*, Pune, India, 2017.
45. N. Mukundan C. M. and Jayaprakash P., “A Parallel Inverter Topology for Two-Stage Solar PV Fed Three-Phase Isolated Load Applications,” in *Proc. 2nd Int. Conf. Syst., Energy Environ. (ICSEE-17)*, Kannur, India, Dec. 2017.
46. N. Mukundan C. M. and Jayaprakash P., “A Parallel Inverter Topology for Two-Stage Solar PV Fed Three-Phase Isolated Load Applications,” in *Proc. 2nd Int. Conf. Syst., Energy Environ. (ICSEE-17)*, Kannur, India, Dec. 2017.
47. V. Narayanan and Jayaprakash P., “Least Mean Fourth Based Control of 3-Phase 3-Wire DSTATCOM for Power Quality Improvements,” in *Proc. 2nd Int. Conf. Syst., Energy Environ. (ICSEE-17)*, Kannur, India, Dec. 2017.
48. T. George, Jayaprakash P., and T. George T., “Maximum Power Tracking and Power Sharing in PMSG Driven Wind Energy Conversion System Connected to the Grid,” in *Proc. 2nd Int. Conf. Syst., Energy Environ. (ICSEE-17)*, India, Dec. 2017.
49. A. C. P. and Jayaprakash P., “A Review on Various Modulation Techniques Applied to Inverter,” in *Proc. 2nd Int. Conf. Syst., Energy Environ. (ICSEE-17)*, Kannur, India, Dec. 2017.
50. A. L. A., Jayaprakash P., R. M., and R. K. A., “A Review of Solar PV Fed Water Pumping System with Various Electric Motor Drives,” in *Proc. 2nd Int. Conf. Syst., Energy Environ. (ICSEE-17)*, Kannur, India, Dec. 2017.
51. A. K. and Jayaprakash P., “Comparison of Algorithms for Maximum Power Point Tracking in Solar PV Systems,” in *Proc. 2nd Int. Conf. Syst., Energy Environ. (ICSEE-17)*, Kannur, India, Dec. 2017.

52. S. V., N. Mukundan C. M., A. O. V., and Jayaprakash P., “Study and Analysis of Multilevel Inverter Topologies with Reduced Device Count,” in *Proc. 2nd Int. Conf. Syst., Energy Environ. (ICSEE-17)*, Kannur, India, Dec. 2017.
53. A. M. V. and Jayaprakash P., “Isolated Quasi-Z–Source Inverter for Photovoltaic Application,” in *Proc. 2nd Int. Conf. Syst., Energy Environ. (ICSEE-17)*, Kannur, India, Dec. 2017.
54. V. Narayanan and Jayaprakash P., “Performance Comparison of Three-Phase Four-Wire Grid Integrated Solar Photovoltaic System with Various Control Algorithms,” in *Proc. IEEE Int. Conf. Intell. Comput., Instrum. Control Technol.*, Chemberi, Kerala, 2017.
55. T. George and Jayaprakash P., “Maximum Power Tracking and Power Factor Correction in PMSG Driven Wind Energy System,” in *Proc. IEEE Int. Conf. Energy, Commun., Data Anal. Soft Comput. (ICECDS’17)*, Chennai, India, 2017.
56. N. Mukundan C. M., M. K., and Jayaprakash P., “Modular Five-level Inverter with Binary Sources Based DVR for Power Quality Improvement,” in *Proc. IEEE Technol. Adv. Power Energy (TAP Energy '17)*, Kollam, Kerala, 2017.
57. N. Mukundan C. M. and Jayaprakash P., “Isolated SEPIC Converter fed Trinary Hybrid Cascaded H-bridge Multilevel Inverter for Solar PV System,” in *Proc. IEEE Region 10 Symp. (TENSYMP '17)*, Cochin, Kerala, 2017.
58. N. Mukundan C. M. and Jayaprakash P., “Two-stage Solar Energy Conversion System with dMPPT Controller for Three-phase Distribution Grid with Power Quality Improvement,” in *Proc. IEEE Int. Conf. Control, Power, Commun. Comput. Technol. (ICCPCCT-2018)*, Chemperi, Kerala, Mar. 2018.
59. S. K. Asok, B. F, Jayaprakash P., and N. Mukundan C. M., “Proportional Resonant Based Current Control of Three-Phase Single-Stage Grid Connected PV System,” in *Proc. IEEE ICCPCCT*, VJEC, Kannur, 2018, pp. 506-511.
60. N. Mukundan C. M. and Jayaprakash P., “Cascaded H-Bridge Multilevel Inverter Based Grid Integration of Solar Power with PQ Improvement,” in *Proc. IEEE Int. Conf. Power Electron., Drives Energy Syst. (PEDES-18)*, IIT Madras, Dec. 2018.
61. S. V., N. Mukundan C. M., A. O. V., and Jayaprakash P., “A New Topology of Multilevel Inverter with Reduced Number of Switches and Increased Efficiency,” in *Proc. IEEE PEDES-18*, IIT Madras, Dec. 2018.
62. A. C. P., T. George, and Jayaprakash P., “Wavelet Modulated Inverter for WECS using Permanent Magnet Synchronous Generator,” in *Proc. IEEE PEDES-18*, IIT Madras, Dec. 2018.

