

FACULTY PROFILE

Name of the Staff : **Dr. B. VIGNESHWARAN**
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1. Personal Details

Age : 37
Date of Birth : 06/10/1989
Sex & Marital Status : Male / Married
Citizenship : Indian

1.1. Qualification

Degree	Specialization	Class /CGPA	Month &Year of Passing	Institute/University
Ph.D	High Voltage Engineering	December 2019		Anna University, Chennai
M.E	High Voltage Engineering	I Class with Distinction/ 9.1	July 2013	National Engineering College, Kovilpatti.
B.E	Electrical and Electronics Engineering	I Class/82	April 2011	P.S.R Engineering College, Sivakasi.

1.2. Professional Experience:

Designation	Institution/Organization	Period	Nature of Duties
Associate Professor	National Engineering College	10.07.2024 to Present	Teaching and Research
Assistant Professor (Senior Grade)	National Engineering College	15.07.2019 to 09.07.2024	Teaching and Research
Assistant Professor	National Engineering College	13.05.2013 to 14.07.2019	Teaching and Research

2. Academic Achievements

2.1 Short term Courses / Seminars / Conference/ Workshops Attended:

S.No	Title	Period	Venue
1.	Deep Learning for Generative AI: Theory and Practice	01.12.2025 – 05.12.2025	IITDM, Kancheepuram

2.	AI/ML for Computer Vision and IoT Applications	11.07.2024 - 21.07.2024	Electronics & ICT Academy, NIT Warangal
3.	Artificial Intelligence and Machine Learning Applications	01.07.2023 - 10.07.2023	Electronics & ICT Academy, NIT Warangal
4.	FDP on Python for Data Science	Jul - Aug 2022	NPTEL Course, IIT Madras
5.	ATAL FDP on Artificial Intelligence: Applications of AI in Research and Development	05.07.2021 to 09.07.2021	Council of Scientific and Industrial Research (CSIR), Bhopal-462026
6.	ATAL FDP on Artificial Intelligence	09.11.2020 to 13.11.2020	National Institute of Technology, Calicut
7.	AICTE - Margdarshan Scheme sponsored one week faculty development programme on Perspectives and Challenges in	13.07.2020 to 17.07.2020	National Institute of Technology, Trichy
8.	AICTE - Margdarshan Scheme sponsored one week faculty development programme on Empowering Teachers in 21 st Century	27 th April to 03 rd May 2019	National Institute of Technology, Trichy
9.	TEQIP - III sponsored one-week faculty development programme on Free/open source software for AI and Machine	01 st - 06 th October 2018	Thiagarajar College of Engineering, Madurai
10.	AICTE sponsored short term course on Recent trends in condition monitoring of power apparatus and systems	19 th - 24 th February 2018	Indian Institute of Technology, Madras
11.	Two Weeks AICTE sponsored faculty development programme on "Recent trends and Applications of High Voltage Engineering"	6 th - 19 th November 2017	National Engineering College, Kovilpatti
12.	Training on protection relay - P14D	24 th and 25 th October 2017	National Engineering College, Kovilpatti
13.	Three days Quality improvement Programme on "Instructional design and delivery systems" conducted by NITTTR,	22 nd - 27 th May 2017	National Engineering College, Kovilpatti
14.	Three days Quality improvement Programme on "Technology Enabled Teaching Learning Process" conducted by	27 th - 29 th May 2017	National Engineering College, Kovilpatti
15.	Five days QIP-AICTE sponsored short term course on "Recent Advances in UHV transmission and distribution"	19 th - 23 rd December 2016	Indian Institute of Science (IISc), Bangalore
16.	Two Days National Workshop on "Image Processing using MATLAB"	16 th and 17 th September 2016	KPR Institute of Engineering and Technology, Coimbatore
17.	Anna University sponsored 7 Days FDTP Programme on "Applied Soft Computing Techniques"	7 Days 09 th - 15 th June 2016	MIT, Anna University, Chennai

