



Dr. V. Karthikeyan, B.E, M.E, Ph.D.,  
Professor  
E-mail: [Karthikeyan.v@ametuniv.ac.in](mailto:Karthikeyan.v@ametuniv.ac.in)

**Dr. V. Karthikeyan**, Professor in the Department of Electrical and Electronics Engineering has 15 years of experience in teaching in the engineering colleges/universities and professional experience in Designing of Power System Control and Protection Panels.

He received his B.E (Electrical & Electronics Engineering) from Madurai Kamaraj University in 1999, M.E (Power Electronics & Drives) from Anna University, Chennai in 2005, Ph.D from Faculty of Electrical Engineering, Anna University, Chennai in July 2017.

He has published over 40 technical papers in international journals, and in various international and national conferences. Presently he is guiding three Ph.D research scholars under the faculty of Electrical Engineering, AMET Deemed to be University. His research interests include IoT, Smart grid and Micro grid, Modern Electric Drives, Power Quality and Renewable Energy Systems. He had co-authored a book chapter published by Book Publisher International. He had published two patents.

He is a member of several professional bodies like IEEE, ISTE, IAENG, ISRDP, IFERP and the IRED.

### **Funded Project/Consultancy Details:**

1. Title: Solar Still using Nano Phase Change Material (PCM) for water desalination.  
Funding Agency: TNSCST, Chennai.  
Investigators: Dr. T. Sasilatha, Dr. V. Karthikeyan, Mrs. R. Elavarasi  
Duration: 2019-2021  
Amount: Rs. 4.30 lakhs  
Status: Ongoing
2. Title: Battery Operated Vehicle for Cleaning Solar Module  
Funding Agency: EPR Labs, Chennai.  
Investigator: Dr. V. Karthikeyan  
Duration: 2019-2020 (6 Months)  
Amount: Rs. 0.6 lakhs  
Status: Completed
3. Title: Co-Generation of Electrical Energy from the Waste Heat produced by the process industry  
Funding Agency: AMET  
Investigator: Dr. V. Karthikeyan  
Duration: 2019-2020 (6 Months)  
Amount: Rs. 1.1 lakhs  
Status: Completed
4. Title: VFD and HMI Drive Panel Using MODBUS Protocol  
Funding Agency: CDCE Automation, Chennai.  
Investigator: Dr. T. Sasilatha, Dr. V. Karthikeyan, Mr. P. Veerakumar  
Duration: 2018-2019 (6 Months)  
Amount: Rs. 0.8 lakhs  
Status: Completed

### **Patent Publications:**

- “A New Depiction of Water Path for Power Generation from Waste Water as well as Oil”, The Patent Office, Chennai, Application No: 202041040082, Publication Date: 25/09/2020, Application Status: Published.
- “A Method and an IoT System for Operating, Illumination Control and Fault Detection of the Street Lights” The Patent Office, Chennai, Application No: 202041003504, Publication Date: 07/02/2020, Application Status: Under Examination.

### **Book/Book Chapter Publications:**

Book chapter titled “Phase Disposition PWM based Multi-Level Inverter with Reduced Number of Switches” in the book Advanced Aspects of Engineering Research, Book Publisher International, India. (ISBN: 978-93-90149-84-1).