63. S. S. Kumar, N. Mukundan C. M., Jayaprakash P., and M. M. V., “Grid-tied Solid Oxide Fuel Cell Power Generation System for Peak Load Management,” in *Proc. IEEE ICECCT 2019*, SVS College of Engineering, Coimbatore, Tamil Nadu, India, Feb. 2019.
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65. A. R. K. P. and Jayaprakash P., “Performance Evaluation of SRFT and SOGI-QSG Control with MCCF Algorithm for Solar Grid System,” in *Proc. ICSEE-19*, July 2019.
66. A. R. K. P. and Jayaprakash P., “Comparison of SRFT and ISOGI-QFG Control Algorithm for Grid Integrated SPV System,” in *Proc. 2nd Int. Conf. Intell. Comput., Instrum. Control Technol. (ICICICT-2019)*, July 2019.
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69. N. Narayanan and Jayaprakash P., “A Single Switch Multiple Step Gain Converter for Solar PV Application,” in *Proc. ICICICT-2019*, July 2019.
70. A. M. V., N. Mukundan C. M., R. M., and Jayaprakash P., “A Novel Single-stage Standalone Five-level MLI Topology Scheme Having Battery as Energy Storage Element for Rural Deployment,” in *Proc. ICICICT-2019*, July 2019.
71. N. Mukundan, V. K., S. S. Kumar, and Jayaprakash P., “Improved H-bridge Multilevel Inverter for Grid Integration of Photovoltaic Power Conversion System with Power Quality Enhancement,” in *Proc. IEEE PESGRE 2020*, Kochi, India, Jan. 2–4, 2020.
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74. S. V., N. Mukundan C. M., Jayaprakash P., and A. O. V., “Control of a Multilevel Inverter Based Grid Integration of Solar PV with BESS,” in *Proc. IEEE PEREA 2020*, Nov. 2020.
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76. A. J. S., S. S. Kumar, Jayaprakash P., and U. Subramaniam, “Design and Analysis of a High Step-Up DC-DC Converter Fed Grid Connected Fuel Cell System,” in *Proc. IEEE PEREA 2020*, Nov. 2020.
77. M. A. M., S. M., N. Mukundan C. M., and Jayaprakash P., “A Modified SEPIC Converter Based Solar Water Pumping System Using SRM Drive,” in *Proc. IEEE Int. Power Renew. Energy Conf. (IPRECON 2020)*, Oct. 2020.
78. V. K., N. Mukundan C. M., and Jayaprakash P., “A New Topology of Asymmetrical Multilevel Inverter with Reduced Switch Count for Electric Drive Applications,” in *Proc. IEEE Int. Conf. Power Electron., Drives Energy Syst. (PEDES 2020)*, Dec. 2020.
79. S. V., N. Mukundan C. M., A. O. V., Jayaprakash P., and U. Subramaniam, “A Single-Stage Dual-Source Seven-Level Inverter for Grid Integrated Photovoltaic Energy Transfer System with MPPT,” in *Proc. IEEE PEDES 2020*, Dec. 2020.
80. S. V., N. Mukundan C. M., Jayaprakash P., and A. O. V., “A New Trinary Source-Based Multilevel Inverter for Renewable Applications,” in *Proc. IEEE PEDES 2020*, Dec. 2020.
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83. T. George and Jayaprakash P., “Adaptive Fuzzy Logic Control for Maximum Power Tracking and Grid Synchronization of PMSG Based Wind Energy Conversion System,” in *Proc. Int. Conf. Technol. Convergence Eng., Energy, Sustain.*, Kannur, India, July 2020.

84. P. C. Renuka Varma, Nirmal Mukundan, and Jayaprakash P., "High Gain Multilevel Inverter Based Grid Integrated Solar Power Transfer System with Power Quality Enhancement," in *Proc. IECON 2021*, Virtual Conference, Toronto, Canada, Oct. 13–16, 2021.
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91. V. V. Veena and Jayaprakash P., "High Gain Converter Based Grid Connected Solar Water Pumping System," in *Proc. 4th Int. Conf. Systems, Energy & Environment (ICSEE'21)*, Kannur, Kerala, Jan. 20–23, 2021
92. V. V. Veena and Jayaprakash P., "Control of Single-Phase Grid Connected Inverter Using Proportional Resonant Control Algorithm for Solar Water Pumping System," in *Proc. IEEE Int. Conf. Control, Communication and Information Sciences (ICCISc'21)*, Idukki, Kerala, June 16–18, 2021.