18.	Workshop on “Hands on training on MATLAB toolboxes” – HTMT’16	2 days 03. 03. 2016 & 04. 03. 2016	National Engineering College, Kovilpatti
19.	IEEE CIS Sponsored Three days workshop on “Implementation of Soft Computing Techniques” ISCT’15	3 Days 5 th to 8 th August 2015	National Engineering College, Kovilpatti
20.	Two Weeks ISTE STTP Conducted by IIT Bombay “Pedagogy for Effective use of ICT in Engineering Education”	5 th – 7 th & 19 th – 21 st Jan 2015	Anna University of Technology, Tirunelveli
21.	DST sponsored “Empowering Indian Engineering Education for Global Expectations”	2 Days 7 th & 8 th November	National Engineering College, Kovilpatti
22.	Anna University sponsored 7 Days FDP Programme on “ Electromagnetic Theory”	7 Days 12 th – 19 th June 2014	Kamaraj College of Engineering and Technology, Virudhunagar
23.	AICTE sponsored on day CD-Cell workshop on “Research Themes on High Voltage Technology”	1 Day 8 th February 2014	Indian Institute of Technology, Madras
24.	CSIR Sponsored One day National level Technical Seminar on “Recent Advancements in the field of High Voltage Testing Techniques”	1 Day 27 th December 2013	National Engineering College, Kovilpatti
25.	Three day workshop on “Implementation of Soft Computing Techniques Using MATLAB 2013”	3 Days 23 rd to 25 th October 2013	National Engineering College, Kovilpatti
26.	One day workshop on “High Voltage Insulation Testing, Measurement and Simulation Techniques”	1 Day 28 th September 2013	SASTRA University, Thanjavur.
27.	Three days workshop named “ Nuances of Support Vector Machine”	3 Days 5 th to 7 th October 2012	National Institute of Technology, Trichy
28.	National Level Seminar titled “ Speech and Audio Signal Processing”	2 Days 14 th and 15 th September	Mepco Schlenk Engineering College, Sivakasi
29.	Technical Seminar on “Media Security: A set-theoretic framework for Data Hiding” delivered by Dr. Gaurav Sharma, Professor, Department of Electrical and Computer Engineering, University of Rochester, USA.	1 Day 29 th August 2012	National Engineering College, Kovilpatti.
30.	Two Days National Level Technical Seminar on “Application of Artificial Intelligence Techniques in Renewable	2 Days 20 th and 21 th January 2012	National Engineering College, Kovilpatti.
31.	Two Days National Level Technical Seminar on “Design, Modeling and Control of Electrical Machines using Artificial	2 Days 28 th and 29 th October 2011	National Engineering College, Kovilpatti.

2.2 Expert Lecture Delivered:

S.No	Title	Date	Venue	Participants
1.	AI-Driven Transformer Fault	27 th April 2026	IEI Student Chapter, VNR Vignana Jyothi Institute	40

	Recognition: A Smart and Reliable Diagnostic Framework		of Engineering and Technology	
2.	AI Based Health Monitoring approach	8 th July 2023	IEEE Student Branch, National Engineering College	30
3.	Startup Ideas for Green Energy Technology	31 th March 2022	Karpagam Institute of Technology, Coimbatore	80
4.	Innovative Research in Condition Monitoring of High Voltage Insulator using Deep Learning Algorithm	11 th March 2021	Karpagam Institute of Technology, Coimbatore	30
5.	Recognition of High Voltage defective Insulator using Deep Learning Algorithm	06 th February 2021	Dept of EEE, National Engg. College, Kovilpatti	60
6.	Flashover characteristics on High Voltage Insulator	20 th February 2019	Dept of EEE, National Engg. College, Kovilpatti	30
7.	Characterization of Solid Insulation, Simulation Tools for Field Computation and Partial discharge characterization and recognition	6 th – 19 th November 2017	Dept of EEE, National Engg. College, Kovilpatti.	35
8.	Introduction to COMSOL	1 st September 2015	Dept of EEE & Mechatronics, Kamaraj College of Engineering and Technology, Virudhunagar.	30
9.	Introduction to High Voltage Laboratory	8 th December 2014	Dept of EEE, National Engg. College, Kovilpatti.	19
10.	Electric field computation using ANSYS	11 th December 2014	Dept of EEE, National Engg. College, Kovilpatti.	19
11.	Breakdown in Solid and Composite Dielectrics	12 th December 2014	Dept of EEE, National Engg. College, Kovilpatti.	19
12.	Electric field computation using COMSOL	14 th December 2014	Dept of EEE, National Engg. College, Kovilpatti.	19

2.3 Industrial Training Attended:

S. No	Training Details	Period	Company Details
1.	Faculty Internship Training on Partial Discharge characteristics	24 th February – 01 st March 2022	Mohan Power Infrastructure Private Limited, Tirunelveli
2.	Faculty Internship Training on condition Monitoring of Insulator	01 st – 05 th March 2021	TANGEDCO/M.E.D.C, Kallikudi, Madurai Division
3.	Faculty Internship Training on Transformer Manufacturing and Testing	19 th – 23 rd November 2018	Shree AbiramiEngineering works, Chennai
4.	Faculty Internship Training on High Voltage Testing Techniques	05 th – 09 th June 2017	Global Power Research Institute, NABL Certified Lab, Cuddalore

