


## Sri Sai Ram Engineering College

### Department of Electronics and Instrumentation Engineering

<b>Name: Dr. S.DURGADEVI</b>	
Designation:	Associate Professor
Qualification:	M.E, Ph.D
Area of Specialization:	POWER ELECTRONICS
Experience:	Teaching-18 yrs
	Industry/Polytechnic: NA
Date of Joining	02.05.2011
Number of Workshops/ Conferences/ FDP Attended:	Workshops -10 Seminars-04 FDP-29
Publication:	Journal: National: -01 International: SCI-3, WOS-4, Scopus-10, UGC and AICTE approved-6
	Conference: National: -03 International: 27
Patents Published:	03
Grant Received:	Co-PI for SERB Power Research grant for 26 Lakhs from DST
Research Guidance:	Guided 16 UG projects till date
General	Ph.D Supervisor Recognition from Anna University Life time member of ISTE and ISOI IEEE Member IQAC Coordinator NAAC Co-ordinator Coordinator for ISO 9001:2015 & EOMS 21001:2018 Change practioner Coordinator Qs-I gauge rating
Staff Achievement	Have won Cash awards for producing 100% results 9 times.

**Ph.D Thesis Title:**

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, Power Electronics and applications, Transducer Engineering.

**Experience:**

Sl. No	College/Organization	Designation	Period		Total period	Nature of work
			From	To		
1.	Sri Sairam Engineering College	Associate Professor	01.08.2020- till date		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		3 years	Teaching
4.	K.L.N College of Engineering, Madurai	Lecturer	07.09.2005-16.05.2008		2.8 years	Teaching

**Theory Subjects Handled:**

- Power Electronics
- Microprocessors and Microcontrollers
- Applied Soft computing
- Digital Logic circuits
- Electrical Machines
- Digital system Design
- Industrial Instrumentation
- Logic &DCS
- Transducer Engineering
- Industrial Data Networks

**UG projects Guided (Since 2012)**

S.No	Title of the Project work	Period of Guidance
1.	Integrated Power Generation and Distribution systems based on Renewable Energy Sources	Dec '12-April'13
2.	Controller optimization for Conical tank using Fuzzy Logic Controller	Dec '13-April'14
3.	Smart Intelligence Street Light Monitoring and Controlling using Embedded Web Server	Dec '14-April '15
4.	Fuzzy based Controller optimization for switching regulator"	Dec '14-April '15
5.	Power electronics Based Ignition Control System	Dec '15-April '16
6.	Controller Optimization for CSTR Using Soft Computing Techniques	Dec '16-April '17
7.	Smart system for cardiological risk and prevention	Dec '17-April '18
8.	Green house gas monitoring, control and conversion system	Dec '17-April '18

9.	A Novel Technique for Text To Speech Signal Conversion System Using Raspberry Pi	Dec'18-April '19
10.	Smart Assistance for blind using Machine learning	Dec'19-April '20
11.	IOT based assistive and Alerting system for visually impaired and aged people	Dec'20-April '21
12.	Design and Implementation of health monitoring system using IOT	Dec'21-April '22
13.	Solar Fed IOT Based Power Monitoring System	Dec'22-April'23

### **Workshop/Conferences/FDP/Industrial Training Attended:**

#### **Industrial Training:**

Undergone one-week Industrial Training at GH Induction Ltd, Thirumudivakkam, Chennai from 20.06.2022 to 25.06.2022

#### **Workshop:**

##### **AY:2020-21**

- Seven Day National Level Online Technical Program on “MATLAB”, organized by the Department of Electronics and Communication Engineering, Andhra Loyola Institute of Engineering and Technology, Vijayawada during 10th to 16th June 2020.

##### **AY:2019-20**

- Attended Python 3.4.3 training organized at Sathyabama Institute of Science and Technology in January 2020 semester, with course material provided by the Spoken Tutorial Project, IIT Bombay.

##### **AY:2018-19**

- “IOT for Instrumentation Applications” workshop conducted by Trend Instrumentation and Automation Pvt Ltd at Sri Sairam Engineering College, Chennai during 23.7.2018 to 25.7.2018.