93. A. Mohan and Jayaprakash P., “An Improved Seven-Level Multilevel Inverter for Grid Connected SPV Application,” in *Proc. IEEE Int. Conf. Control, Communication and Information Sciences (ICCISc’21)*, Idukki, Kerala, June 16–18, 2021.
94. A. K. Anisha, S. S. Kumar, and Jayaprakash P., “High Gain Boost Converter With Voltage Multiplier Cell Based Grid Connected System,” in *Proc. IEEE Int. Conf. Communication, Control, and Information Sciences (ICCISc-21)*, Idukki, Kerala, June 16–18, 2021.
95. D. R. K. Drishya and Jayaprakash P., “Impact of Solar Photovoltaic Penetration on Voltage Stability of Power Network,” in *Proc. IEEE Int. Conf. Communication, Control and Information Sciences (ICCISc-21)*, Idukki, Kerala, June 16–18, 2021.
96. S. M. Sruthi and Jayaprakash P., “Control of Pumped Storage Plant with BLDC for Single Stage Grid Connected PV System Based Distributed Generation,” in *Proc. 4th Int. Conf. Systems, Energy & Environment (ICSEE’21)*, Kannur, Kerala, Jan. 20–23, 2021.
97. H. T. K. Haritha, O. V. Asokan, Jayaprakash P., S. S. Kumar, and I. C. Ismayil, “A High Gain Step-Up DC-DC Converter Driven BLDC Motor for Fuel Cell Vehicles,” in *Proc. Int. Conf. Systems, Energy & Environment (ICSEE) 2021*, Kannur, India, Jan. 2021.
98. S. K. P. and Jayaprakash P., "Sliding Mode Control of Bidirectional DC-DC Converter for Stand-Alone PV Applications," in *Proc. IEEE Int. Conf. Power Electron., Drives and Energy Syst. (PEDES-2022)*, Jaipur, India, 2022, pp. 1-6.
99. K. V. Anandkrishnan, S. S. Kumar, A. T. T., and Jayaprakash P., "High Gain Converter Based Fuel Cell-Battery System for Electric Vehicles and Residential Applications," accepted for presentation at *IEEE Power Electron., Drives and Energy Syst. (PEDES-2022)*, Jaipur, India, 14-17 Dec. 2022.
100. K. V. Anandkrishnan, S. S. Kumar, A. T. T., and Jayaprakash P., "Fuel Cell - Battery Integrated BLDC Motor for Electric Vehicle with Regenerative Braking," accepted for presentation at *IEEE 19th India Council Int. Conf. (INDICON-2022)*, Kochi, India, 24-26 Nov. 2022.
101. J. V., S. M., A. O. V., and Jayaprakash P., "Grid Integrated Solar PV-Based Electric Vehicle Charging Station with Power Quality Improvement," in *Proc. Int. Conf. Syst., Energy and Environ. (ICSEE-2022)*, Kannur, India, Aug. 2022.
102. K. V. Anandkrishnan, S. S. Kumar, A. T. T., and Jayaprakash P., "A Comparative Study of Maximum Power Tracking of Turbines of Wind Energy Conversion

Systems," in *Proc. Int. Conf. Futuristic Technol. Control Syst. & Renewable Energy (ICFCR-2022)*, Kuttipuram, India, July 2022.

103. M. M., Jayaprakash P., and N. B. Kumar, "A Comparative Study of Maximum Power Tracking of Turbines of Wind Energy Conversion Systems," in *Proc. Int. Conf. Futuristic Technol. Control Syst. & Renewable Energy (ICFCR-2022)*, Kuttipuram, India, July 2022.

104. J. V., S. M., A. O. V., and Jayaprakash P., "Fuzzy Logic Algorithm-Based MPPT Controller for Solar PV Powered Electric Vehicle Charging Station," in *Proc. Int. Conf. Futuristic Technol. Control Syst. & Renewable Energy (ICFCR-2022)*, Kuttipuram, India, July 2022.

105. A. M. E., Nirmal Mukundan C. M., M. V. Manoj Kumar, and Jayaprakash P., "Modified Parallel Inverter Topology of a Grid-Connected Wind Energy Conversion System for Power Quality Improvement," in *Proc. IEEE Int. Conf. Power Electron., Smart Grid, and Renewable Energy (PESGRE-2022)*, Trivandrum, Kerala, Jan. 2022.

106. H. T. K., S. S. Kumar, Jayaprakash P., and A. O. V., "High Gain DC-DC Converters Based Fuel Cell Electric Vehicle Drive with Regenerative Braking," in *Proc. IEEE Int. Conf. Power Electron., Smart Grid, and Renewable Energy (PESGRE-2022)*, Trivandrum, Kerala, Jan. 2022.

107. S. M., Nirmal Mukundan C. M., and Jayaprakash P., "Grid Integrated PV System-Based Electric Vehicle Charge Exchange Station with Power Quality Enhancement Using LMS Control," submitted to *IEEE PESGRE-2022*, Trivandrum, Kerala, Jan. 2022.