2.4 Online Certification Completed:

S. No	Certification	Period	Organizers	Remarks
1.	Agentic AI and AI Agents: A Primer for Leaders	September 2025	Coursera	
2.	NPTEL Online Certification on “Design Thinking A Primer”	July – August 2023 (4 Weeks)	Indian Institute of Technology (IIT), Madras	Elite
3.	NPTEL Online Certification on “Python for Data Science”	July – August 2022 (4 Weeks)	Indian Institute of Technology (IIT), Madras	Elite
4.	Data Processing and Feature Engineering with MATLAB	June 2022	Coursera	
5.	Exploratory Data Analysis with MATLAB	July 2021	Coursera	
6.	Neural Network and Deep Learning	Feb 2021	Coursera	
7.	MATLAB Online Certification on “MATLAB Programming Techniques”	June 2020	Mathworks Training Services	
8.	MATLAB Online Certification on “Machine Learning with MATLAB”	Apr 2020	Mathworks Training Services	
9.	Coursera Online Certification on “Electric Power Systems”	Mar 2020	The State University of Newyork	
10.	Coursera Online Certification on “Python Data Structures”	Dec 2019	University of Michigan	
11.	MATLAB Online Certification on “Deep Learning with MATLAB”	Oct 2019	Mathworks Training Services	
12.	Coursera Online Certification on “Programming for Everybody (Getting Started with Python)”	Oct 2019	University of Michigan	
13.	MATLAB Online Certification on “Deep Learning Onramp”	Sep 2019	Mathworks Training Services	
14.	NPTEL Online Certification on “Recent Advances in	August – September 2018	Indian Institute of Science	Elite

	Transmission Insulators”	(4 Weeks)	(IISC), Bangalore	
15.	NPTEL Online Certification on “Advances in UHV Transmission and Distribution”	July-September 2018 (8 weeks)	Indian Institute of Science (IISC), Bangalore	Elite
16.	NPTEL Online Certification on “Introduction to Research”	January-February 2016 (10 Hours)	Indian Institute of Technology (IIT), Madras	Elite

2.5. Event Organized:

S. No	Title of the Webinar/ Event	Date	Participants
1	Application of Artificial Intelligence Techniques in High Voltage Engineering	5.02.2021 and 6.02.2021	60
2	Condition Monitoring and Diagnosis Techniques for High Voltage Power Apparatus using Soft Computing Approaches	11.03.2022 and 13.03.2022	60
3	Hands-on experience with MATLAB tools and techniques applicable to IoT & Hardware	09.10.2025 and 10.10.2025	30

3. Research Achievements

3.1 International Journal Publication – SCI (With Impact Factor)

S.No.	Title of the Paper	Name of the Journal	Vol. No & Page No.	Year
1.	Cyber-Resilient Dissolved Gas Analysis Fault Diagnosis for Power Transformers Using Physics-Constrained Semi-Supervised Adversarial Learning	IEEE Transactions on Dielectrics and Electrical Insulation IF = 3.1	Accepted for Publication	2026
2.	A smart feature-aware sentiment prediction model integrated with topology-guided feature optimization for multimodal social media analysis	Engineering Applications of Artificial Intelligence IF = 8	Volume 175, 2026, 114594	2026
3.	Explainable AI-Based Coating Defect Recognition in HV Porcelain Insulators Using Improved GAN and Multi-Modal PD Feature Fusion Under Imbalanced Data	IEEE Transactions on Dielectrics and Electrical Insulation IF = 3.1	vol. 33, no. 1, pp. 595-603, Feb. 2026	2026
4.	Improved Robot Localization and Mapping Using Adaptive Tuna Schooling Optimization With Sensor Fusion Techniques	Journal of Field Robotics, IF = 5.2	42: 3795-3811	2025

5.	Influence of Bi/Sn co-doped ZnO nanoparticles on the dielectric, electrical, and thermal properties of aged mineral oil for transformer applications	ECS Journal of Solid State Science and Technology IF = 2.2	14(7), 073012	2025
6.	Enhancement of aged transformer mineral oil by green synthesised TiO ₂ —NiO nanocomposite	Journal of Dispersion Science and Technology IF = 1.9	1-15	2025
7.	Stacking Deep Scalogram Features with the Enhanced GAN for Defect Recognition in Power Transformers with Highly Imbalanced Partial Discharge Signals	IEEE Transactions on Dielectrics and Electrical Insulation IF = 3.1	vol. 33, no. 1, pp. 479-488, Feb. 2026	2026
8.	A novel semi-supervised power transformer defect monitoring technique using unreliable pseudo-labels with highly imbalanced partial discharge signals	Electrical Engineering IF = 1.6	Volume 107, pages 4939–4957	2025
9.	Partial discharge based recognition of water droplets location in high voltage insulator using convolutional neural network – Bacterial foraging algorithm based optimized machine learning classifier	Measurement IF = 5.2	Volume 221, 15 November 2023, 113527	2023
10.	A mathematical model for investigation of dry band location on 22 kV bushing with and without RTV coating: Experimental study	MethodsX IF = 1.6	Volume 12, June 2024, 102579	2024
11.	Development of Sustainable poly benzoxazine based organic-inorganic hybrid composites for high voltage insulator applications	Journal of Material Science: Materials in Electronics IF = 2.779	Accepted for Publication	2023
12.	Deep Learning Based Monitoring of High Voltage Transformer Using Partial Discharge Patterns	Intelligent Automation & Soft Computing IF = 2.334	Vol. 34, Issue 3	2022
13.	Statistical Reliability Analysis on Flashover Characteristics of Ceramic Disc Insulator and Polymeric Insulators	Arabian Journal for Science and Engineering IF = 1.647	Vol. 47, pp14627–14639	2022
14.	Enhanced Particle Swarm Optimization based Convolution Neural Network hyperparameters tuning for Transformer failure	Electrical Engineering – Springer IF = 1.836	Vol. 104, pp2621–2636	2022

