Name of the Faculty	**Dr. J. KARTIGEYAN**		
Designation	Associate Professor & Dean of Student Affairs		
Date of Joining (JBIET)	30-08-2017		
E - Mail	deanstudentaffairs@jbiet.edu.in		
Educational Qualifications	**Name of the Degree**	**Institute/ University**	**Class**
Ph. D	Doctor of Philosophy (Electrical Engineering)	Annamalai University	NA
PG	M. Tech (Electrical Drives and Control)	Pondicherry University	First
UG	B.E (Electrical and Electronics Engineering)	Madras University	First
Work Experience			
Teaching	13Years 6 Months		
Research	3 Years 6 Months		
Industry	NIL		
Responsibilities held at the central level in college	▪ Dean of Student Affairs ▪ Played a vital central-level role in UGC, AICTE, NBA, and NAAC inspections ▪ Convenor for the Anti-Ragging, Disciplinary, Hostel, Extracurricular, Anti-Drug Committee, and Student Wellness Centre ▪ Convenor for SAC, NSS and Sports		
Responsibilities held at the departmental level in college	▪ Former HoD of Department of EEE ▪ NBA Criteria 1 and 3 Incharge, Department NBA & NAAC Coordinator, BOS Coordinator		
Courses Handled at UG Level	▪ Basic Electrical and Electronics Engineering, Electronic Devices and Circuits, Pulse and Digital Circuits, Electromagnetic Fields, Control Systems, Linear Integrated Circuits, Power Electronics, Power Systems – I, Power Systems – II, Power Semiconductor Drives, Electrical Machine Design, Special Electrical Machines, Switchgear and Protection, Energy Engineering, Utilization of Electrical Energy		
Courses Handled at PG Level	▪ HVDC Transmission, Electric Vehicle		
Area of Research	▪ Power Converters, Magnetic Materials, Design and Development of Electrical Machines using Finite Element Method and Electric Vehicles		
Research Guidance for M. Tech/ Ph. D Students	▪ Guided more than 15 M.Tech Students ▪ Guiding Two Ph.D Scholars ▪ One Ph.D Scholar Submitted Thesis		
Books/ Book Chapters Published	***Recent Book Publications*** ▪ J.Kartigeyan, Best Practices and Practical Applications, *IGI Global Scientific Publishing*, February 2025. ISBN13: 9798369383926, DOI: 10.4018/979-8-3693-8392-6		

	▪ J.Kartigeyan, Feature knowledge-based fault detection of induction motors through the analysis of stator current data using SWT-LSTM- DNN model, *CRC Press*, January 2025. eBook ISBN: 9781003559139, https://doi.org/10.1201/9781003559139 ▪ J.Kartigeyan, Advanced Engineering Research and Applications – Book Chapter (Magnetic Materials for Rotating Electrical Machines: A Selection Perspective), ISBN: 978-93-87374-77-5, *Research India Publications*, 2019, Book Code: AERA.
Prominent Research Publications in Conferences	***Recent Conference Publications*** ▪ J.Kartigeyan," Different Optimization Technique for Ant Cluster Head and Routing Protocol Wireless Sensor Network, *3rd IEEE World Conference on Applied Intelligence and Computing*, July 2024. ▪ J.Kartigeyan, "A Comprehensive Review of UPFC Techniques For Improving Power Quality", *International Conference on Energy, Materials and Communication Engineering (ICEMCE*), IEEE, Dec 2023. ▪ J.Kartigeyan, "Enhanced Particle Swarm Optimization based Node Localization Scheme in Wireless Sensor Networks", *Proceedings of the International Conference on Augmented Intelligence and Sustainable Systems*, 1019-1024, 2022. ▪ J.Kartigeyan, "High Impedance fault classification in power grids with distributed generation using deep learning technique", *2nd International Conference on Devices, Intelligent System and Communications,* AIP *(Publication in Progress).*