### **Paper Publications:**

- **V. Karthikeyan**, T. Porselvi, Gangadharayya. F. Salimath, G. Giftson Samuel, “Grid Connected Bidirectional Converter Based EMS System with Model Predictive Control”, IOP Conference Series: Materials Science and Engineering (In Press).
- Balachandra Pattanaik, G. Giftson Samuel, **V. Karthikeyan**, “Energy Storage System with Dynamic Voltage Restorer Integrated for Wind Energy System”, IOP Conference Series: Materials Science and Engineering (In Press).
- G. Giftson Samuel, Gangadharayya. F. Salimath, T. Porselvi, **V. Karthikeyan**, “Improved Prediction of Wind Speed Using Machine Learning”, IOP Conference Series: Materials Science and Engineering (In Press).
- **V. Karthikeyan**, I. William Christopher, V. Jamuna, “Nine Level Symmetrical Modified Multi-Level Cascaded H-Bridge Inverter”, International Journal of Advanced Science and Technology, Vol. 29, No. 7s, pp. 2532-2537, 2020.
- **V. Karthikeyan**, R. Elavarasi, I. William Christopher, “Yield Analysis of 20kW Grid-Tie Roof-top Solar Photovoltaic Unit in Tamilnadu”, Test Engineering and Management, Vol. 82, pp. 15685-15689, Jan-Feb, 2020.
- R. Elavarasi, **V. Karthikeyan**, D. Padma Subramanian, “Integration of Wind Energy System in Shipboard using Frequency Converter”, Test Engineering and Management, Vol. 82, pp. 1771-1774, Jan-Feb, 2020.
- P. Muthukumar, **V. Karthikeyan**, R. Elavarasi, “Analysis of Switching and Control Characteristics of Brushless DC Motor,” in National Conference on Cutting Edge Technologies in Power Conversion and Industrial Drives (PCID 2019) on 29<sup>th</sup> November 2019 organized by Bannari Amman Institute of Technology, Sathamangalam.
- **V. Karthikeyan**, V. Jamuna, “A Simplified Optimal THD Modulation Algorithm for Multi-Level Inverter with Reduced Components,” *International Journal of Recent Technology and Engineering (IJRTE)*, Vol.7, No.5S2, pp. 200-204, January 2019. (**SCOPUS Indexed, IF:5.92**)
- G. Jegadeeswari, **V. Karthikeyan**, “Review of Power Quality Performance Analysis Using Shunt Active Power Filter”, in International Conference on Sustainability Management of Advanced Renewable energy Technologies (ICSMART 19) during April 11<sup>th</sup> and 12<sup>th</sup>, 2019 organized by Aarupadai Veedu Institute of Technology, Chennai.
- **V. Karthikeyan**, V. Jamuna, “Performance Study of Multicarrier PWM based Multi-Level Inverter with Reduced Components,” *Journal of Advanced Research in Dynamical and Control Systems*, Vol.10, NO.15, pp. 423-433, 2018. (**SCOPUS Indexed, IF:0.14**)

