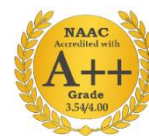




SETHU INSTITUTE OF TECHNOLOGY

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Department of EEE		
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	22 years	22 years
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Area of Specialization	Power Electronics and Drives, Electric Vehicles	
Courses taught	Electrical Machines , Power Electronics, Design of Electrical Machines, Special Electrical Machines, Power Quality	
Research Focus	Electric Vehicle Technology, Multilevel Inverter, Drives and AI	
Subject Competency	Power Electronics, Special Electrical Machines	
No. of papers published	International Journals	Conferences
	16	20
PG Specialization	Power Electronics and Drives	
Ph.D. Specialization	Multilevel Inverter -Electrical Engineering	
Projects Carried out	<ul style="list-style-type: none">Received a Research grant of Rs 11 lakhs from MSME-Government of India for the Project titled "Design and Implementation of AI based automatic Breast Cancer Detector" in the year 2024Received a Research grant of Rs 1 lakh from Unnat Bharat Abhiyan (UBA)- Government of India for the Project titled "Design and Implementation of IoT based Smart Bin for Organic Fertilizer generation" in the year 2023Received a Research grant of Rs 1 lakh from Unnat Bharat	



	<p>Abhiyan (UBA)- Government of India for the Project titled “Efficient Solar dryer for Farmers” in the year 2023</p> <ul style="list-style-type: none"> Received a Research grant of Rs 11 lakhs from MSME-Government of India for the Project titled “Accident Alerting System” in the year 2023 Received a grant of Rs 5 lakhs from State Institute of Rural Development under RRGAs- Government of Tamil Nadu scheme for Rural Development Projects on 31.01.2024 Received the amount of Rs 1.2 lakhs from IEEE USA for the Project Contest on “ Role of Electronics in achieving Sustainable Development Goals.on 08.02.2024 Received the amount of Rs 40,000 from IEEE Power & Energy Society USA for idea competition “ Sustainable Development Goals” Received the amount of Rs 10,000 from IEEE Madras Section for the program conduction Received a Research grant of Rs 1 lakh from Unnat Bharat Abhiyan (UBA)- Government of India for the Project titled “ Women Entrepreneur: Building Capacity in Entrepreneurship Skills for Rural Communities” in the year 2024
Patents (Filed & Granted)	05
No. of Books published with details (Name of the book, Publisher with ISBN, year of publication, etc.)	<p>01</p> <p>Power Electronics</p> <p>Shanlak Publications</p> <p>ISBN : 9788193399842</p>

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Academic Credentials

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Details of Journal Publication:

- G.Soundradevi , J.Rahila, Dani Abraham, A.R ,Network for Fast Electric Vehicle Charging Stations with Renewable Energy”, Indian Journal of Science and Technology , Transactions of Electrical Engineering”, 2025,
- J.Rahila, G.SoundraDevi& A.Radhika,Electric Vehicle Smart Charging with network expansion planning hybrid COA-CGG-DLNN approach, Optimal Control Applications and Methods,pp:1-22,2024
- A. Radhika; N. Karuppiah; G. Soundradevi; Patil Mounica,Monitoring and Coordinated Control of Hybrid Power System with Energy Storage Device Using Arduino, 2nd International Conference on Sustainable Computing and Smart Systems (ICSCSS),2024
- Soundra Devi G., Rahila J., Radhika A., Meenalochini P.- Power electronics converters for an electric vehicle fast charging station based energy storage system and renewable energy sources: Hybird approach, Optimal Control Applications and Methods,pp:1-28,2024
- Kamalam C.K.; Rahila J.; Soundradevi G. - A Novel Bidirectional Electric-Drive-econstructed Onboard ANN Controlled Converter for Electric Vehicles, SSRG International Journal of Electrical and Electronics Engineering,2021
- G.Soundra devi, A.Radhika — An Effective compensation of power Quality issues using MPPT-based Cuckoo Search Optimization approach, Soft Computing, Vol.24,no.22,pp. 16719–16725
- G.Soundradevi,K.Aravindhnan - Power Flow control of Hybrid Micro-Grids using modified UIPC,Material Science Proceedings,2020

