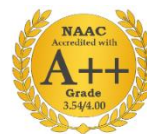





**SETHU INSTITUTE OF TECHNOLOGY**  
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Department of EEE					
Name	Dr.J.Jeyashanthi				
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Experience	Industry	Teaching	Others	Total	
	0	18	0	18	
Date of Joining the Institution	11.01.2011				
Area of Specialization	Power Electronics and Drives, Electric Vehicle, Machine learning				
Courses taught	Electrical Machines, Control Systems, Circuit Theory, Electronics Devices and Circuits, Power Electronics, Power System operation and Control, Protection and switchgear, Design of Electrical Machines, Basic Electrical and Electronics, PLC and Scada, Electric Vehicle, Electric drives and Control, Robotics and Automation, Machine Learning, Deep Learning, Electrical machines lab, Power Electronics lab, Circuits and devices lab, Control and Instrumentation lab , Power Converters, Electric vehicle and energy storage, AC Drives				
Research Focus	Electric vehicle, BMS				
Research guidance (Number of Scholars)	6				
Subject Competency	Electrical machines, Control Systems, Machine Learning, Power electronics and drives, Circuit theory, electric vehicle				
No. of papers published	National Journals		International Journals		Conferences
	-		12		24
PG Specialization	Power Electronics and Drives				

<b><i>Ph.D. Specialization</i></b>	Power electronics and drives, electric vehicle
<b><i>Projects Carried out</i></b>	<b><i>1 (UBA) – An efficient solar dryer for farmers</i></b>
<b><i>Patents (Filed &amp; Granted)</i></b>	<b><i>3 (published)</i></b>

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## Academic Credentials

Level	Degree	Specialization	University	Year of Completion
UG	B.E	<b>B.E.</b> , Electrical and Electronics Engineering	Government College of Engineering, Anna University, Chennai, Tamil Nadu,	2005
PG	M.E	Power Electronics and Drives,	Sethu Institute of Technology, Anna University, Chennai, Tamil Nadu.	2011
Ph.D.	Ph.D	Electrical Engineering	Anna University, Chennai, Tamil Nadu	2020

## Details of Journal Publication:

1. **Jeyashanthi J**, BarsanaBanu J, (2022) “ANFIS based double integral sliding mode control a grid integrated hybrid power system” Optik - International Journal for Light and Electron Optics – Elsevier, <https://doi.org/10.1016/j.ijleo.2022.170013>
2. **Jeyashanthi J**, Barsana Banu J, M.Pandi Maharajan, M. Ramuvel, (2022) “Assessment of physical and chemical Water Quality Parameters Using Naïve Bayes Classification Algorithm”, Material Today Proceedings – Elsevier
3. **Jeyashanthi J**, BarsanaBanu J, “ANN-based direct torque control Scheme of an IM Drive for a wide range of speed operation”, Neural Network World, 2022, Vol. 31, No. 6, Pages. 395 -414.
4. Banu, J.B., **Jeyashanthi, J.**, Ansari, A.T, (2021),” DTC-IM drive using adaptive neuro fuzzy inference strategy with multilevel inverter, Journal of ambient Intelligence and Humanized Computing. <https://doi.org/10.1007/s12652-021-03244-3>
5. **Jeyashanthi, J.**, Santhi, M., (2020), ”Performance of direct torque controlled induction motor drive by fuzzy logic controller”, Control Engineering and Applied Informatics, ISSN 1454-8658 , 22(1), pp. 63–71
6. **Jeyashanthi, J.**, Santhi, M., (2019), “Improved efficiency of direct torque controlled induction motor drive by golden section method” Revista Facultad de Ingenieria, ISSN: 0120-6230, Issue No. 91, pp. 31–42
7. BarsanaBanu J,Nammalvar P,**Jeyashanthi J** and Kannan V, (2021) “Implementation of Direct Current Control Strategy for PWM Rectifier Under Unbalanced Input Voltage circumstances”, Annals of R.S.C.B., 2021, Vol. 25, No. 5, Pages. 1499 -1507.
8. S Rohini, **Jeyashanthi J**, “Improved Performance of Photovoltaic Inverters Utilizing in VAR Mode” (2020), Irish Interdisciplinary Journal of Science & Research (IIJSR) , Volume 4,Issue 1, Pages 15-20
9. J.Jeyashanthi (2014), “Improved Performance of Multilevel Inverter by Reversing Voltage” International Journal of Applied Engineering Research, Volume 9, Issue 24, Pages 8170-8175
10. J.Jeyashanthi, “A Positive Buck Boost DC-DC converter with Mode-select circuit using PID

Controller”, in International Journal of Innovative Research in Science, Engineering and Technology, Issue3, Vol.3(2014), ISSN 2347-6710.