Prominent Research Publications in Journals	***Recent Journal Publications*** ▪ J.Kartigeyan, "Solar And IoT Based Railway Track Crack Detection System," *YMER,* 24(3), PP. 753-760, Mar 2025. ▪ J.Kartigeyan, "Fuzzy Logic Controller Based G2v & V2g Technologies For Three Phase Bidirectional Electric Vehicle Battery Charger," *Industrial Engineering Journal*, 7(53), PP.161-169, Jul 2024. ▪ J.Kartigeyan, "Solar/Wind Hybrid Power System based Charging Electric Vehicles Applications using fuzzy logic controller," *Industrial Engineering Journal*, 33(7), PP. 170-176, Jul 2024. ▪ J.Kartigeyan, "Wind Integrated UPFC System with Cascaded Fuzzy Logic Controller for Alleviation of PQ Issues," *GMSARN International Journal ,* 19(2), PP. 137 – 151, Jun 2024. ▪ J.Kartigeyan, "Solar Power Based Modernization of Agriculture For Crop Protection Using IoT," *JETIR*, 2(11), PP. 314 – 321, Feb 2024. ▪ J.Kartigeyan, "Mitigation of power quality disturbances in wind energy conversion systems with fed unified power flow controllers using cascaded adaptive neuro-fuzzy inference system controller," *International Journal of Advanced Technology and Engineering Exploration*, 10(108), PP. 1503 – 1523, 2023. ▪ J.Kartigeyan, "Simulation and Analysis of Fuzzy Controlled Grid-Connected PV System With P&Q Control Theory," *The*

	International Journal of Analytical and Experimental Modal, 15(1), PP. 67-75, 2023. ▪ J.Kartigeyan, "Intelligent controller based WECS fed unified power flow conditioner for PQ enhancement," *International Journal of Power Electronics and Drive Systems*, 14(4), PP. 2148 – 2162, 2023. ▪ J.Kartigeyan, "Investigative study on the properties of magnetic materials for electrical machines," *Indonesian Journal of Electrical Engineering and Computer Science*, 32(1), PP. 71 - 79, 2023. ▪ J.Kartigeyan, "WECS Fed Unified Power Flow Conditioner for Solving PQ Issues with Crow Search Algorithm," *International Journal of Intelligent Systems and Applications In Engineering*, 10(4), PP. 57–66, 2022. ▪ J.Kartigeyan, "A PV Based Hybrid Energy Storage System for Electric Vehicles," *IJRASET*, 9(12), PP. 672-680, 2021. ▪ J.Kartigeyan, "A Modified Structure of Comparative Analysis of 13 & 15 Multilevel Topologies for Renewable Applications," *Design Engineering*, 9(6), PP. 6861-6866, 2021. ▪ J.Kartigeyan, "Power Quality Analysis of Multilevel Renewable Energy Sources," *Journal of Critical Reviews*, 7(18), PP. 647-652, 2020. ▪ J.Kartigeyan, "Three-Level Inverter Based Autonomous Power Management Scheme for Interlinking AC-DC Microgrids," *JETIR*, 7(2), PP. 144-151, 2020. ▪ J.Kartigeyan, "Improving the Power Quality of Distribution System by Using Modified UPQC Controller," *JETIR*, 7(2), PP. 130-137, 2020. ▪ J.Kartigeyan, "Analysis, Design and Implementation of an APWM ZVZCS Full Bridge DC to DC Converter for Battery Charging in Electric Vehicle," *JES*, 11(5), PP. 145-148, 2020. ▪ J.Kartigeyan, "Magnetic Performance of 3-phase 12/8 Poles Switched Reluctance Motor," *IJRAR*, 6(2), PP. 1-6, 2019. ▪ J.Kartigeyan, "Core Loss Analysis of Linear Switched Reluctance Motor," *IJRAR*, 6(2), PP. 7-12, 2019. ▪ J.Kartigeyan, "2-D Finite-Element Analysis of 8/6 Switched Reluctance Motor with C-Core Stators," *IJRAR*, 6(2), PP. 13-20, 2019. ▪ J.Kartigeyan, "Modeling of Switched Reluctance Motor using Soft Magnetic Composites," *IJRAR*, 6(2), PP. 21-29, 2019. ▪ J.Kartigeyan, "Miniature Thermal Power Plant Using TEP Transducer for Domestic and Industrial Applications," *JETIR*, 6(5), PP. 581-585, 2019. ▪ J.Kartigeyan, "Core Loss Model for Switched Reluctance Motor in Electric Vehicles," *IJCRT*, 6(1), PP. 139-146, 2018. ▪ J.Kartigeyan, "Magnetic Materials for Rotating Electrical Machines: A Selection Perspective," *International Journal of Applied Engineering Research*, 13(2), PP. 1506-1513, 2018. ▪ J.Kartigeyan, "Effect of Material Properties on Core Loss in Switched Reluctance Motor using Non-Oriented Electrical Steels," *Journal of Magnetics*, 22(1), PP. 93-99, 2017.

	▪ J.Kartigeyan, "Effect of Steel Lamination on Core Losses in Switched Reluctance Motors," *International Journal of Electrical Engineering & Technology*, 7(6), PP. 64-74, 2016. ▪ J.Kartigeyan, "Fault Tolerance of 12/8 Switched Reluctance Motor Using Fuzzy Logic Controller," *International Journal of Scientific & Engineering Research*, 7(11), PP. 325-330, 2016.