	diagnosis under Complex Data Sources			
15.	Recognition of Shed damage on 11kV Polymer Insulator using Bayesian Optimized Convolution Neural Network	Soft Computing – Springer IF = 3.643	Vol. 26, pp6857–6869	2022
16.	Recognition of pollution layer location in 11 kV polymer insulators used in smart power grid using dual-input VGG Convolutional Neural Network	Energy Reports – Elsevier IF = 3.595	Vol. 7 pp. 7878–7889	2021
17.	Partial discharge pattern analysis using multi class support vector machine to estimate cavity size and position in solid insulation	Soft Computing – Springer IF = 2.784	Vol. 24 pp. 10645–10656	2020
18.	Recognition of multiple partial discharge patterns by multi-class support vector machine using fractal image processing technique	IET Science, Measurement & Technology IF = 1.336	Vol. 12, Issue 8, November 2018, pp. 1031 – 1038	2018
19.	Genetic Algorithm Based Automated Threshold Estimation in Translation Invariant Wavelet Transform for De-noising PD Signal	International Journal for Computation and Mathematics in Electrical and Electronic Engineering IF = 0.440	Vol.34, No.4.: pp. 1252 - 1269	2015
20.	Analysis of Stress Control on 33kV Non-Ceramic Insulators using FEM	Taylor & Francis Electric Power System & Components IF = 0.690	Vol.43, No.5. : pp. 566-577	2015
21.	Support Vector Machine Based Denoising Technique for Removal of White Noise in Partial Discharge Signal	Taylor & Francis Electric Power System & Components IF = 0.690	Vol.42, No.14. : pp. 1611-1622	2014
22.	Non Linear Support Vector Machine Based Partial Discharge Patterns Recognition Using Fractal Features	Journal of Intelligent and Fuzzy System IF = 0.939	Vol.27, No.5.: pp. 2649-2664	2014
23.	Partial Discharge Signal Denoising using Adaptive Translation Invariant Wavelet Transform – Online Measurement	Journal of Electrical Engineering and Technology (JEET) IF = 0.725	Vol.9, No.2: pp. 695-706	2014

3.2 International Journal Publication – (Without Impact Factor)

S.No	Title of the Paper	Name of the Journal	Vol. No & Page No.	Year
1.	Pollution Severity Diagnose on Solid Insulators using the Partial Discharge and Flashover Characteristics	International Journal of Innovative Technology and Exploring Engineering	Volume-9 Issue-4,	February 2020
2.	Development of Partial Discharge Signal in Ester Oil Impregnated Paper	International Journal of Innovative Technology and Exploring Engineering	Volume-9 Issue-4,	February 2020
3.	Measurement and Denoising of Partial Discharge Signal in High Voltage Cables using Wavelet Transform	International Journal of Engineering and Advanced Technology (IJEAT)	Volume-9 Issue-2,	December, 2019
4.	Influence of Electric field distribution on 33KV Non-ceramic Insulator with different shed configurations using 3D finite element Method	International Journal of Recent Technology and Engineering	Volume-8 Issue 4	November 2019
5.	Analysis of Partial Discharge Characteristics on Aged Mineral Oils	International Journal of Applied Engineering Research	Vol.10, No.20.: pp. 18260 - 18264	2015
6.	Extraction of Wave Parameters for Classification of Partial Discharge Signal Using Pearson Cross Correlation Method	Australian Journal of Electrical & Electronics Engineering (AJEEE)	Vol. 11, No. 1: pp. 105-118	2014

3.3 International Conference Publication

S.No	Title of the Paper	Name of the Conference	Organizer	Month & Year	Publication
1.	Machine Learning-based Cable Fault Prediction: A Comparative Study of KNN, SVM, Decision Tree, and Random Forest	2026 6th International Conference on Trends in Material Science and Inventive Materials (ICTMIM)	Rohini College of Engineering and Technology	08-10 April 2025	Published in IEEE Xplore Digital Library
2.	Electric Field Control in a 400kV Composite Insulator Using Grading Ring and Optimization Techniques	2026 6th International Conference on Trends in Material Science and Inventive Materials (ICTMIM)	Rohini College of Engineering and Technology	08-10 April 2025	Published in IEEE Xplore Digital Library
3.	Optimized Deep	2025 Second	PSG Itech,	09-10 Oct	Published in

