Sri Sai Ram Engineering College

Department of Electronics and Instrumentation Engineering

Name:Dr.S.DURGADEVI	
Designation:	Professor
Qualification:	M.E, Ph.D
Area of Specialization:	POWER ELECTRONICS
Experience:	Teaching-19.4yrs
	Industry/Polytechnic : NA
Date of Joining	02.05.2011
Number of Workshops/Conferences/FDP Attended:	Workshops -12 Seminars -04 FDP-35

Publication:	Journal Publications
	National:-01
	International: SCI-3, WOS-7, Scopus-13, UGC and AICTE approved-6
	
	 Conference:
	    National:-03
	    International:27

Patents Published:	04
Patent Grant :	01
Grant Received:	Co-Principal Investigator for SERB Power Research Grant project for 22 Lakhs from DST
ResearchGuidance:	Guided 18 UG projects till date
General	Ph.D Supervisor Recognition from Anna University Life time member of ISTE ,ISOI IEEE-Senior Member IQAC Coordinator NAAC Co-ordinator Coordinator for ISO 21001:2018 (EOMS) Change practioner Coordinator -Qs-I gauge rating Recognized as NPTEL Star Performer during 2023 & 2024 Certified ISO 21001:2018 Lead auditor

Ph.D ThesisTitle:

Analysis and Design of single stage DC-DC SEPIC converter based power factor corrector using conventional and soft computing techniques.

Area of Interest:

Soft computing techniques, Optimization, Power Electronics and applications, Transducer Engineering. IoT and Embedded systems

Experience:

Sl. No	College/Organization	Designation	Period From	To	Total period	Nature ofwork
1.	Sri Sairam Engineering College	Professor	01.01.2024- till date		-	Teaching &Research
2	Sri Sairam Engineering College	Associate Professor	01.08.2020- 31.12.2023		2.2 years	Teaching &Research
2.	Sri Sairam Engineering College	Assistant Professor	02.05.2011-31.07.2020		9.2 years	Teaching
3.	RMK Engineering College, Chennai	Lecturer	22.05.2008-20.04.2011		3years	Teaching
4.	K.L.N College of Engineering, Madurai	Lecturer	07.09.2005-16.05.2008		2.8 years	Teaching

Publications: International Journal Authored:

- **S. Durgadevi**, A. Abishree, S. Harshini, K. Gopi and S. S. Ram.S, "Hybrid Sustainable Green Energy for Domestic Applications Solar Powered Active Noise Cancellation," *2024 International Conference on Power, Energy, Control and Transmission Systems (ICPECTS)*, Chennai, India, 2024, pp. 1-6, doi: 10.1109/ ICPECTS62210.2024.10780325.

- **S. Durgadevi**, S. N. Kumar, S. Kishore, R. M. Sathappan and S. Varun, "Plastic collecting robot," *2024 International Conference on Communication, Computing and Internet of Things (IC3IoT)*, Chennai, India, 2024, pp. 1-5, doi: 10.1109/IC3IoT60841.2024.10550275.

- **S. Durgadevi**, S. Shalini, T. Sundari and A. Hari Shanker, "A Smart Solar Monitoring system using IOT," *2024 International Conference on Communication, Computing and Internet of Things (IC3IoT)*, Chennai, India, 2024, pp. 1-5, doi: 10.1109/IC3IoT60841.2024.10550426.

- Komathi, C., Arun, A., Umamaheswari, M.G., **Durgadevi, S**., Sundari, K.T.Smart power strip for household power outlet control and energy conservation using IoT Smart Grids for Smart Cities, 2023 pp.175-186

- B. LekshmiSree, M.G. Umamaheswari, A. Sangari, C. Komathi, **S. Durgadevi** (2022), " Adaptive Neuro-Fuzzy Inference System-Based Bass Gura Controller for Solar-Powered SEPIC

Converter, IETE Journal of Research, DOI: 10.1080/03772063.2022.2143442.