Patents	***Recent Patent Publications*** ▪ J.Kartigeyan, "Cloud-Enhanced Machine Learning And Wireless Sensor Networks For Pollution Prediction And Management In Smart Cities," *Indian Patent Office Journal*, Application Number: 202511003284 A, Publication Date (U/S 11A): 31/01/2025. ▪ J.Kartigeyan, "Sensor-Based Security Device Embedded With Cloud," *Intellectual Property Office of the United Kingdom*, Design number: 6413753, Grant date: 06 January 2025. ▪ J.Kartigeyan, "Multi-protocol charging port and electronic control system for electric vehicles," *The German Patent and Trademark Office*, Utility Model No. 20 2024 105 478, Publication Date: 07.10.2024. ▪ J.Kartigeyan, "High-Efficiency Power Conversion Systems for Renewable Energy Integration," *Indian Patent Office Journal*, Application Number: 202441055887, Publication Date (U/S 11A): 02/08/2024. ▪ J.Kartigeyan, "Smart Solar Forecasting for Enhanced Irradiance and Temperature Predictions of Photovoltaic Systems Using Deep Learning Techniques," *Indian Patent Office Journal*, Application Number: 202441044499, Publication Date (U/S 11A): 08/06/2024. ▪ J.Kartigeyan, "Smart Switches with LED lights to indicate the on or off of the Switch from a Distance," *Intellectual Property Office of the United Kingdom*, Design number: 6302719, Grant date: 18 August 2023. ▪ J.Kartigeyan, "Design of an Integer Linear Programming Model for Partially Ordered Sets of Logical Units of Computers," Indian Patent Office Journal, Application Number: 202241066588, Publication Date (U/S 11A): 09/12/2022. ▪ J.Kartigeyan, "Analysing the Synergic Effects of Unidirectional and Bidirectional Smart Charging Points of Electric Vehicles," *Indian Patent Office Journal*, Application Number: 202211055119, Publication Date (U/S 11A): 14/10/2022. ▪ J.Kartigeyan, "An IOT Integrated Smart Irrigation System Based on Wind Energy Utilization to Monitor the Watering of Crops," *Indian Patent Office Journal*, Application Number: 202241052586, Publication Date (U/S 11A): 23/09/2022. ▪ J.Kartigeyan, "Artificial Intelligence Based Approach to Design an engine to Receive Wind Energy and Run The Electric vehicles," *Indian Patent Office Journal*, Application Number: 202241051820, Publication Date (U/S 11A): 16/09/2022. ▪ J.Kartigeyan, "An Automated Artificial Intelligence Based Approach to handle the Servicing of Electric Vehicles," *Indian Patent Office Journal*, Application Number: 202241048683, Publication Date (U/S 11A): 02/09/2022.

	▪ J.Kartigeyan, "Design of Solar Thermal Power Integration Systems to Increase the Efficiency of Utilization of Renewable Energy Resources in Housing Units," *Indian Patent Office Journal*, Application Number: 202211035079, Publication Date (U/S 11A): 01/07/2022. ▪ J.Kartigeyan, "Smart Dielectric System To Protect The Humans Working on Electric Poles," *Indian Patent Office Journal*, Application Number: 202221012862, Publication Date (U/S 11A): 29/04/2022. ▪ J.Kartigeyan, "Artificial intelligence-based system for addressing the Privacy and security aspects of wireless networks," *Indian Patent Office Journal*, Application Number: 202211018717, Publication Date (U/S 11A): 08/04/2022. ▪ J.Kartigeyan, "Nanotechnology Utilization Aspects in Solar Photovoltaic Cells for Efficient Performance Analysis and Absorption Rate Of Solar Energy," *Indian Patent Office Journal*, Application Number: 202241015269, Publication Date (U/S 11A): 25/03/2022. ▪ J.Kartigeyan, "Nano Electronics Based Solar Cells for Efficient Performance of Absorption of Solar Energy," *Indian Patent Office Journal,* Application Number: 202211013548, Publication Date (U/S 11A): 01/04/2022. ▪ J.Kartigeyan, "An Intelligent Mobile Alert System for Reservoir Water Level and Flow Indication Integrated with GPS for Farmers," *Indian Patent Office Journal*, Application Number: 202041032052, Publication Date (U/S 11A): 21/08/2020. ▪ J.Kartigeyan, "IOT Enabled Calorie Counter Wristwatch," Indian Patent Office Journal, Application Number: 202041030037, Publication Date (U/S 11A): 31/07/2020. ▪ J.Kartigeyan, "Door Mounted Door Handle Sanitizer Dispenser," *Indian Patent Office Journal*, Application Number: 202041026845, Publication Date (U/S 11A): 10/07/2020.