108. A. K., S. S. Kumar, M. K. M. V., Jayaprakash P., U. Subramaniam, and D. Almakhles, "Hybrid Compensation System Using PV-DSTATCOM and SVC for Enhanced Power Quality in Low Voltage AC Distribution Grid," in *Proc. IEEE Int. Conf. Power Electron., Drives and Energy Syst. (PEDES-2024)*, Surathkal, India, Dec. 2024.

109. S. M., J. P., S. S. Kumar, Jayaprakash P., and A. Chacko, "Control of a Two-Stage High-Frequency Isolated PV-Grid Integrated System with Improved Power Quality," in *Proc. IEEE Int. Conf. Power Electron., Drives and Energy Syst. (PEDES-2024)*, Surathkal, India, Dec. 2024.

110. A. K., S. S. Kumar, M. K. M. V., Jayaprakash P., N. Mukundan C. M., U. Subramaniam, and D. Almakhles, "Hybrid Compensation System Using DSTATCOM and FCTCR for Enhanced Power Quality in AC Grid," in *Proc. Int.*

Conf. Advancements in Power, Communication and Intelligent Syst. (APCI-2024), Kannur, India, June 2024.

111. A. G. M. D., F., A. T. K., S. M., A. Chacko, S. S. Kumar, and Jayaprakash P., "Bidirectional Charging System for Electric Vehicle with Improved Power Quality," in *Proc. Int. Conf. Advancements in Power, Communication and Intelligent Syst. (APCI-2024)*, Kannur, India, June 2024.

112. D. R. Nambiar, S. S. Kumar, M. K. M. V., Jayaprakash P., U. Subramaniam, and D. Almakhles, "Enhancement of Power Quality in Single-Phase Systems Using Grid-Connected Solar Inverter with AQSG Control," in *Proc. 2nd Int. Conf. Sustainability: Developments & Innovations (ICSDI-2024)*, Riyadh, Saudi Arabia, 18-22 Feb. 2024.

7. M Tech Thesis Guided:

1. Jayasree V, "Solar PV Array Based Multifunctional EV Charger" – APJ Abdul Kalam Technological University, 2022
2. K V Anand Krishnan, "High Gain DC-DC Converter for Fuel Cell" – APJ Abdul Kalam Technological University, 2022
3. Manasa M, "MPPT Based on Artificial Neural Network for a Wind Power Generation System" – APJ Abdul Kalam Technological University, 2022
4. Drishya Ramesh K, "Reactive Power Optimization of Power Network with Photovoltaic Generation" – APJ Abdul Kalam Technological University, July 2021
5. Veena V, "Control of Single Phase Grid Connected Solar Water Pumping System" – APJ Abdul Kalam Technological University, July 2021
6. Amal Mohan, "An Improved Multilevel Inverter Configuration for Grid Connected Solar Photovoltaic Application" – APJ Abdul Kalam Technological University, July 2021
7. Anisha A K, "Interleaved Boost Converter with Voltage Multiplier Cell for Fuel Cell Based Grid Connected System" – APJ Abdul Kalam Technological University, July 2021
8. Renuka Varma P C, "Control Algorithms on High Gain Converter Integrated Solar Energy Transfer System" – APJ Abdul Kalam Technological University, July 2021
9. Abhiram, "High Gain DC-DC Converters" – APJ Abdul Kalam Technological University, July 2020
10. Vineeth, "Multi-Level Inverters" – APJ Abdul Kalam Technological University, July 2020

11. Henna R, "Maximum Power Point Tracking in WECS" – APJ Abdul Kalam Technological University, July 2020
12. Anagha Rajendran K P, "Grid-Integrated Solar PV System with ISOGI-QSG Based Control Algorithm" – APJ Abdul Kalam Technological University, July 2019
13. Nikhil Narayanan, "Multiple Step Gain DC-DC Converter for Solar PV Based Applications" – APJ Abdul Kalam Technological University, July 2019
14. Anagha R, "Investigations on MPPT Algorithms for SPV Systems" – APJ Abdul Kalam Technological University, May 2018
15. Archana, "Wavelet Modulation Technique for Inverter Control" – APJ Abdul Kalam Technological University, May 2018
16. Vivek Narayanan, "SRF-Based Control of Single-Stage Dual Purpose Three-Phase Grid Integrated Solar PV System" – APJ Abdul Kalam Technological University,2017
17. Mithun K, "Three Level Inverter Based Dynamic Voltage Restorer for Power Quality Improvement" – APJ Abdul Kalam Technological University, 2017.
18. Aswini M V, "Quasi Z-Source Inverter for Photovoltaic Power Generation" – APJ Abdul Kalam Technological University, 2017.
19. Sushil Kannan, "A New DSTATCOM Configuration" – APJ Abdul Kalam Technological University, 2017.
20. Elby Varghese, "Analysis of DSTATCOM and Comparison of Various Control Algorithms" – Kannur University, 2016
21. Nirmal Mukundan, "Cascaded H-Bridge Multi-Level Converter for Electric Vehicle Application" – Kannur University, 2016
22. Alex Jose, "Power Factor Correction Rectifier for Standalone Wind Energy Conversion System" – Kannur University,2015
23. Jithu Benny George, "Sag and Swell Compensation Using Dynamic Voltage Restorer" – Kannur University,2015
24. Ramjith R., "Grid Interfaced Solar Photovoltaic Power Generation System" – Kannur University,2015
25. Udayakumar P, "DSTATCOM Employed Load Compensation for Power Quality Improvement" – Kannur University,2014
26. Shamna K. T, "PMSG Based Standalone Wind Energy Conversion System for Rural Applications" – Kannur University, 2014
27. Neethu P, "Power Quality Improvement in a Grid-Interfaced Solar Photovoltaic Power Generation System" – Kannur University, 2014