- K. T. Sundari, R. Giri, S. **Durgadevi, S**. Deivanayagi and S. U, "Detection and Classification of Muscular Fatigueness on Upper Extremities using Surface EMG Electrode Interfaced with Labview," 2022 1st International Conference on Computational Science and Technology (ICCST), CHENNAI, India, 2022, pp. 147-152, doi: 10.1109/ICCST55948.2022.10040449.

- K. T. Sundari, **S. Durgadevi** and S. Sruthi, "Controller optimization for a single tank liquid level system," 2022 International Conference on Power, Energy, Control and Transmission Systems (ICPECTS), Chennai, India, 2022, pp. 1-5, doi: 10.1109/ICPECTS56089.2022.10047574.

- Fuzzy Logic Control of Liquid Level in a Single Tank with IoT-Based Monitoring System K.ThirupuraSundari, R. Giri, M. G. Umamaheswari, **S. Durgadevi**, and C. Komathi Lecture Notes in Electrical Engineering 947, https://doi.org/10.1007/978-981-19-5936-3_38.

- **Durgadevi. S**, Anbazhagan R. R, Harini.R and Vimonisha.A, "**A Review of Performance Optimization of Footstep Energy Harvester,**" *2022 International Conference on Communication, Computing and Internet of Things (IC3IoT)*, 2022,pp. 1-5, doi: 10.1109/IC3IOT53935.2022.9767957.(Scopus and Google Scholar Indexed)

- **S.Durgadevi**, C.Komathi, K.Thirupurasundari, S.S.Haresh and A.K.R.Harishanker, "IOT Based Assistive System for Visually Impaired and Aged People,"2022 2ndInternational Conference on Power Electronics & IoT Applications in Renewable Energy and its Control (PARC), 2022, pp. 1-4, doi:10.1109/PARC52418.2022.9726626. (Scopus and Google Scholar Indexed)

- K. T. Sundari, R. Giri, C. Komathi, **S. Durgadevi** and D. S. Adlene Jessica, "Gain Scheduled Adaptive PI Controller for a Hybrid Three Tank System," 2022 2ndInternational Conference on Power Electronics & IoT Applications in RenewableEnergyanditsControl(PARC),2022,pp.1-5,doi:10.1109/PARC52418.2022.9726595..(ScopusandGoogle Scholar Indexed)

- **S Durgadevi**, C.Komathi, K.Thirupurasundari, S Aruna , ' A Novel Approach of Chemical Process for Regulation, Control and Conversion of Greenhouse Gas,Journal of Chengdu University of Technology (Science and Technology) Vol 26Issue 9,2021ISSN-No-1671-9727(Scopus Indexed/UGCCare)

- **S Durgadevi**,C.Komathi , K.thirupurasundari. Simplified Chemical ApproachFor Monitoring, Controlling And Conversion Of Greenhouse Gas. EEO. 2020;19(4):6843-6853.doi:10.17051/ilkonline.2020.04.765089

- Komathi. C, **Durgadevi. S**, ThirupuraSundari.K, Abirami.K and Vidyathmikaa.R, "RGA Analysis and Hardware Implementation of PSO Based Decoupled MIMO System,"2021 4thInternational Conference on Computing and Communications Technologies (ICCCT), 2021, pp.448-452

,doi:10.1109/ICCCT53315.2021.9711818.(Scopus and Google Scholar Indexed)

- **S.Durgadevi**, K.Sudharsan, "A study of Smart Cancer Detection System Using Image Processing and Deep Learning" Advances in Automation, Signal Processing, Instrumentation, and Control, Lecture Notes in Electrical Engineering700, DOI: https://doi.org/10.1007/978-981-15-8221-9_59, Springer. 2021, PP-661-667(Scopus andGoogle ScholarIndexed)

- **S.Durgadevi**, M.G.Umamaheswari "Design of Internal model control using Neuro fuzzy controller for power converter applications "Advances in Automation, Signal Processing, Instrumentation,and Control, Lecture Notes in Electrical Engineering 700,DOI:https://doi.org/10.1007/978-981-15-8221-9_30,Springer.2021, PP-323-330(Scopus and Google Scholar Indexed)