Web of Science/Scopus ID	57197830535 https://www.mendeley.com/profiles/kartigeyan-jayaraman/#profile-employment
H-Index (As per SCOPUS Database)	▪ 11
Professional Memberships	▪ AICTSD - 3758
Details of Short-Term Training Programs/Faculty Development Programs/Seminars/ Workshops (Attended and Organized)	▪ National Level Awareness Program on Institutional Development Plan (IDP) for Higher Education Institutions, 06th Mar 2025, *Telangana Council of Higher Education (TGCHE), and Institute for Academic Excellence (IAE*), Hyderabad ▪ Seminar on Beneficial Effects of Radiation Technology, 25th Jan 2025, *Indian Association for Radiation Protection*, Mumbai. ▪ ATAL FDP on Next Generation Green Energy Powered Electric Vehicle And Renewable Energy Integration Using Solar Micro Grid, 09 To 14th Dec 2024, *Holy Mary Institute of Technology And Science*, Hyderabad ▪ Lecture on Ultra-Low Power Sensor Interfaces For IoT, 01st Nov 2024, *IEEE SNIST SB Sensors Council Chapter*.

	▪ ATAL FDP on Artificial Intelligence For Geospatial Data Analysis, 18 To 23rd Nov 2024, *VJIT*, Hyderabad ▪ FDP on Engineering Tomorrow's Cars: Mastering Automotive Architecture with Embedded systems, 14th To 19th Oct 2024, *JBREC*, Hyderabad. ▪ Seminar on Intellectual Property Rights, 07th Oct 2024, *JBIET*, Hyderabad. ▪ Recent Advances in the Power Sector, Challenges, Solutions & Opportunities, 31st July – 05th Aug 2023, *VJIT,* Hyderabad. ▪ Academic Challenges Towards Implementation of NEP in HEI's, 29th – 30th Sep 2022, *LTJSS*. ▪ PYTHON Programming, 08th – 13th Aug 2022, *JBIET,* Hyderabad. ▪ Online Workshop on Intellectual Properties Rights, 10th -11th Apr 2020, *IPPO.* ▪ Online Webinar on Paper Writing And Publishing In Reputed Journals, 18th Apr 2020, *StartCore Techs*. ▪ Online Webinar on Structuring Your Article Correctly, 22nd Apr 2020, *Research Academy.* ▪ Online FDP on Research Opportunities in Power Engineering ,22nd -27th Apr 2020, *CMR,* Hyderabad. ▪ Online Webinar on Renewable Energy Grid Integration: Challenges and Key Issues, 23rd Apr 2020, *IEEE MEA SB*. ▪ Online Webinar on Permanent Magnet Machines for Industrial and Strategic Applications", 26th Apr 2020, IEEE SC, *CBIET*, Hyderabad. ▪ Online FDP on Outcome Based Education ,1st May 2020 , *Inpods.* ▪ Online Webinar on Opportunities for Engineers and Exceptions from Industry, 2nd May 2020 ,*CIT*. ▪ FDP on Effective Teaching and Research Skills, 05th -11th, Nov 2019, *VJIT,* Hyderabad. ▪ FDP on Emerging Trends in Power and Energy: A Research Perspective, 07th -13th Aug 2019, *JBIET,* Hyderabad. ▪ FDP on Machine Learning with Python, 05th - 09th Aug 2019 , *JBIET*, Hyderabad. ▪ Workshop on Significance of MATLAB in Applications of Emerging Technologies, 26th Jun 2019, *CBIT*, Hyderabad. ▪ Seminar on Awareness of Advanced Emerging Technologies, 25th Feb 2019, *JBIET,* Hyderabad. ▪ Add-on Course on Industrial Automation using Programmable Logic Controller (PLC & SCADA), 19th -23rd Feb 2019, *JBIET,* Hyderabad. ▪ Training Program on Career Counseling for Overseas Studies, 19th Feb 2019, *JBIET,* Hyderabad. ▪ Seminar on Seminar on Switchgear Engineering, its Evolution and Modern Trends, 09th Jan 2019, *JBIET,* Hyderabad. ▪ Seminar on Emerging Trends in the Operation and Control of Wind Energy Systems, 08th – 09th , Dec 2018, *Annamalai University*, Tamil Nadu. ▪ Seminar on Recent Trends in Batteries, 03rd Aug 2018, *JBIET,* Hyderabad.

	▪ Workshop on Emerging Challenges in the operation and Control of Solar Power Plants, 24th – 25th, Mar 2018, *Annamalai University,* Tamil Nadu. ▪ Workshop on Emerging Trends in the Operation and Control of Smart Grid, 17th – 18th, Sep 2016, *Annamalai University,* Tamil Nadu. ▪ Short Term Training Programme on Trends and Issues in Modelling and Design of Digital Systems,22nd – 26th, Sep 2015, *Annamalai University,* Tamil Nadu. ▪ Workshop on Emerging Trends in Energy Systems Management ,14th – 16th, Mar 2014, *Annamalai University,* Tamil Nadu.