##### **AY:2017-18**

- National level workshop on “Intelligent Systems Engineering” organized by NIT,Trichy during 27.07.2017&28.07.2017

##### **AY:2016-17**

- “Instrumentation Detailed Engineering workshop conducted by Trend Instrumentation and Automation Pvt Ltd at Sri sairam Engineering College, Chennai on 30.06.2016

##### **AY:2015-16**

- IEEE Sponsored Workshop on “Implementation of soft computing techniques” organized by IEEE Computational Intelligence Society, Madras Chapter National Engineering College, Kovilpatti during 05.08.2015-07.08.2015

**AY:2011-12**

- Workshop on “PIC Microcontroller based Embedded system Design” organized by Sri Sairam Engineering College, Chennai during 28.02.2012&29.02.2012
- National Level workshop on” Smart sensors for Industrial Application” organized by Sri Sairam Engineering College, Chennai during 1.12.2011&2.12.2011.
- National Level workshop on “Virtual Instrumentation in Industrial Automation” conducted by Sri Sairam Engineering College, Chennai during 24.06.2011 & 25.06.2011.

**AY:2007-08**

- International Workshop on “Modern Image Processing organized by RMK EnggCollege, Chennai during 02.08.2007&03.08.2007.

**Seminars:****AY:2020-21**

Webinar on “Process Automation and Instrumentation “on 6.6.202 organized by SNS College of Technology

**AY:2013-14**

- AICTE sponsored National Seminar on “Current Trends and Future Role of Renewable energy” organized by Sri Sairam Engineering College, Chennai during 08.10.2013&09.10.2013
- BRNS Sponsored National Seminar on “Development of Sensors in Industrial Applications” organized by Easwari Engineering College, Chennai during 26.09.2013 & 27.09.2013

**AY:2007-08**

- AICTE sponsored National Seminar on Recent trends in Process control and Instrumentation organized by SMVEC Engg college, Puducherry during 23<sup>rd</sup> -25<sup>th</sup> January 2008
- National Level Technical Seminar on Instrumentation Practices ,Research and Teaching organized by Madras Institute of Technology – Chennai for 2 days (2006)

**Faculty Development Program:****AY: 2023-24**

- Attended FDP on Process mining using CELONIS by ICT Academy during 31.10.23 - 02.11.23 at Sri Sairam engineering college
- Attended curriculum audit training organized by IQAC of Sri sairam engineering college in association with NITTTR during 16.08.23 -18.08.23

**AY: 2022-23**

- Attended FDP course on ““Renewable Energy Systems Laboratory’ organized by the Department of Electrical and Electronics Engineering SSN College of Engineering, Chennai during 26th – 29th September, 2022.
- Attended ISO Auditors training conducted organized by Sri Sairam Engineering College

during 17.10.222 -20.10.2022

#### **AY: 2021-22**

- Attended FDP course on **“Python for Data science”** conducted by IIT- Madras under NPTEL-AICTE for one week during Jan-Feb 2022
- Participated & completed successfully AICTE Training and Learning (ATAL) Academy Online FDP on **"Waste Technology"** from 02-08-2021 to 06-08-2021 at National Power Training Institute-Shivpuri (M.P).
- Participated and successfully completed the 5-day online FDP on the theme **“Inculcating Universal Human Values in Technical Education”** organized by All India Council for Technical Education (AICTE) from 26 July, 2021 to 30 July, 2021.
- Participated & completed successfully AICTE Training and Learning (ATAL) Academy Online FDP on **"Recent Trends in Electric Vehicles"** from 05-07-2021 to 09-07-2021 at National Institute of Technology, Arunachal Pradesh.
- Participated & completed successfully AICTE Training and Learning (ATAL) Academy Online FDP on **" Emerging Trends in Internet of Things"** from 07- 06-2021 to 11-06-2021 at Acropolis Institute of Technology and Research - AITR