11. J.Jeyashanthi “Direct Torque Controlled Induction Motor Drive using Carrier based Space Vector PWM”, in International Journal of Emerging Trends in Engineering and Development, Issue3, Vol.2 (2013), ISSN 2249-6149, Page no. 410-416
12. J.Jeyashanthi, “Reduction of Voltage Spike In the Isolated Bi-directional Converter with Flyback Snubber”, in International Journal of Emerging Trends in Engineering and Development, Issue3, Vol.2(2013), ISSN 2249-6149, Page no. 632 – 640

### **Details of Conference attended:**

#### ***International Conferences***

1. J. Jeyashanthi, J. B. Banu, M. Ramuvel and K. M. Begam, "Autonomous Weapon Detection System in Real-Time Monitoring Using Convolutional Neural Network," *2024 International Conference on Integration of Emerging Technologies for the Digital World (ICIETDW)*, Chennai, India, 2024, pp. 1-6, doi: 10.1109/ICIETDW61607.2024.10939817. **[SCOPUS]** **[IEEE CONFERENCE]**
2. J. Barsana Banu, J. Jeyashanthi, K. M. Begam and T. Deepika Vinothini, "Techno-Economic Study of Grid-Integrated Solar Residential Energy Management (REM) System," *2024 International Conference on Integration of Emerging Technologies for the Digital World (ICIETDW)*, Chennai, India, 2024, pp. 1-5, doi: 10.1109/ICIETDW61607.2024.10939514. **[SCOPUS]** **[IEEE CONFERENCE]**
3. Barsana banu J, Karthigaivel R, Jeyashanthi J, Deepika vinothini T, “Study of Home Energy Management (HEM) Considering Grid-Integrated Solar”, IEEE International Conference for Innovation in Technology (INOCON) at Sai Vidya Institute of Technology, Bengaluru, India held during 4<sup>th</sup> – 6<sup>th</sup> March, 2024 **[SCOPUS]** **[IEEE CONFERENCE]**
4. J. Barsana Banu, R. Karthigaivel, T. Deepika Vinothini and **J. Jeyashanthi**, (2023) "Development of a three-level soft switching topology for renewable energy applications with multiple operating modes: Development of three-level soft switching topology," Third International Conference on Advances in Electrical, Computing, Communication and Sustainable Technologies (ICAECT), Bhilai, India, 2023, pp. 1-6, doi:10.1109/ICAECT57570.2023.10118157. **[SCOPUS]** **[IEEE CONFERENCE]**
5. **Jeyashanthi, J.**, Hemamaheswari, V., Thilagam, G.L., Loganayaki, G, (2011), "A novel approach for a multirate 3 level carrier SVM of DTC based IM drive" International Conference on Recent Advancements in Electrical, Electronics and Control Engineering, IConRAEeCE'11 – Proceedings, pp. 78-81, 6129750. DOI: 10.1109/ICONRAEeCE.2011.6129750 **[SCOPUS]** **[IEEE CONFERENCE]**
6. J. Jeyashanthi, P Harikrishnan & M Mohamed Sharif, M. Nithish Raja, “Smart Navigation System for Bus Stop”, 12th International Conference on Emerging Trends in Engineering and Technology ICETET'25, 04th & 05th APRIL 2025, Pandian Saraswathi Yadav Engineering College, Madurai
7. **Jeyashanthi, J.** “Cloud controlled aquatic cleaning boat”, (2024), international conference on recent trends in information, communication and electrical engineering, held on 23 & 24 March 2024 at Sethu Institute of Technology, Virudhunagar.