28. Ratheesh K, "Autonomous Control of Self-Excited Induction Generator for Isolated Micro Hydro Power Generation" – Kannur University,2013
29. Irshad Ahmed, "Control of Unified Power Quality Conditioner" – Kannur University
30. Deepa R, "Voltage and Frequency Controller for Wind Energy Conversion System" – Kannur University,2013.

8. Short-term Training Programmes/ Conferences/ Activities Coordinated:

1. Patron of the IEEE International Conference on "Advancements in Power, Communication, and Intelligent Systems (APCI)", held on June 27-28, 2024, at Government College of Engineering, Kannur, Kerala.
2. General Chair of the IEEE International Conference on Power Electronics and Renewable Energy Applications, held on November 27-28, 2020, at Government College of Engineering, Kannur.
3. General Chair of the "National Symposium and Research Colloquium", held on October 8-9, 2022, organized by IEEE SB Government Engineering College, Wayanad, in association with IEEE IA/IE/PELS Joint Chapter Kerala and APJ Abdul Kalam Technological University.
4. General Chair of the "National Symposium and Research Colloquium", held on September 11-12, 2021, organized by IEEE SB Government College of Engineering, Kannur, in association with IEEE IA/IE/PELS Joint Chapter Kerala and APJ Abdul Kalam Technological University.
5. Coordinator of the Short-Term Training Programme on "Power Electronics for Renewable Energy Applications" (PEREA), held from January 14-19, 2019, at Government College of Engineering, Kannur.
6. Coordinator of the Faculty Development Programme (FDP) on "Power Quality and Custom Power Devices", held from February 7-9, 2018, at Government College of Engineering, Kannur.
7. Coordinator of the Short-Term Training Programme on "Distributed Generation and Power Quality", held from December 19-23, 2016, at Government College of Engineering, Kannur.
8. Coordinator of the Short-Term Training Programme on "Simulation of Power Electronics and Power Systems Using MATLAB, ANSYS, and MIPOWER", held from July 25-29, 2015, at Government College of Engineering, Kannur.

9. Coordinator of the Short-Term Training Programme on "Simulation Software in Electrical Engineering (SSEE)", held from July 7-11, 2014, at Government College of Engineering, Kannur.
10. Coordinator of the Two-Day Workshop on "Appropriate Energy Mix for India", held on July 2-3, 2013, at Government College of Engineering, Kannur.
11. Coordinator of the Short-Term Training Programme on "Power Quality and Renewable Energy Sources", held in March 2011, at Government College of Engineering, Kannur.
12. Secretary of the College of Engineering Alumni Association Kannur (CEAAK) during 2003-2004.
13. Programme Officer of the National Service Scheme (NSS), Unit 140, at Government College of Engineering, Kannur, during 1999-2001.
14. Committee Member for the Installation of a 50kW Rooftop Solar PV Plant at Government College of Engineering, Kannur, in 2017.
15. Coordinator of the National Board of Accreditation (NBA) Work at Government College of Engineering, Kannur, during 2016-17.
16. Coordinator of R&D, TEQIP-II at Government College of Engineering, Kannur, during 2012-16.
17. Coordinator of the First National Conference on Systems, Energy, and Environment, held on August 2-3, 2013.
18. Served as IAS Chapter Advisor of IEEE SB GCE Kannur in 2019.
19. Served as a Member of the Coordination Team for the Millennium Wireman Workshop, organized by the IEEE Life Member Affinity Group at Government College of Engineering, Kannur, on November 7-8, 2023.
20. Served as a Member of the Coordination Committee for UDYAMA 1.0, the Industry-Academia-Government Conclave, held from December 7-10, 2024, in Thiruvananthapuram.

9. Completed Sponsored Projects:

01. Development of Voltage-Frequency Controller for Standalone Small Hydro System Employing Induction Motor, Research Seed Money (CERD) – ₹2 lakh, 2012.
02. Design and Development of Three-Phase Grid-Connected Photovoltaic Systems with Power Quality Improvement (TRSM 16), Research Seed Money (TEQIP-II) – ₹1.6 lakh, 2014.