	Neural Network for Power Transformer Fault Diagnosis	International Conference on Intelligent Technologies for Sustainable Electric and Communications Systems (iTech SECOM)	Coimbatore	2025	IEEE Xplore Digital Library
4.	Performance Enhancement of Rice Bran Oil-based Transformer Fluid Enhanced with TiO ₂ Nanoparticles as Dielectric Additives	2025 6th International Conference on Smart Electronics and Communication (ICOSEC)	Kongunadu College of Engineering and Technology	24-26 Sep 2025	Published in IEEE Xplore Digital Library
5.	Performance Evaluation of Mineral-Rapeseed Oil Blends for Transformer Insulation using MCDM Technique	2025 6th International Conference on Smart Electronics and Communication (ICOSEC)	Kongunadu College of Engineering and Technology	24-26 Sep 2025	Published in IEEE Xplore Digital Library
6.	A Comparative Analysis of CNN and LSTM Models for Transformer Fault Diagnosis using Dissolved Gas Analysis	2025 5th International Conference on Soft Computing for Security Applications (ICSCSA)	Dhirajlal Gandhi College of Technology Salem,	04-06 Aug 2025	Published in IEEE Xplore Digital Library
7.	Enhancement of Dielectric Characteristics of used Transformer Oil Blended with New Mineral Oil using Al ₂ O ₃ Nanoparticle in Power Transformers	2025 7th International Conference on Inventive Material Science and Applications (ICIMA)	Muthyammal Engineering College, Namakal	28-30 May 2025	Published in IEEE Xplore Digital Library
8.	Power Transformer Fault Diagnosis using Optimized Fuzzy C-Means Clustering	2025 7th International Conference on Inventive Material Science and Applications (ICIMA)	Muthyammal Engineering College, Namakal	28-30 May 2025	Published in IEEE Xplore Digital Library
9.	Breakdown Voltage Performance of Transformer Oil under Impulse Voltage: An Experimental Approach	2025 7th International Conference on Inventive Material Science and Applications (ICIMA)	Muthyammal Engineering College, Namakal	28-30 May 2025	Published in IEEE Xplore Digital Library
10.	Machine Learning Models for DGA Detection in Power Transformers: A	2025 7th International Conference on Inventive	Muthyammal Engineering College, Namakal	28-30 May 2025	Published in IEEE Xplore Digital Library

	Comparative Study of SVM and Random Forest Techniques	Material Science and Applications (ICIMA)			
11.	Investigation of Multilevel Inverter with MultiCarrier PWM Techniques for E-Vehicle Applications	2025 5th International Conference on Trends in Material Science and Inventive Materials (ICTMIM)	Rohini College of Engineering and Technology, Kanyakumari	07-09 April 2025	Published in IEEE Xplore Digital Library
12.	Impact of Pollution on the Performance of High-Voltage Insulators under Alternating Current	2025 5th International Conference on Trends in Material Science and Inventive Materials (ICTMIM)	Rohini College of Engineering and Technology, Kanyakumari	07-09 April 2025	Published in IEEE Xplore Digital Library
13.	Weather Monitoring System for Plants using ESP32	2025 5th International Conference on Expert Clouds and Applications (ICOECA)	R V College of Engineering, Bengaluru	06-07 March 2025	Published in IEEE Xplore Digital Library
14.	Enhanced Fault Diagnosis in Transformer Oil using Duval Pentagon Method	2025 5th International Conference on Expert Clouds and Applications (ICOECA)	R V College of Engineering, Bengaluru	06-07 March 2025	Published in IEEE Xplore Digital Library
15.	Improvement of dielectric characteristics of used transformer oil as liquid insulation in power transformer	2024 4th International Conference on Ubiquitous Computing and Intelligent Information Systems (ICUIS)	Shree Venkateshwar a Hi-Tech Engineering College. Erode	12-13 Dec 2024	Published in IEEE Xplore Digital Library
16.	Optimized Support Vector Regression model for accurate state of charge estimation of Li-Ion Phosphate batteries for Electric Vehicles	2024 5th International Conference on Circuits, Control, Communication and Computing (I4C)	Ramiah Institute of Technology Bengaluru	04-05 Oct 2024	Published in IEEE Xplore Digital Library
17.	Intelligent breast cancer diagnosis with optimized long-short memory network using mammogram images	2024 5th International Conference on Circuits, Control, Communication and Computing (I4C)	Ramiah Institute of Technology Bengaluru	04-05 Oct 2024	Published in IEEE Xplore Digital Library
18.	Removal of Interference in Partial Discharge Signals	2024 5th International Conference on	Ramiah Institute of Technology	04-05 Oct 2024	Published in IEEE Xplore Digital