- C Komathi,**S Durgadevi**,K ThirupuraSundari,T.R.SreeSahithya,S.Vignesh"Smart Energy Metering For Cost And Power Reduction In House Hold Applications",2021 7th International Conference on Electrical Energy Systems(ICEES),in IEEE Xplore digital library,DOI:10.1109/ICEES51510.2021.9383725, ISBN978-1-7281-7612-3, February2021(Scopus and Google Scholar Indexed)

- **S.Durgadevi**,K.Thirupurasundari,C. Komathi,S.Mithun Balaji"SMART MACHINE LEARNING SYSTEM FOR BLIND ASSISTANCE "in IEEE Xplore–digital library,10.1109/ICPECTS49113.2020.9337031,ISBN978-1-7281-1084-4 February2021(Scopus and Google Scholar Indexed)

- Komathi C,**S.Durgadevi**, Thirupurasundari K,T.R.SreeSahithya "Smart Power Distribution system for Residential and Industrial Applications" in IEEE Xplore–digital library ,10.1109/ICPECTS49113.2020.9336999,ISBN978-1-7281-1084-4 February 2021(Scopus and Google Scholar Indexed)

- K.Thirupura Sundari,C.Komathi, **S.Durgadevi**, K.Abirami"Optimal Controller tuning of a PI controller for a three tank non-interacting Process" in IEEE Xplore –digital library 10.1109/ICPECTS49113.2020.9337044 ,ISBN 978-1-7281-1084-4 February2021(Scopus and Google Scholar Indexed)

- **S.Durgadevi**, M.G.Umamaheswari "Design and Realization of Internal Model Control Scheme for Single Phase Power Factor Correction with DC-DC SEPIC Converter", Vol 20,No3, Journal of Electrical Engineering, Politehnica"Publishing House,March30,2020.

- **S.Durgadevi**, S.Kalaivani, V.Lishitha, O.Narmadha Devi, " A Raspbian Module Based Novel Approach for Conversion of Text To Audio Signal" , Studies in Indian Place Names (UGC Care Journal), Vol.40, Issue 1 (s1), ISSN: 2394-3114,pp.-162-170

- **S.Durgadevi**. K.Thirupurasundari, R.S.Akshaya ,D.Rhagavi "Comparative study of Controller Optimization for CSTR using Particle Swarm Optimization Technique in IEEE Xplore–digital library10.1109/ICEES.2019.8719302,ISBN:978-1-5386-9249-3 IEEE. May 2019 (Web of Science, SCOPUS, Google Scholar Indexed).

- **S.Durgadevi**,Kaushik.S,D.Magesh,B.Ashwin"Early detection of cardiological Issues using mobile applications",International Journal of Engineering trends and Technology (IJETT)ISSN :2231-5381Vol-62,No-1August 2018.(UGC approved)

- **S.Durgadevi** , M.G.Umamaheswari, "Analysis and Design of Single Phase PowerFactor Corrector using GA and Adaptive Neuro Fuzzy based SMC using DC-DC SEPIC "Neural Computing and Applications, Springer Publications,ISSN0941-0643, Neural Computer &Applications.DOI 10.1007/s00521-018-3424-2,Vol31 No 10 Oct 2019.(SCI Indexed) pp :6129–6140 (SCI Indexed)

- **S.Durgadevi** ,M.G.Umamaheswari "Analysis and Design of Single Phase PowerFactor Correction for Fast dynamic response using Genetic Algorithm optimized PI Controller using DC-DC SEPIC Converter", IET- Circuits, Devices and SystemsISSN 1751-858X ,16th October 2017, DOI: 10.1049/iet-cds.2017.0229, Vol 12, No2,pp164-174. (SCI Indexed)