- Soundradevi, G & Santhi Santhi, M 2019, „Single DC source multilevel inverter based on switched capacitor with minimum number of switches for medium power applications“, Journal of Electrical Engineering, vol. 19 ,no. 3, pp. 502-512.
- **Soundradevi, G** - Real Time Operating System based closed loop control of Single Source Multilevel Inverter fed Induction Motor Drive, International Journal of Applied Engineering Research, Vol 9 , pp 8147-8152
- **Soundradevi, G** - Selective Harmonic Elimination in Closed Loop Control of Multi level Inverter Fed Induction Motor Drive, International Journal of Applied Engineering Research, Vol 9 , pp 8142-8146
- **Soundradevi, G** - Harmonic Elimination in Cascaded Monticello Trans -Z - Source Inverter Fed Induction Motor, Asian Journal of Engineering and Applied Technology (AJEAT), Vol.2.No.1,pp 30-352014
- **Soundradevi, G** - A New Three Phase 5-Level Converter By Cascading a Flying Capacitor Inverter and an H-Bridge, Indian Journal of Electrical Engineering and Informatics (IJEI), Vol.2.No.1 pp18-24.
- **G.Soundra Devi** — A 11 level cascaded multilevel inverter using hybrid modulation technique, International Journal of emerging trends in engineering and development, Issue 3, Vol 2 30 march 13.
- **G.Soundra Devi** — Cascaded H Bridge Multilevel Inverter using multi winding transformer and single Dc input with single carrier sinusoidal PWM control, CiiT International Journal, Vol. 4 (1), 21-25
- **G.Soundra Devi** — A 31 Level Cascaded H-Bridge Multilevel Inverter Using DC Input with Unequal Ratio Transformers, IJCCI, Vol 2,pp.127-132
- C.Rajeswari G Soundra Devi - Obtaining step response with small settling time using fuzzy logic controller for a separately excited DC motor

Details of Conference attended:

- G.Soundradevi, J.Dani Abraham,A.D.Vetrivel ,Integration of smart weighing and digital data transformation for error free commodity distribution, 3rd International conference on Applications of AI in smart Technologies and Manufacturing, 2025
- G.Soundra devi, .Saravana kumar B,Prijith nayagam. M , Rozhan.R,VEHICLE SPEED CONTROL USING INTERNET OF THINGS (IOT), International Conference on —Recent Trends in Information, Communication and Electrical Engineering, ICRTICE ,2024
- G. Soundra Devi J.Ronald G Richards,P.Ramanathan,R.Salai Sivam, ELECTROCOAGULATION-BASED WATER TREATMENT FOR TEXTILE DYEING, International Conference on —Recent Trends in Information, Communication and Electrical Engineering, ICRTICE,2024

- G.Soundra Devi, S.Agneeswaran,G.Dhyaneshwar vel,R.Magudapathi, HELMET DETECTION USING MACHINE LEARNING, International Conference on —Recent Trends in Information, Communication and Electrical Engineering, ICRTICE,2024
- N.Pandiselvi, G.Soundra Devi- A Model Predictive controller based High current density DC-DC converter for EV Charging Applications, National level conference on Communication Technology, Muthayammal College of Engineering,2023
- G.Soundradevi,M.Vijayalakshmi , Novel Design and Implementation of Multilevel Inverter using Reduced Power Switching Components ,International conference on Emerging Electrical Systems and Control,ICEESC,2023
- **G.Soundra devi** —Design and Implementation of Pathogen Disinfection Box, International conference on Emerging Trends in Information and communication Technologies, May 2022
- **G.Soundra devi** —Onshore converter in series connected offshore Wind farm using ANN based Modular Multilevel Inverter, International conference on Emerging Electrical Systems and control, pp-12
- **G.Soundra devi** — A Novel Bidirectional Electric-Drive-Reconstructed Onboard ANN Controlled Converter For Electric Vehicles, International conference on Emerging Electrical Systems and control, pp-27
- **G.Soundra devi** -An Improved Efficiency in load by synchronizing solar and Biomass using Arduino Controller, Modern Research & Computations in Electrical Technology (ICMRCET)
- **G.Soundra devi** - GA based Single DC Source Cascaded Multilevel Inverter with Multi Winding Transformer, International Conference, AISGSC 2019, pp-29.
- **G.Soundra devi** - GA Based Selective Harmonic Elimination of a 27 level Cascaded multilevel inverter for Solar PV Applications, International Conference, AISGSC 2019, pp-17.
- **G.Soundra devi**- An new Three phase 5-level converter by Cascading a lying Capacitor Inverter and an H-Bridge with reduced harmonics, International Conference ICEAS2014 ,Vol 5,pp 980.
- **G.Soundra devi** -Harmonic Elimination in Cascaded Multicell Trans Z-Source Inverter Fed Induction Motor Drive`, International Conference, ICEAS2014 ,Vol 5,pp 900.
- **G.Soundra devi**- Obtaining step response with small settling time using Fuzzy Logic Controller for a separately excited DC motor, International Conference, pp.44

Details of Book Chapter and Books Published:

Title : Power Electronics

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Details of Patents Filed and Granted:

1. Star cook- An advanced IoT based variety cooking machine. Application Number: 202041041919 Dated: 27.09.2020
2. Supply-Demand management for future electric vehicle system method thereof'. Application. Number: 202231005727 Dated:02.02.2022
3. Go anywhere anytime, Application Number: 2022410587587 Dated: 14.10.2022.
4. LTLC Detector, Application Number: 202341005812 Dated: 30.01.2023.
5. Design and Implementation of Smart bin for Organic Fertilizer Generation – Application Number-202441081705

Expert Lecture Delivered:

Delivered Guest Lecture on “ Role of AI in EV” in the Faculty Development Program organized by Velammal College of Engineering and Technology from 24.02.23 to 03.03.2023