8. **Jeyashanthi, J.** "AI based fault detection on electric vehicle", (2024), international conference on recent trends in information, communication and electrical engineering, held on 23& 24 March 2024 at Sethu Institute of Technology, Virudhunagar.
9. Riyazni V V, **Jeyashanthi, J.** "A flying squirrel search optimization for MPPT under partial shaded Photovoltaic System", 3<sup>rd</sup> International Conference on Emerging Electrical System & Control ICEESC-23, Sethu Institute of Technology.
10. Karthik J, **Jeyashanthi J**, "Design of Full Bridge Three port interleaved Bidirectional Converter for smart charging of Electric vehicle Batteries", Emerging Trends in Information & Communication Technologies, (ETICT 2022), Sethu Institute of Technology.
11. **Jeyashanthi J**, "Hybrid energy storage system for smart tractor using energy management system", First International Conference on Recent Advances and Innovations in Science, Engineering, Technology and Management" held on 21, 22 April 2023 at Solamalai College of Engineering, Madurai.
12. **Jeyashanthi J**, "Smart Digicard for health information at emergency state", First International Conference on Recent Advances and Innovations in Science, Engineering, Technology and Management" held on 21, 22 April 2023 at Solamalai College of Engineering, Madurai.
13. **Jeyashanthi J**, Barsana Banu J, "Smart Obstacles Detection System for Visually Impaired Person", International Conference on "Emerging Trends in Electric Vehicles and Smart Technologies (ICETEVST-22), SRM TRP Engineering college, ISBN: 978-93-94899-37-7 Page 28, 21.04.2022 – 22.04.2022.
14. Barsana Banu, J., **Jeyashanthi, J.**, Thameem Ansari, A., Sathish, A, "Development and implementation of the smart energy monitoring system based on IoT", International Conference on Power Engineering Computing and Control (PECCON-2019), Vellore Institute of Technology, 12.12.2019 – 14.12.2019.
15. **Jeyashanthi J** "GA and PSO based direct torque-controlled induction motor drive", International Conference on smart grid and smart city applications, PSG College of Engineering and Technology, 03.01.2019.
16. **Jeyashanthi J** "A novel Cascaded Multilevel Inverter using Reverse Voltage Topology" in International Conference on Emerging Electrical systems and Control at Sethu Institute of Technology from 04.12.2014 & 05.12.2014

### ***National Conferences***

17. **Jeyashanthi J** "Symmetric and Asymmetric Cascaded Multilevel Inverter with Reduced Number of Switches" in the National Conference, "Emerging Electrical Systems and Control" on 15.4.16 at Sethu Institute of Technology, kariapatti.
18. **Jeyashanthi J** "A wide area Monitoring System based Load Restoration Method" in the National Conference "Emerging Electrical Systems and Control" on 15.4.16 at Sethu Institute of Technology, kariapatti.
19. **Jeyashanthi J** "A high Efficiency DC-DC Converter with Mode- Select Circuit for Portable Devices" in national conference on Emerging Technologies in Computing, Control and Communications, on 21.03.2014 and 22.03.2014
20. **Jeyashanthi J** "Multilevel Carrier Space Vector Modulation of DTC based IM Drive" in National Conference on Power Electronics and Drives Applications at Govt. College of

21. **Jeyashanthi J** “A Novel Approach for a Multirate Multilevel Carrier Space Vector Modulation of DTCBased IM Drive” in National conference on Power Electronics & Drives at A.C college of Engineering & Technology on 09.03.2011

**Details of Book Chapter and Books Published:**

1. Barsana Banu, J., **Jeyashanthi, J.**, Thameem Ansari, A., Sathish, A, 2021, “Development and Implementation of the Smart Energy Monitoring System Based on IoT”, Advances in Smart Grid Technology. Lecture Notes in Electrical Engineering, 688, pp. 513–525, Springer, Singapore. [https://doi.org/10.1007/978-981-15-7241-8\\_38](https://doi.org/10.1007/978-981-15-7241-8_38). **[SCOPUS]**
2. **Jeyashanthi J**, BarsanaBanu J, (2023) “Performance Analysis of DTC-IM Drive Using Various Control Algorithms”, In chapter, Book published in Bentham Science Publishers. (<https://drive.google.com/file/d/1-Zc7yfgDh90vervhyUP08au-rOUIZjiV/view>) **[SCOPUS]**

**Details of Patents Filed and Granted:**

- Design and implementation of iot based smart bin for organic fertilizer generation, 202441081705, 2024
- Evaluation of cellular properties for non-small cell lung cancer treatment based on advanced nanoparticle drug delivery systems, 202511052088,2025
- Sustainable ev charging station combining wind turbine and solar photovoltaic technologies, 202441079217,2024

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