- **S.Durgadevi** , M.G.Umamaheswari "Analysis and Design of Single Phase Power Factor Correction using DC-DC SEPIC Converter with Bang-Bang and PSO based Fixed PWM Techniques" Energy Procedia, Elsevier Publications SCOPUS Indexed Vol /Issue: 117C, (2017) pp.   80-87. Doi:10.1016/J.EGYPRO.2017.5.109.ISSN:1876-6102 (Web   of Science and SCOPUS Indexed)

- **S.Durgadevi** , M.G.Umamaheswari"Adaptive Neuro Fuzzy logic Controller Based Current mode control for single phase Power factor correction using DC-DC SEPIC converter", IEEE   Xplore Digital Library doi:10.1109/ICPEDC.2017.8086139.Inspec No:978-1-5090-4679-9pp :490-495. (Web of Science, SCOPUS and Google scholar Indexed)

- K.Thirupurasundari , **S.Durgadevi**, "Maturity Detection of Fruits and Vegetables using K-Means Clustering Technique" IJETSR UGC Approved Vol.4.Issue 11,Nov2017,ISSN:2394-3386

Patent- Grant:

- The Smart System for Pre-Detection of Cardiac Issues; Granted Date:05.06.2024

Patent –Published

- Smart Gloves : Published Date: 04.11.2024

- Generation of Nano Coating for Bio-Electricity Using Microbial Fuel Cell: Published Date: 01.03.2024

- A Smart Health Care System for Online Monitoring and Control: Published Date: 04.11.2022

- Cari teeth-Handheld Device for Tooth Cavity Detection; Published Date: 06.11.2020

Funding Received:

Received funding from SERB (Science and Engineering research board) Power research grant, Department of Science and Technology for 22 Lakhs as a Co-Principal Investigator for Design of onboard charger for E-vehicles during the period 2021-2024.

Reviewer–International Journals (Scopus and SCI Indexed Journals)

- ➢ IET-PowerElectronics
- ➢ IET-Circuits,DevicesandSystems
- ➢ International Journal power electronics and Drives
- ➢ The journal of Engineering
- ➢ Journal of Environmental science and Technology-Springer
- ➢ Automatica
- ➢ Current journal of applied science and Technology
- ➢ Journal of Engineering research and reports
- ➢ Asian journal of advances in research
- ➢ Asian journal of chemical sciences

Resource person/Co-ordinator:

- Delivered a session on Process control in **Faculty development program**" Industrial **Instrumentation and process control systems"**Organized by Department of EIE from **25-11-2024 to 29-11-2024**,SRM Valliammai Engineering College, Chennai
- Coordinator for **21001:2018 (EOMS) Lead auditor training** in association with Knowledge academy during 04.06.2024-08.06.2024
- Session chair for International Conference ICCEBS'23 organized by Sri Sairam Engineering College during 14th& 15th December 2023
- Coordinator for **Curriculum audit training organized** by IQAC in association with NITTTR during 16.8.23-18.8.23
- **Session chair** for International Conference ICETET organized by Narshimha reddy Engineering College during 9th& 10th Jun2 2023
- Resource person for Two days workshop on "**Design of Controllers for Electrical and Process Control Applications using MATLAB**" Organized by Department of Electronics and Instrumentation Engineering during 19.09.2022&20.09.2022,Sri Sairam Engineering College
- Delivered a session on **"EOMS(Educational Organization Management Systems) "**in the orientation program Organized by Department of Artificial Intelligence and Data Science on 16.09.2022, Sri

Sairam Engineering College.