03. Design, Development, and Testing of a Z-Source Inverter-Based Solar Photovoltaic Powered Street Lighting System (SP194/2013), Student Project (CERD) – ₹40,000, 2014.
04. Power Theft Identification and Auto-Disconnecting System for KSEB (SP195/2013), Student Project (CERD) – ₹40,000, 2014.
05. Three-Phase Solar UPS with Variable Frequency Drive for Remote Areas (SP91/2014), Student Project (CERD) – ₹50,000, 2015.
06. Solar Powered Electric Car, Innovation Centre Project – ₹70,000, 2015.
07. Driverless Electric Auto, Innovation Centre Project – ₹45,000, 2017.
08. Graphene-Based Power Generation, Innovation Centre Project – ₹45,000, 2019.
09. Solar-Powered Induction Cooker, KTU CERD Student Project – ₹50,000, 2022.
10. BLDC Motor-Driven Electric Auto for Improved Efficiency, (SPS 65/ 2021/ KCSTE), KSCSTE Student Project – ₹10,000, 2021.
11. Establishing Centre of Excellence, in SYSTEMS, ENERGY & ENVIRONMENT", CERD, KTU – ₹25 lakh, 2017.

10. Short-term training programmes attended:

Certifications and Training Programs:

1. Completed a Certificate Course in German Language, *"Deutch als Frendsprache"*, from Technical University Dresden, Germany, from May 15 – June 28, 2002.
2. Attended training in the Power Electronics Lab of CDAC, Trivandrum, from December 18-29, 2006.
3. Completed Orientation Training Course for NSS Programme Officers, Rajadhani College of Social Sciences, Kalamassery, from August 23 – September 1, 2000.
4. Completed Course on "Unix & C", ISTE, Government College of Engineering, Kannur, from November 1995 – March 1996.
5. Attended a Two-Day Workshop on "Least Cost Power Planning," Government College of Engineering, Kannur, on January 18-19, 1996.
6. Participated in "Induction Training Programme for Teachers", College of Engineering, Trivandrum, from November 22 – December 3, 1999.
7. Completed training on "Dynamic System Simulation", Department of Electrical & Electronics Engineering, Government College of Engineering, Kannur, from March 13-24, 2000.
8. Attended training on "Maintenance Engineering and Management", Department of Mechanical Engineering, Government College of Engineering, Kannur, from February 22 – March 6, 2000.
9. Attended a Workshop on "Human Factors Engineering and Manpower Planning," Department of Mechanical Engineering, Government College of Engineering, Kannur, from December 8-20, 2003.

10. Attended training on "Computer Aided Power System Solutions", Department of Electrical & Electronics Engineering, NSS College of Engineering, Palakkad, from November 28-30, 2003.
11. Participated in the IEEE Workshop on “Recent Advances in Power Quality,” IIT Delhi, on December 20-21, 2005.
12. Completed training on "Analysis of Modern Power Systems", Department of Electrical Engineering, IISc Bangalore, from February 6-10, 2006.
13. Attended “Indian Energy Scenario and Energy Security”, IIT Delhi, on January 22, 2008.
14. Attended the IEEE Workshop on “Power Quality,” IEEE PES-IAS Delhi Chapter, on November 21-22, 2008.
15. Attended the “International Symposium on Hydrogen Energy Technologies,” CES, IIT Delhi, on March 14-15, 2018.
16. Participated in the “Industry-Academia-Government Conclave, UDYAMA 1.0”, held from December 7-10, 2024, in Thiruvananthapuram.

Faculty Development Programs (FDPs) and Short-Term Training Programs:

17. Attended the STTP on” Pedagogical Training,” Indian Institute of Technology Madras, from July 27-29, 2015.
18. Participated in the FDP on "Renewable Energy and Distributed Generation", Government Engineering College, Wayanad, from March 14-18, 2016.
19. Attended the Tutorial Programme on "Smart Grid and Power Quality", Central Power Research Institute, Bengaluru, from March 3-4, 2016.
20. Attended the Tutorial Programme on "Smart Grid and Solar Power", Central Power Research Institute, Bengaluru, from August 25-26, 2016.
21. Attended the STTP on "Outcome-Based Technical Education and Training", Government College of Engineering, Kannur, from December 4-8, 2017.
22. Participated in the STTP on "Modern Optimization Tools in Engineering", Government College of Engineering, Kannur, from February 26 – March 3, 2018.
23. Participated in the FDP on "Recent Trends in Power Electronics – Research Scope and Challenges", Department of Electrical & Electronics Engineering, NITK, from September 23-27, 2020.

Specialized Training Programs on Power Systems and Power Electronics:

24. Attended the STTP on "Simulation of Power Electronics and Power Systems Using MATLAB, ANSYS, and MIPOWER", Government College of Engineering, Kannur, from July 25-29, 2016.
25. Participated in the STTP on "Distributed Generation and Power quality", Government College of Engineering, Kannur, from December 19-23, 2016.
26. Attended the STTP on "Recent Trends in Power Electronics and Power Systems", Government College of Engineering, Kannur, from March 12-14, 2014.
27. Completed training on "Recent Developments in Power System Operation and Control", Department of Electrical & Electronics Engineering, Government College of Engineering, Kannur, from January 19 – February 1, 2004.