#### **AY:2020-21**

- Attended FDP course on **“Introduction to Embedded system Design”** conducted by IIT- Madras under NPTEL-AICTE for one week during Jan-April 2021.
- Participated & completed successfully Online FDP on **"Recent trends in Medical Image Processing"** from 24-02-2021 to 02-03-2021 at SRM Easwari Engineering College,Ramapuram Camps,Chennai
- Participated & completed successfully AICTE Training And Learning (ATAL) Academy Online FDP on **"Smart Cities"** from 01-02-2021 to 05-02-2021 at Vellore Institute of Technology ,Vellore
- Participated & completed successfully AICTE Training And Learning (ATAL) Academy Online FDP on **"Data sciences"** from 15-12-2020 to 19-12-2020 at National Institute of Technology ,Mizoram
- Participated & completed successfully AICTE Training And Learning (ATAL) Academy Online FDP on **"Leadership & Excellence"** from 23-11-2020 to 27-11- 2020 at National Institute of Technology.
- AICTE sponsored STTP on **“IOT in Agriculture and Smart farming solutions”** organized by Velammal Engineering College during 16th Nov – 21st Nov 2020.
- Participated & completed successfully AICTE Training and Learning (ATAL) Academy Online FDP

on "**Electric Vehicles**" from 02.11.2020 to 06.11.2020 at Hindustan Institute of Technology and Science.

- Completed online course on “**Remote sensing applications in Agriculture in Agriculture water** management conducted by IIRS (Indian Institute of remote sensing) during 03.08.2020 -07.08.2020
- Faculty Development Program on **Circuit Design using AutoCAD Electrical** (Online Live FDP) conducted by ICT Academy during 20th July 2020 to 24th July 2020.
- AICTE Sponsored STTP on "**Recent Trends and Challenges of IoT in Automation**" from 13.7.2020 to 18.7.2020 organized by the department of EIE, RMD Engineering College, Chennai
- Five days Online FDP on “**Insights into cutting Edge Technologies**” from 16.06.2020 to 20.06.2020 organized by the department of EIE, RMD Engineering College, Chennai
- participated & completed successfully AICTE Training and Learning (**ATAL**) Academy Online FDP on "**Data Sciences**" from 09-06-2020 to 13-06-2020 at Central University of Kerala.

#### **AY:2019-20**

- 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
- Five days Faculty Development programme on **PYTHON 3.4.3** from 04.05.2020 to 08.05.2020 organized by Sathyabama institute of Science and Technology, Chennai in association with IIT Bombay Spoken Tutorial – Pandit Madan Mohan Malaviya National Mission on Teachers and Teaching (PMMMNMTT).
- Attended 5 day FDP on **Artificial Intelligence** conducted by Department of EEE ,Sri Sairam Engineering College ,during 05.12.2019 to 11.12.2019.
- Attended FDP on **Machine learning and Data manipulation using R and SQL**conducted by Department of ECE , Sri Sairam Engineering College during 30.10.2019 to 06.11.2019.
- Attended FDP course on “**Advanced Linear Continuous Control systems: Applications with MATLAB programming and Simulink**” conducted by IIT- Madras under NPTEL-AICTE for one week during July-September 2019.
- ISTE sponsored Five days FDP on “**Renewable energy systems**” organized by Department of EEE Sri Sairam Engineering College, Chennai during 22.07.2019&26.07.2019.
- ISTE sponsored Faculty Development Programme on "**Process Modeling and Control**" organized by Department of EIE &ICE, Sri Sairam Engineering College, Chennai during 11-06-19 to 15-06-19

**AY: 2018-19**

- Attended FDP course on “**Outcome based Education**” conducted by IQAC of Sri Sairam Engineering College during 5-6 April 2019.
- Attended FDP course on “**Automatic control**” conducted by IIT- Madras under NPTEL-AICTE for one week during Jan-March-2019.
- Two days FDP on “**Presentation skills**” organized by ICT Academy during 01.03.2019 to 02.03.2019 at Dhaanish Ahmed College of Engineering, Chennai
- Attended FDP course on “**Outcome based pedagogic principles for effective teaching**” conducted by IIT- Madras under NPTEL-AICTE for half of one week during Aug-September-2018.