- **Dr. V. Karthikeyan**, S. Janarthanan, “Yield Factor of Grid Connected Solar Photovoltaic System-A Case Study,” *Journal of Advanced Research in Dynamical and Control Systems*, Vol.9, NO.9, pp. 206-213, 2017. (*SCOPUS Indexed, IF:0.14*)
- K. Thanigai Arul, M. Ramesh, C. Chennakesavan, **V. Karthikeyan**, E. Manikandan, A. Umar, M. Maaza and M. Henini, “Novel multifunctional of magnesium ions ( $Mg^{++}$ ) incorporated calcium phosphate nanostructures,” *ELSEVIER’s Journal of Alloys and Compounds*, vol.730, pp. 31-35, Jan. 2018. (*SCOPUS Indexed, IF:3.133*)
- **V. Karthikeyan**, V. Jamuna, “Reduced Switch Reverse Voltage Multi Level Inverter,” *International Journal for Scientific Research & Development (IJSRD)*, ISSN: 2321-0613, Vol. 5, No.5, pp. 625 - 628, July 2017.
- **V. Karthikeyan**, V. Jamuna, “Phase Disposition PWM Based Reduced Switch Reverse Voltage Multi Level Inverter”, *ADVANCES in NATURAL and APPLIED SCIENCES*, ISSN Print: 1995-0772, ISSN Online: 1998-1090, Vol. 11, No.7, pp. 190 -199, May 2017.
- S. Janarthanan, D. Balaji, **V. Karthikeyan**, “Linear Modeling of Switched Reluctance Motor Based on MATLAB/SIMULINK and SRDaS Environment”, *International Journal of Mechanical Engineering and Technology (IJMET)*, ISSN Print: 0976-6340, ISSN Online: 0976-6359, Vol. 8, No.5, pp. 832-842, May 2017. (*SCOPUS Indexed*)
- **V. Karthikeyan**, V. Jamuna, “Multilevel Inverter with Reduced Number of Switches for Solar Energy Generation”, *International Journal of Latest Technology in Engineering, Management & Applied Science-IJLTEMAS*, Vol.6, No. 6, pp.113-116, May 2017.
- **V. Karthikeyan**, V. Jamuna, “A Simplified Optimal THD Modulation Algorithm for Multi Level Inverter with Reduced Components”, in *TEQIP-II Sponsored International Conference on Contemporary Topics in Power Engineering and Aiding Technologies (ICCPEAT’2017)* during February 24<sup>th</sup>– 25<sup>th</sup>, 2017 organized by Pondicherry Engineering College, Puducherry.
- **V. Karthikeyan**, V. Jamuna, “Hybrid Control Strategy for BCD Topology Based Nodular Multilevel Inverter”, *Circuits & Systems (CS)*, ISSN Print: 2153-1285, ISSN Online: 2153-1293, Vol. 7, No.8, pp. 1441-1454, June 2016.
- **V. Karthikeyan**, V. Jamuna, R. Ranjith, “BCD Topology Based Modular Multilevel Inverter”, *National Workshop on Recent Advances in Engineering Materials & Chemical Sciences (NWRAEMCS 2016)* at Anna University, Villupuram.
- E. S. Jayashree, **V. Karthikeyan**, V. Jamuna, “Phase Disposition PWM Based Multilevel Inverter with Reduced Number of Switches”, in *International Journal of Applied Engineering Research (IJAER)*, ISSN: 0973-4562, Vol.10, No.42 (2015). (*SCOPUS Indexed*)
- R. Janakiraman, **V. Karthikeyan**, “Single phase transformer-less grid connected PV system”, *International Journal of Emerging Technology in Computer Science & Electronics (IJETCSE)*, ISSN: 0976-1353 Vol.8, No.1, April 2014.
- **V. Karthikeyan**, V. Jamuna, D. Rajalakshmi, “Interleaved Boost Converter for Photovoltaic Energy Generation” in *Applied Mechanics and Materials*, Vol. 622 (2014) pp 97-103. [www.scientific.net/AMM.622.97](http://www.scientific.net/AMM.622.97). (*SCOPUS Indexed*)

- **V. Karthikeyan**, V. Jamuna, Abisha James, “Multilevel Inverter for Hybrid Energy Generation System”, Applied Mechanics and Materials, Vol. 622 (2014) pp 127-131. [www.scientific.net/AMM.622.127](http://www.scientific.net/AMM.622.127) (*SCOPUS Indexed*)
- N. Sakthipriya, **V. Karthikeyan**, “BCD Topology of Multilevel inverter for Solar Energy Generation”, in 2<sup>nd</sup> National Conference on Recent Trends in Electrical, Electronics & Embedded Systems (RTEEE-2014) at GKM College of Engineering & Technology, Chennai.
- B. Saradha, **V. Karthikeyan**, “Symmetrical Multilevel Inverter with Reduced Number of Switches”, in 2<sup>nd</sup> National Conference on Recent Trends in Electrical, Electronics & Embedded Systems (RTEEE-2014) at GKM College of Engineering & Technology, Chennai.
- A. Rakesh Kumar, **V. Karthikeyan**, Dr. V. Jamuna, “A Multilevel Inverter with Reduced Number of Switches”, in Second National Conference on Power System, Power Electronics and Drives (PSPED-2013) at SSN College of Engineering, Chennai.
- **V. Karthikeyan**, A. Rakesh Kumar, Dr. V. Jamuna, “A New Multilevel Inverter with BCD Topology and Reduction of Harmonics Using Sine Property”, in Archives Des Sciences Journal (ISSN: 1661-464X), Vol. 66, Issue. 4, Apr 2013.
- **V. Karthikeyan**, Dr. C. Chellamuthu, “Control of Switched Reluctance Motor by Indirect Rotor Position Estimation”, in National Level Conference (NCSSC-2005) at College of Engineering, Anna University, Chennai-25.