	Using Type 2 Fuzzy Logic Controller	Circuits, Control, Communication and Computing (I4C)	Bengaluru		Library
19.	Intelligent Techniques based Power Transformer Health Monitoring Index using Dissolved Gas Analyser	2024 5th International Conference on Smart Electronics and Communication (ICOSEC)	Kongunadu College of Engineering and Technology	18-20 Sep 2024	Published in IEEE Xplore Digital Library
20.	Comparison of Mamdani and Sugeno fuzzy inference systems to assess the health condition of power transformer	2024 International Conference on Expert Clouds and Applications (ICOECA)	R V College of Engineering, Bengaluru	18-19 April 2024	Published in IEEE Xplore Digital Library
21.	Recognition of Type of Faults in Power Transformer Using Dissolved Gas Analysis	2024 Third International Conference on Intelligent Techniques in Control, Optimization and Signal Processing (INCOS)	Kalasalingam Academy Of Research And Education, Krishnakoil	14-16 March 2024	Published in IEEE Xplore Digital Library
22.	Bayesian Optimized Convolution Neural Network Architecture for Partial Discharge Signature Recognition	2024 International Conference on Cognitive Robotics and Intelligent Systems (ICC-ROBINS)	KPR Institute of Engineering and Technology, Coimbatore	17-19 April 2024	Published in IEEE Xplore Digital Library
23.	Enhancement of Dielectric Characteristics of Blended Natural Ester Oil with Transformer Oil with Optimal Ratio using Grey Relational Analysis	2024 Third International Conference on Intelligent Techniques in Control, Optimization and Signal Processing (INCOS)	Kalasalingam Academy Of Research And Education, Krishnakoil	14-16 March 2024	Published in IEEE Xplore Digital Library
24.	Convolution Neural Network-Based Meat Quality Checker Using Different Optimizers	2023 International Conference on Intelligent Technologies for Sustainable Electric and Communications Systems (iTech SECOM)	PSG Institute of Applied Research and Technology, Coimbatore	18 – 19 Dec 2023	Published in IEEE Xplore Digital Library
25.	Investigation of Electric Field Patterns for Different	2023 International Conference on	PSG Institute of Applied Research and	18 – 19 Dec 2023	Published in IEEE Xplore Digital

	Electrode Configurations with the Presence of Dielectric Barrier	Intelligent Technologies for Sustainable Electric and Communications Systems (iTech SECOM)	Technology, Coimbatore		Library
26.	Semi-Supervised Learning based Power Transformer Health Monitoring Index using Deep Learning	2023 7th International Conference on Electronics, Communication and Aerospace Technology (ICECA)	RVS Technical Campus, Coimbatore	22 – 24 Nov 2023	Published in IEEE Xplore Digital Library
27.	Computation of Electric Field distribution on 110 kV Polymer Insulator for Different Corona Ring Positions	International Conference on Artificial Intelligence and Smart Systems (ICAIS 2023)	JCT College of Engineering and Technology, Coimbatore	02 - 04, Feb 2023	Published in IEEE Xplore Digital Library.
28.	Optimized Parameter selection of Induction Motor using Finite Element Method	International Conference on Computer Communication and Informatics (ICCCI 2023)	Sri Shakthi Institute of Engineering and Technology, Coimbatore	25-27, January 2023	Published in IEEE Xplore Digital Library.
29.	Recognition of Partial Discharge Signatures using Convolution Neural Network	International Conference on Circuits, Communication, Control, and Computing (IC4 2022)	Ramaiah Institute of Technology, Bengaluru	21 - 23 Dec 2022	Published in IEEE Xplore Digital Library.
30.	Fuzzy Logic-Based Fault Recognition in HV Transformer	International Conference on Circuits, Communication, Control, and Computing (IC4 2022)	Ramaiah Institute of Technology, Bengaluru	21 - 23 Dec 2022	Published in IEEE Xplore Digital Library.
31.	Fuzzy Based Pollution Severity Prediction In Polymer Insulator Using Harmonic Analyzer	International Conference on Automation, Computing and Renewable Systems (ICACRS 2022)	Mount Zion College of Engineering and Technology, Pudukottai	13 - 15, Dec 2022	Published in IEEE Xplore Digital Library.
32.	Fuzzy Logic-Based Efficient Blending of Mineral and Vegetable Oil as Alternate Liquid Insulation	International Conference on Electronics, Communication, and Aerospace Technology (ICECA 2022)	RVS Technical Campus, Coimbatore	01 – 03 Dec 2022	Published in IEEE Xplore Digital Library.