**AY: 2017-18**

- Two days FDP on “**Power electronics and applications**” organized by Tagore Engineering college, Chennai on January 2018

**AY: 2015-16**

- FDTP on “**POWER ELECTRONICS**” organized by Centre For Faculty Development Anna University, Chennai during 01.06.2015-08.06.2015

**AY: 2012-13**

- National Level FDP on “**Role of Academic Excellence in Developing World Class Higher Learning Institutions and Faculties**” organized by Sri Sairam Institute of Management Studies on 12.12.2012

**AY: 2009-10**

- Quality Improvement Programme on **Instructional Design and Delivery** Organized by National Institute of Technical Teachers Training & Research, Chennai. Govt of India, Ministry of Human Resource Development. R.M.K.Engineering College, Chennai during 16<sup>th</sup> to 18<sup>th</sup> Dec 2010.

**AY: 2005-06**

- Two days Orientation programme on **Teaching Methodologies** organized by K.L.N.College of Engg.Madurai during 06.12.2005 to 07.12.2005.

**Conferences:****National :****AY: 2016-17**

- Presented a paper titled “**Controller optimization for CSTR using Soft Computing Techniques**” in National Conference on “**Innovative Techniques in Power Engineering and Drives-ITPED’17**” at Velammal Engineering College, Chennai on 31.03.2017

**AY: 2012-13**

- Participated in the National Conference on “**Intelligent Computing in Instrumentation and Communication**” Sri sairam Engineering College, Chennai during 25.03.2013&26.03.2013.

#### **AY : 2009-10**

- Presented a paper titled “**Energy Efficiency Optimization of Induction Motor using GA**” in National conference on Instrumentation Measurement Automation & Control K.L.N.College of Engg.Madurai on 16<sup>th</sup> April 2010.

#### **International AY: 2021-22**

- Presented a Paper titled “**A Review of Performance Optimization of Footstep Energy Harvester**” International Conference on Communication, Computing and Internet of Things, IC3IoT 2022, during 10-11 March 2022.
- Presented a Paper titled “**Gain Scheduled Adaptive PI Controller for a Hybrid Three Tank System**” 2nd International Conference on Power Electronics and IoT Applications in Renewable Energy and its Control, PARC 2022, during 21-22 January 2022
- Presented a Paper titled “**IOT Based Assistive System for Visually Impaired and Aged People**” 2nd International Conference on Power Electronics and IoT Applications in Renewable Energy and its Control, PARC 2022, during 21-22 January 2022

#### **AY: 2020-21**

- Presented a Paper titled “**RGA analysis and hardware implementation of PSO based decoupled MIMO system**” 4th International Conference on Computing and Communication Technologies (ICCT'21), Sri Sairam Engineering College, Chennai during 16th & 17th December 2021.
- Presented a Paper titled “**Smart Energy metering for cost and power reduction in house hold applications**” 7<sup>th</sup> International Conference on Electrical Energy systems (ICEES'21), SSN College of Engineering, Chennai during 11th & 12th February 2021
- Presented a Paper titled “**A Novel Approach of Chemical Process for Regulation, Control and Conversion of Greenhouse Gas**” International Conference on Advances in Mechanical Engineering (ICAME'21), Sri Sairam Engineering College, Chennai during 27 & 28th January 2021. Presented a Paper titled “**Adaptive control of a PI controller for a three-tank interacting process**” International Conference on Advances in Mechanical Engineering (ICAME'21), Sri Sairam Engineering College, Chennai during 27 & 28th January 2021
- Presented a Paper titled “**Smart Power Distribution system for Residential and Industrial Applications**” **Virtual** International Conference on Power, Energy, Control and Transmission systems (ICPECTS'21), Sri Sairam Engineering College, Chennai during 10 & 11<sup>th</sup> December 2021.
- Presented a Paper titled “**Optimal Controller tuning of a PI controller for a three tank non- interacting Process**” International Conference on Advances in Mechanical Engineering (ICAME'21), Sri Sairam Engineering College, Chennai during 27 & 28th January 2021.
- Presented a Paper titled “**Smart Machine learning system for blind Assistance**” **Virtual** International



Conference on Power, Energy, Control and Transmission systems (ICPECTS'21), Sri Sairam Engineering College, Chennai during 10 & 11<sup>th</sup> December 2021.