28. Attended training on "Control of Converters and Drives", Department of Electrical Engineering, IISc Bangalore, from February 6-10, 2004.
29. Participated in the STTP on "Recent Advances in Power Systems", Government College of Engineering, Kannur, from December 16-20, 2013.

Training Programs on Computational & Technical Skills:

30. Attended the STTP on "Advances in Numerical Methods in Engineering", Department of Civil Engineering, Government College of Engineering, Kannur, from March 7-12, 2011.
31. Completed the Training on "Technical Documentation and Data Analysis Tools", Department of Electronics & Communication Engineering, Government College of Engineering, Kannur, from February 3-8, 2014.
32. Participated in the STTP on "Mathematical and Computational Techniques in Engineering Research (MCTER 2013)", Government College of Engineering, Kannur, from August 19-24, 2013.
33. Attended training on "Application Development, Testing, and Deployment Using JAVA-Based Framework", Department of Computer Science & Engineering, Government College of Engineering, Kannur, from September 2-7, 2013.

Training on Professional & Communication Skills:

34. Participated in the FDP on "Tools and Techniques for Effective Professional Communication", Department of Mechanical Engineering, Government College of Engineering, Kannur, from August 22-27, 2011.
35. Completed the Training on "Communication Skill Development", Department of Business Administration, College of Engineering, Trivandrum, from September 1-14, 2012.
36. Attended the Workshop on "Professional Excellence", Department of Civil Engineering, Government College of Engineering, Kannur, from December 6-9, 2013.
37. Attended a Three-Day Residential Training Program on "**Managerial and Executive Training for Principals of Government Engineering Colleges**", from August 1-3, 2023, in Thiruvananthapuram.
38. Attended workshop on “Energy conservation and unconventional energy” at IRTC Palakkad on 18 Jun 2004.
39. Participated in the STTP on "Micro controllers, neural network and fuzzy logic (MNAF)", Government College of Engineering, Kannur, from 7-12 Oct 2013.
40. Participated in the STTP on "Modelling and analysis of Thermal systems", Government College of Engineering, Kannur, from 9-11 Jul 2012.
41. Participated in the STTP on "Recent trends in bioenergy (RTIBE)", Government College of Engineering, Kannur, from 24-28 Mar 2014.

11. Responsibilities Undertaken at University/ Outside Institution:

01. Member, Academic Council, APJ Abdul Kalam Technological University, Kerala, since 15 March 2024..

02. Chairman, Board of Studies (Research), APJ Abdul Kalam Technological University, Kerala, since 16 Jan 2021.
03. Member, Board of Studies in Engineering (UG), Kannur University, since 2021.
04. Member, Board of Studies in Engineering (PG), Calicut University, since 2021.
05. Chairman, Department Advisory Board Meeting, LBS College of Engineering, Kasaragod, on February 17, 2020.
06. Chairman, Board of Governors (BoG), EK Nayanar Memorial Govt. Polytechnic College, Trikaripur, Kasaragod since 22 Jan 2024.

12. Resource Person Outside the Institution:

1. Delivered a lecture on "Grid connected photovoltaic inverter design and MPPT implementation" at National Institute of Technology Puducherry, Karaikal, on 6-12 May 2024.
2. Delivered a keynote lecture on "Custom power devices" at National Institute of Technology Calicut, Kerala, on 21 Dec 2017.
3. Delivered a lecture on "Custom power devices for Power Quality Improvement" at National Institute of Technology Karnataka, Surathkal, on 4 Mar 2015.
4. Delivered a lecture on "Electrical Power Quality Improvement" at National Institute of Technology Karnataka, Surathkal, on 13 Nov 2018.
5. Delivered an expert lecture at an FDP organized by VJEC Chemperi, Kannur,, on the topic "Opportunities and challenges for integrating renewable energy in smart grid" on 15 March 2021.
6. Delivered an expert talk on “Research and development for faculty members” at College of Engineering Thalassery, on 17 Feb 2014.
7. Delivered an expert talk on “Grid connected photovoltaic system with power quality improvement” at College of Engineering Thalassery, on 29 Jan 2016.
8. Delivered an expert lecture on the topic "Power processing devices- New trends",at GCE Kannur, on 11 Nov 2022.
9. Delivered an expert talk on “Renewable energy and distributed generation” at Govt. Engg. College Wayanad, on 15 Mar 2016.
10. Delivered an expert talk on “Power quality Issues, Challenges and Solutions” at College of Engineering Trikaripur, on 17 Mar 2016.
11. Delivered a lecture on "Power Electronics and Drives" at Indian Naval Academy, Ezhimala, Kannur, on 26-27 Feb 2016.

12. Delivered an expert talk on “Impact of power quality issues and energy conservation”, at Albertian Institute of Science and Technology, Kochi, on 28 Feb 2015.