33.	Recognition of Power Transformer Defect Identification Based on Dissolved Gas Analysis using Support-Vector Machine	International Conference on Electronics, Communication, and Aerospace Technology (ICECA 2022)	RVS Technical Campus, Coimbatore	01 – 03 Dec 2022	Published in IEEE Xplore Digital Library.
34.	Deep learning-based condition monitoring of insulators in overhead power distribution lines using Enhanced Cat Swarm Optimization	International Conference on Artificial Intelligence: Advances and Applications (ICAIAA 2022)	Poornima College of Engineering, Jaipur	23 & 24 April 2022	https://link.springer.com/book/9789811970405
35.	Recognition of Electrocardiogram Signal using Multi-class Kernel Support Vector Machine	International Conference on Artificial Intelligence and Smart Systems (ICAIS 2022)	JCT College of Engineering and Technology, Coimbatore	23-25, February 2022	Published in IEEE Xplore
36.	Transformer oil quality assessment using Machine learning techniques	International Conference on Computer Communication and Informatics (ICCCI 2022)	Sri Shakthi Institute of Engineering and Technology, Coimbatore	25-27, January 2022	Published in IEEE Xplore
37.	Investigation and Performance of Pollution Layer Location on 11kV Polymer Insulator	International Conference on Computer Communication and Informatics (ICCCI 2022)	Sri Shakthi Institute of Engineering and Technology, Coimbatore	25-27, January 2022	Published in IEEE Xplore
38.	Support Vector Machine based Recognition of cavity size and location in High Voltage Cable	International Conference on Electrical, Electronics, Information and Communication Technologies (ICEEICT 2022)	K. Ramakrishna College of Engineering, Tiruchirappalli	16-18, February 2022	Published in IEEE Xplore
39.	Recognition of Single and Multiple Partial Discharge patterns using Deep Learning Algorithm	International Conference on Artificial Intelligence and Smart Systems (ICAIS 2021)	JCT College of Engineering and Technology, Coimbatore	25-27, March 2021	Published in IEEE Xplore
40.	Investigation of properties of short-term aged liquid dielectrics	International Conference on Smart Grids, Structure and materials (ICSGSM2021)	Koneru Lakshmaiah Education Foundation	19 th & 20 th April 2021	Published in Springer Book Series
41.	Dimensionality Reduction and	RTU TEQIP-III Sponsored, 3 rd	Rajasthan Institute of	February 27 th & 28 th	Springer Book Series,

	Feature Extraction using Image processing techniques for classification of Single Partial Discharge Patterns	International Conference on Communication and Computational Technologies (ICCCT 2021),	Engineering and Technology, Jaipur	2021	'Algorithms for Intelligent Systems'
42.	Investigation of Pollution severity and dry and characteristics on 11KV composite Insulator	2020 IEEE International Conference on Advances and Developments in Electrical and Electronics engineering (ICADEE 2020)	Karpagam College of Engineering, Coimbatore	December 10 th & 11 th 2020	Published in IEEE Xplore
43.	A Comprehensive Study and Prediction of Flashover Voltage of 11kV Bushing with Various Pollutions Using Support Vector Machine	IEEE International Conference on Innovation in Power and advanced computing technologies IPACT'19	VIT Vellore	22 th & 23 rd March 2019	Published in IEEE Xplore Digital Library.
44.	Experimental Study of Electrical Characteristics of High Voltage Bushing under Single Dry Band Conditions	IEEE International Conference on Electrical Energy systems ISEES'19	SSN College of Engineering, Chennai	21 st and 22 nd February 2019	Published in IEEE Xplore Digital Library.
45.	Prediction of flashover voltage on 11kV Composite Insulator using Kernel Support Vector Machine	International Conference on Soft Computing for Problem Solving – (Springer)	VIT Vellore	17 th – 19 th December 2018	Soft Computing for Problem Solving: SocProS 2018
46.	Investigation of Electrical characteristics of dielectric fluids using 3D finite element method	IEEE International Conference on Electrical Energy systems ISEES'18	SSN College of Engineering, Chennai	07 th and 09 th February 2018	Published in IEEE Xplore Digital Library.
47.	Electric Field Analysis of 11kV Socket End Fitting Composite Insulator	IEEE International Conference on Intelligent Systems and Control ISCO'16	Karpagam College of Engineering	05 th and 06 th January 2016	Published in IEEE Xplore Digital Library.
48.	Investigation on Electrical	IEEE International	Adhiparasakthi Engineering	02 nd – 04 th April	Published in IEEE Xplore

	Characteristics of Dielectric Fluids under Aging Phenomena	Conference on Communication and Signal Processing- ICCSP'15	College	2015	Digital Library.
49.	Modeling and Behaviour of Partial Discharge in Nano Composite Materials	IEEE International Conference on Circuits, Power and Computing Technologies, ICCPCT-2014	Noorul Islam Centre for Higher Education, Kumaracoil	21 st and 22 nd March 2014	Published in IEEE Xplore Digital Library.
50.	Employing Mathematical Morphological filters for Partial Discharge Signal Denoising.	IEEE International Conference on Circuits, Power and Computing Technologies, ICCPCT-2014	Noorul Islam Centre for Higher Education, Kumaracoil	21 st and 22 nd March 2014	Published in IEEE Xplore Digital Library.
51.	An Improved Threshold Estimation for Partial Discharge Signal Denoising Using Wavelet Transform	IEEE International Conference on Circuits, Power and Computing Technologies, ICCPCT-2013	Noorul Islam Centre for Higher Education, Kumaracoil	21 st and 22 nd March 2013	Published in IEEE Xplore Digital Library.