#### **AY:2019-20**

- Presented a Paper titled “**Smart Assistance for blind using Machine learning**” International Conference on Research Advancements & Challenges in Engineering Sciences (ICRACE'20), Velammal Institute of Technology, Panchetti, Chennai during 6 & 7<sup>th</sup> March 2020.
- Presented a Paper titled “**A study of Smart Cancer Detection System Using Image Processing and Deep Learning**” in International conference ICASIC 2020 organized by VIT Institute of science and Technology, Vellore during 27&28th February 2020.
- Presented a Paper titled “**Design of Internal model control using Neuro fuzzy controller for power converter applications**” in International conference ICASIC 2020 organized by VIT Institute of science and Technology, Vellore during 27&28th February 2020.

#### **AY:2018-19**

- Presented a Paper titled “**A Novel Technique for Text To Speech Signal Conversion System Using Raspberry Pi**” in 2<sup>nd</sup> International conference ICIECS- 2019 at St.Joseph College of Engineering during 22.03.2019.
- Presented a Paper titled “**Comparative study of controller optimization for CSTR using particle swarm optimization technique**” in 5<sup>TH</sup> International conference ICEES-2019 at SSN College of Engineering during 21.02.2019- 22.02.2019. AY:2017-18
- Presented a Paper titled “**Smart system for cardiological risk and prevention** in the International Conference on Advanced computing and Big data analytics ICACB-18 at Kingston Engineering college during 23.03.2018-24.03.2018
- Presented a Paper titled” **Green house gas monitoring, control and conversion system**” in the International conference on Innovative & Emerging trends in Engg & Technology ICIETET-18 at Panimalar Institute of technology during 09.03.2018&10.03.2018

#### **AY: 2016-17**

- Presented a Paper titled “**Comparative analysis of B-B and ANFLC based current mode control for single phase Power factor correction using DC-DC SEPIC converter**” in the International Conference on Computational Science & Technology (ICCST'17) at Sri Sairam Engineering College, Chennai during 09.03.2017-10.03.2017
- Presented a Paper titled “**Adaptive Neuro Fuzzy Logic Controller Based Current mode control for single phase Power factor correction using DC-DC SEPIC converter** in the International Conference on Power and Embedded Drive Control- ICPEDC 2017” at SSN College of Engineering, Chennai during 16.03.2017-18.03- 2017
- Presented a Paper titled “**Analysis and Design of single phase Power factor correction**

**using DC-DC SEPIC with Bang-Bang & PSO Based Fixed PWM Techniques** in the International conference on “Power Engineering Computing and Control (PECCON’17) at VIT University, Chennai Campus during 02.03.2017- 04.03.2017

- Presented a paper titled “**Particle Swarm Optimization based PI Controller tuning for Power Factor Correction using DC-DC SEPIC Converter**” Trends in Industrial measurements & Automation” (TIMA-2017) at MIT, Anna University, Chennai, CSIR-CEERI, ISA South India Section & IEEE Madras Section during 6.1.2017-8.1.2017

#### **AY:2014-15**

- Presented a Paper titled “**Genetic Algorithm based Controller optimization for switching regulator**” in the International Conference on Power electronics Instrumentation and Communication Engineering” at Jeppiaar Engineering College, Chennai during 26.3.2015&27.3.2015

#### **AY:2009-10**

- Participated in an “ **International Conference Millennium Development Goals role of ICT and Other Appropriate Technologies**” R.M.K.Engineering College, Chennai during 27-29 December 2009
- Presented a paper titled “**Induction Motor Design Optimization using Genetic Algorithm**” in the International Conference on Convergence of Science & Engineering in Education and Research. Dayananda Sagar Institutions, Bangalore during 21-23 April 2010.

#### **Publications: International Journal**

##### **Authored:**

##### **AY: 2022-23**

- 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.Thirupura Sundari, 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](https://doi.org/10.1007/978-981-19-5936-3_38).