PhD Thesis Evaluations:

13. Evaluated PhD thesis for Mr. Arun , at National Institute of Technology, Puduchery, on 9 Jul 2024.
14. Evaluated PhD thesis and conducted PhD Viva for Ms. K. Amritha, at Koneru Lakshmaiah Education Foundation (Deemed to be University), on 12 May 2023.
15. Evaluated PhD thesis and conducted PhD Viva for Mr. Arun Shankar V.K, at VIT University, Vellore, on 23 Nov 2018.
16. Evaluated PhD thesis and conducted PhD Viva for Mr. T. Bogaraj, at PSG College of Technology, Coimbatore (Anna University, Chennai), on 12 May 2017.
17. Evaluated PhD thesis and conducted PhD Viva for Mr. S. Umasankar, at VIT University, Vellore, on 10 Aug 2013.

Conference Sessions Chaired:

18. Chaired a session at the National Conference on Recent Advancements in Engineering and Technology (nCoreTech), at LBS College of Engineering, Kasaragod, on 26 Feb 2014.
19. Chaired a session at the National Conference on Recent Advancements in Engineering and Technology (nCoreTech), at LBS College of Engineering, Kasaragod, on 20-21 Jan 2015.
20. Chaired a session at the National Conference on Recent Advancements in Engineering and Technology (nCoreTech), at LBS College of Engineering, Kasaragod, on 10-11 Feb 2016.
21. Chaired a session at the International Conference on Computer, Communication, and Energy Systems (ICCCES), at MEA Engineering College, Perinthalmanna, Malappuram, on 9 Aug 2014.
22. Chaired a session at the International Conference on Advancements in Power Communication and Intelligent Systems (APCI), at GCE Kannur, on 21-22 June 2024.
23. Resource Person for the FDP organized by KTU at VJEC, Chemperi, Kannur, on 01 March 2024, on the topic "Counseling and Academic Mentoring".

24. Chaired a technical session at the 1st International Conference on Power Electronics Applications and Technology in Present Energy Scenario (PETPES), NIT Karnataka, Surathkal, on 29-31 Aug 2019.

13. Reviewer for Journals/ Conferences and Participation:

1. Reviewer for IEEE Transactions on Industrial Electronics, Industrial Applications, and Power Electronics.
2. Reviewer for the IETE Journal of Research.
3. Reviewer for the IEEE Journal of Emerging and Selected Topics in Industrial Electronics.
4. Reviewer for the IEEE International Conference on Power Electronics Drives and Energy Systems (PEDES), 18-21 Dec 2024, at NIT Karnataka, Surathkal.
5. Reviewer for the IEEE International Conference on Advancements in Green Energy, 17-18 Dec 2014, at MBCET, Thiruvananthapuram.
6. Reviewer for the 2nd National Conference on Energy and Sustainable Technologies (NET), 29-30 Aug 2014, at Government Engineering College, Kozhikode.
7. Reviewer for the 3rd National Conference on Systems, Energy, and Environment (NCSEE 2015), 10-11 Sep 2015, at GCE Kannur.
8. Reviewer for the International Conference on Systems, Energy, and Environment (ICSEE 2016), 5-6 Aug 2016, at GCE Kannur.
9. Reviewer for the Third International Conference on Materials for the Future (ICMF), 6-8 Nov 2013, at Government Engineering College, Thrissur.
10. Reviewer for the International Conference on Systems, Energy, and Environment (ICSEE 2022), 5-6 Aug 2022, at GCE Kannur.

Participation and Paper Presentation in Conferences:

11. Participated and presented a paper at the National Conference on Recent Advancements in Engineering and Technology (nCORETEch), 10-11 Feb 2016, at LBS College of Engineering, Kasaragod.
12. Participated and presented a paper at the National Conference on Recent Advancements in Engineering and Technology (nCORETEch), 25-26 Feb 2014, at LBS College of Engineering, Kasaragod.
13. Presented a paper at the 4th National Technological Congress (NATCON), Kerala, 20-21 Feb 2014, at Government Engineering College, Wayanad.

14. Presented a paper at the National Seminar on Graph Theory and Algebra, 30 Jan 2012, at KMM Government Women's College, Kannur.
15. Presented a paper at the 3rd National Technological Congress (NATCON), Kerala, 1-2 Mar 2013, at Rajiv Gandhi Institute of Technology, Kottayam.
16. Participated in the 34th Annual Faculty Convention of ISTE, Kerala Section, 20 Jan 2024, at Federal Institute of Science and Technology, Kochi.
17. Participated and presented a paper at the 7th Power India International Conference (PIICON), 25-27 Nov 2016, at Bikaner, Rajasthan.
18. Participated in the IEEE International Conference on Power Electronics Drives and Energy Systems (PEDES), 16-19 Dec 2012, at Central Power Research Institute, Bengaluru.
19. Participated in the "IGEN SDG research survey entitled SDG-7 Impact on Indian Universities", by IGEN SDG project, 2020.

Declaration:

I hereby declare that the information provided above is true and correct to the best of my knowledge and belief.

Dr. Jayaprakash P

15.03.2025.