- Delivered a session on **"Academic Regulations"** in the orientation program Organized by Department of Electronics and Instrumentation Engineering on 16.09.2022,Sri Sairam Engineering College.
- Acted as an EEE Board Chairman for Central Valuation held during July 2022.
- Event Coordinator for **Two-Days workshop on Programming Arduino processor for IOT Application**s during 07.06.2022-08.06.2022 organized by EIE Department, Sri Sairam Engineering College.
- Delivered a session on Control Engineering in **Faculty development program**" **Computer Control of Circuits and Systems**"Organized by Departmentof EIE from **25-05-2022 to 31-05-2022**,SRM Valliammai Engineering College,Chennai
- Delivered a session on Sustainability Engineering Technology (SET TALK)in the topic, **"Awareness on management of Solid & Liquid Waste-Atechnology Perspective**, "Organized by UBA cell, Sri Sairam EngineeringCollege.
- **Resource person** for Two days Hands on training on "**MATLAB & its applications** organized by Skill development club and ISOI of EIE Dept.Sri Sairam Engineering College.
- Attended two weeks extensive training on **Change management** during the month of July2021.
- **ATAL Mentor** for Schools
- **Evaluator for Toycathon Event organized by** Ministry of Education's Innovation Cell and AICTE
- **Chairperson for IEEE International Conference on**"Power,Energy,Control and Transmission Systems" held at Sri Sairam Engineering College,Chennai,Tamilnadu,Indiaon10thand11thDecember2020.
- Coordinator for FDP on **Course Outcomes-Why? What?& How? Articulation & Attainment** organized by Internal Quality Assurance Cell(IQAC),SriSairamEngineeringCollegeon05.01.2021.
- Coordinator for FDP on **Outcome based Teaching learning process NBA Perspective** organized by Internal Quality Assurance Cell (IQAC), Sri Sairam Engineering college on15.12.2020.
- Co-ordinator for **Hackfest'2020** organized by Skill Development Club of Sri Sairam Engineering college, during 30&31stOctober 2020
- Coordinator for Two Week Online Refresher Course/ FDP on **Recent Innovations in Electrical, Electronics, Instrumentation, Automation &Teaching Pedagogy,** organized by the Departments of EEE, EIE & ICE, Sri Sairam Engineering college from 18th to 30th May 2020.
- Delivered a lecture on "Chemical Process control using Fuzzy"on 15.5.19 in ISTE sponsored FDP on Process modeling and control

Online certification courses:

- Received **NPTEL DISCIPLINE STAR** during the JAN-APRIL 2024 Session

- Received Star Recognition as **NPTEL BELIEVERS** during the JULY-DECEMBER 2024 Session

- Received Star Recognition as **NPTEL MOTIVATED LEARNERS** during the JULY-DECEMBER 2024 Session

Period		Courses	Status	Offered by
NPTEL				
2024-25	ODD	Basic Electrical Circuits	**Elite**	IIT-Hydrabad
		Digital Circuits	**Elite**	IIT-Kharagpur
		Patent Drafting for Beginners	**Elite+ Silver and Topper**	IIT-Madras
		Technical Communication for Engineers	**Elite with Silver**	IIT-Roorkee
2023-24	EVEN	Microprocessors and Microcontrollers	**Elite**	IIT-Kharagpur
		Analog Circuits	**Elite**	IIT-Bombay
2023-24	ODD	Accreditation And Outcome Based Learning	**Elite +silver**	IIT-Kharagpur
2022-23		Fuzzy Sets, Logic and Systems & Applications	**Elite with silver**	IIT-Madras
2021-22		Python for Data Science	**silver**	IIT-Madras
2020-21		Introduction to Embedded System Design	Successfully completed	IIT-Madras
2019-20	EVEN	Introduction to Internet of Things	Successfully completed	IIT-Kharagpur
2019-20	ODD	Advanced Linear Continuous Control systems: Applications with MATLAB Programming and Simulink	**Elite**	IIT-Madras
2018-19		DigitalCircuits	Elite	IIT-Kharagpur
	ODD	Outcome based pedagogic Principles for effective teaching	Successfully completed	IIT-Madras
	EVEN	Automatic Control	Elite+Silver	IIT-Madras
2017-18	ODD	OptimalControl	Successfully completed	IIT-Kharagpur

	EVEN	ControlEngineering	Successfully completed	IIT-Madras
		NITTT		
2022-23	Odd & Even	Module 2,3,5,6,7,8	Successfully completed	NITTT
2021-22	ODD	Module-4Instructional PlanningandDelivery	Successfully completed	NITTT
2021-22	EVEN	Module-1Orientation TowardsTechnicalEducationandCurriculum	Successfully completed	NITTT