**AY:2021-22**

- **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 2nd International 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 2nd International Conference on Power Electronics & IoT Applications in Renewable Energy and its Control (PARC), 2022, pp. 1-5, doi: 10.1109/PARC52418.2022.9726595. .( Scopus and Google 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 26 Issue 9,2021 ISSN-No- 1671-9727 (Scopus Indexed/UGC Care)
- **S Durgadevi** , C.Komathi , K.thirupurasundari. **Simplified Chemical Approach For Monitoring, Controlling And Conversion Of Greenhouse Gas**. EEO. 2020; 19(4): 6843-6853. doi:10.17051/ilkonline.2020.04.765089
- Komathi. C, **Durgadevi. S**, Thirupura Sundari. K, Abirami. K and Vidyathmikaa. R, "**RGA Analysis and Hardware Implementation of PSO Based DecoupledMIMO System**," 2021 4th International Conference on Computing and Communications Technologies (ICCCT), 2021, pp. 448-452, doi:10.1109/ICCCT53315.2021.9711818. (Scopus and Google Scholar Indexed)

**AY:2020-21**

- **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 Engineering

700, DOI: [https://doi.org/10.1007/978-981-15-8221-9\\_59](https://doi.org/10.1007/978-981-15-8221-9_59), Springer. 2021, PP-661-667 (Scopus and Google Scholar Indexed)

- **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](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 Thirupura Sundari,T.R. Sree Sahithya,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 , ISBN 978-1-7281-7612-3, February 2021(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 ,ISBN 978-1-7281-1084-4 February 2021 (Scopus and Google Scholar Indexed)
- Komathi C, **S.Durgadevi**, Thirupurasundari K, T.R.Sree Sahithya “**Smart Power Distribution system for Residential and Industrial Applications**”in IEEE Xplore –digital library , 10.1109/ICPECTS49113.2020.9336999 ,ISBN 978-1-7281-1084-4 February 2021(Scopus and Google Scholar Indexed)
- K.ThirupuraSundari, 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 February 2021 (Scopus and Google Scholar Indexed)

#### **AY:2019-20**

- **S.Durgadevi** , M.G.Umamaheswari “**Design and Realization of Internal Model Control Scheme for Single Phase Power Factor Correction with DC-DCSEPIC Converter**”,Vol 20,No 3,Journal of Electrical Engineering, Politehnica” Publishing House, March 30,2020.
- **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

## **AY:2018-19**

- **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 library 10.1109/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 :2231-5381 Vol-62, No-1 August 2018. (UGC approved)
- **S.Durgadevi** , M.G.Umamaheswari “Analysis and Design of Single Phase Power Factor Corrector using GA and Adaptive Neuro Fuzzy based SMC using DC-DC SEPIC” **Neural Computing and Applications, Springer Publications**, ISSN 0941-0643, Neural Comput & Applications.DOI 10.1007/s00521-018-3424-2,Vol 31 No 10 Oct 2019.(**SCI ,Web of Science and SCOPUS Indexed** ) pp :6129–6140

## **AY:2017-18**

- **S.Durgadevi** , M.G.Umamaheswari “Analysis and Design of Single Phase Power Factor Correction for Fast dynamic response using Genetic Algorithm optimized PI Controller using DC-DC SEPIC Converter”, **IET- Circuits, Devices and Systems** ISSN 1751-858X ,16<sup>th</sup> October 2017, DOI: 10.1049/iet-cds.2017.0229, Vol 12, No 2, pp 164-174. (**SCI, Web of Science and SCOPUS 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:978-1-5090-4679-9 pp :490-495. (**Web of Science , SCOPUS and Google scholar Indexed**)

## **AY:2016-17**

- K.Thirupurasundari , **S.Durgadevi** ,“Maturity Detection of Fruits and Vegetables

using K-Means Clustering Technique” **IJETSR** UGC Approved Vol.4.Issue 11,  
Nov 2017 ,ISSN:2394-3386

**Patents Published :**

1. The Smart System for Pre-Detection of Cardiac Issues; Published Date:06.11.2020
2. Cariteeth-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 26 Lakhs as a Co-Principal Investigator for Design of onboard charger for E-vehicles.