3.4. National Conference Publications

S.No	Title of the Paper	Organizer	Year
1	Modeling of Nano Composite polymer Dielectrics and Electrical Stress	AlagappaChettiar College of Engineering and Technology	2014
2	Analysis of Partial Discharge Signal using Advanced Wavelet Transform Techniques	Government College of Engineering, Tirunelveli.	2013
3	Enhancement the Electrical Properties of High Voltage Composite Insulators Using Grading Materials	Government College of Engineering, Tirunelveli.	2013

4. Membership in Professional bodies :

Name of Society	Grade of Membership
ISTE	Life Member

5. Courses taught:

Course Title	U.G. or P.G.
Circuit Theory, Electromagnetic Theory, AC Rotating Machines, Basic Electrical and Electronics Engineering, High Voltage Engineering, Bio Medical Engineering, CAD of Electrical Apparatus, Linear Integrated Circuits and its Applications, Principles of Management, DC Machines	U.G

and Transformer, Insulation Technology, Project Management and Finance	
Pollution Performance of High Voltage power Apparatus, Advanced Electromagnetic Fields, High Voltage Testing Techniques, Field computation and modeling of power apparatus	P.G

6. Project Grants and Funding – Received:

6.1. Research Projects:

- ✓ Sanctioned a fund of **Rs. 18, 90, 960/-** under the scheme of **Respond Basket 2022** from Indian Space Research Organization (**ISRO**), Department of Space, Government of India for the academic Year (2022 – 2023) - Ongoing.

Title: Denoising Algorithm for Noise reduction in MEMS Sensors

Role: Co-Principal Investigator

Duration: 2 Years

6.2. Student Projects:

S.No.	Name of the Project	Student and Mentor	Project ID & Funded Year	Amount Received
1	Computer Vision based Meat quality Checker	EEE STUDENTS 1.RAJA SEKARAN. E 2.MOHAMED ALTHAF WAHID. T.S 3.MOHAMED MUSAB. V.M 4.SUDALAIMANI. G 5.SUNDAR RAJ. P Mentor(s): Dr.B.Vigneshwaran M.E., Ph.D., Asst. Prof. (SG), EEE Dept. Mr.M.Sivapalanirajan, M.E., Asst. Prof., EEE Dept.	ID: NewGen IEDC /2022- 23/01/ 13.07.2022	Rs. 2,50,000/-
2	IoT Based Chick Incubator	EEE STUDENTS 1. JAGADISH.L 2. JEKHAJ.S 3. PON SARAVANA KUMAR.S 4. ARIF NAUSHATH.M Mentor(s): Dr.R.V.Maheswari M.E., Ph.D., Professor, EEE Dept. Dr.B.Vigneshwaran M.E., Ph.D., Asst. Prof. (SG), EEE Dept.	ID: NewGen IEDC /2021- 22/01/ 06.10.2021	Rs. 2,50,000/-
3	Electrocardiogram Based Human Authentication (ECG-HA)	EEE STUDENTS 1. GOMATHI ARASU.A 2. GANESHKUMAR.M 3. NAVEEN KUMAR.P 4. SELVAKUMAR.A Mentor(s): Dr.N.B.Prakash M.E., Ph.D., Asso. Prof., EEE Dept.	ID: NewGen IEDC /2020- 21/01/	Rs. 2,50,000/-

		Dr.M.WilljuiceIruthayarajan M.E., Ph.D., Professor and Head, EEE Dept. Dr.B.Vigneshwaran M.E., Ph.D., Asst. Prof. (SG), EEE Dept.	10.11.2020	
	Lifetime Extension of Liquid Insulation in High Voltage Transformer using Lignin as additive	EEE STUDENTS HIRIJA. B, ABITHA. S, YUVARANI. M Mentor: Dr.B.Vigneshwaran M.E., Ph.D., Asso. Prof, EEE Dept.	TNSCST – Student Project Scheme 2024 - 2025	Rs. 6450/-

7. Patent Filed

S.No.	Title of Invention	Application Number	Date of Publication
1.	A device for Authenticating a Person	202241010734	04.03.2022

8. Supervisor Status (Guiding Research Scholars)

- ✓ Received Supervisor status under Anna University, Chennai on 14.11.2022.
- ✓ Supervisor Reference Number: **4030017**
- ✓ Supervisor Department: **Electrical Engineering**

9. Additional Responsibilities held

- EEE Newsletter (I/C)
- ICT/ Virtual Lab/ Online Course (In-Charge)
- MATLAB Forum (Incharge)
- ERP (Dept In-charge)