**Reviewer –International Journals (Scopus and SCI Indexed Journals)**

- IET-Power Electronics
- IET-Circuits, Devices and Systems
- 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:**

- Coordinator for Curriculum audit training organized by IQAC in association with NITTTTR during 16.8.23-18.8.23
- Session chair for International Conference ICETET organized by Narshimha reddy Engineering College during 9<sup>th</sup> & 10<sup>th</sup> 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 Applications** 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 Department of 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-A technology Perspective**, “Organized by UBA cell, Sri Sairam Engineering College.
- **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 July 2021.
- **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, India on 10th and 11th December 2020.
- Coordinator for FDP on **Course Outcomes-Why? What? & How? Articulation & Attainment** organized by Internal Quality Assurance Cell (IQAC), Sri Sairam Engineering College on 05.01.2021.
- Coordinator for FDP on **Outcome based Teaching learning process-NBA Perspective** organized by Internal Quality Assurance Cell (IQAC), Sri Sairam Engineering college on 15.12.2020.
- Co-ordinator for **Hackfest’2020** organized by Skill Development Club of Sri Sairam Engineering college, during 30 & 31<sup>st</sup> October 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 Undergone till Date:**

Online platform	Period	Courses	Status	Offered by	
NPTEL	2022-23	Fuzzy Sets, Logic and Systems & Applications	<b>Elite with silver</b>	IIT-Madras	
	2021-22	Python for Data Science	<b>silver</b>	IIT-Madras	
	2020-21	Introduction to Embedded system Design	Successfully completed	IIT-Madras	
	2019-20	Even	Introduction to Internet of Things	Successfully completed	IIT-Karagpur
	2019-20	Odd	Advanced Linear Continuous Control systems: Applications with MATLAB programming and Simulink	<b>Elite</b>	IIT-Madras
	2018-19	Odd	Digital Circuits	Elite	IIT-Karagpur
			Outcome based pedagogic principles for effective teaching	Successfully completed	IIT-Madras
		Even	Automatic Control	Elite+Silver	IIT-Madras
	2017-18	Odd	Optimal Control	Successfully completed	IIT-Karagpur
		Even	Control Engineering	Successfully completed	IIT-Madras
NITTT	2022-23	Odd& Even	Module 2,3,5,6,7,8	Successfully completed	NITTT
	2021-22	Odd	Module-4 Instructional Planning and Delivery	Successfully completed	NITTT



	2021-22	Even	Module-1 Orientation Towards Technical Education and Curriculum	Successfully completed	NITTT
			Aspects		
			Module 3 Communication Skills, Modes & Knowledge Dissemination	Successfully completed	NITTT
			Module 5 Technology Enabled Learning & Life Long Self Learning	Successfully completed	NITTT
<b>Coursera</b>	May-June 2020	The Arduino Platform and C Programming			University of California, Irvine
		Initiating and Planning Projects			
		Essentials of Entrepreneurship: Thinking & Action			
		Programming for Everybody (Getting Started with Python)			University of Michigan
		Python Basics			
		Introduction to Big Data			University of California San Diego
		AI For Everyone			deeplearning.ai
		Foundations of Teaching for Learning: Curriculum			Commonwealth Education Trust
		Machine Learning for All			University of London
Digital Manufacturing & Design			University at Buffalo & The State University of New York		

		Competitive Strategy	Ludwig-Maximilians-Universität München
			(LMU)
		Create Your First Python Program	Coursera Project Network
		C for Everyone: Programming Fundamentals	University of California, Santa Cruz
		The Sustainable Development Goals – A global, transdisciplinary vision for the future	University of Copenhagen
		Programming Fundamentals	Duke University
		Getting Started with Google Sheets	Google Cloud
		Beyond the Sustainable Development Goals (SDGs): Addressing Sustainability and Development	University of Michigan
		Data science ethics	
Futureskills/ Nasscom	2019-2020	Big Data 101	a course on futureskills.c ognitiveclass. ai. Powered by IBM Developer Skills Network.
		Data Science Methodology	
		Python 101 for Data Science	
		Data Science 101	