

Sri Sai Ram Engineering College  
Department of Electrical and Electronics  
Engineering

**1.NAME: Ms.M.HEMALATHA**



**2.DESIGNATION**

**Associate Professor**

**3.QUALIFICATION**

**M.E (Phd)**

**4.AREA OF SPECIALIZATION**

**APPLIED ELECTRONICS**

**5.EXPERIENCE:**

**Teaching Experience: 17 years 9 months**

**6.NO.OF WORKSHOP / SDP / FDP/  
attended:**

**No. of workshops attended:13  
No of seminars attended :4  
No. of FDP attended :18  
No. of workshops organized :12  
No. of conferences attended:7**

**7.PUBLICATIONS :**

**National conference :5  
International conference:18  
Scopus indexed :19  
International journals:3  
SCI: 01  
UGC:1**

**8. GENERAL**

**Organized workshops on Matlab  
,PLC& Scada,Tinkercad, Simulation  
softwares.  
Have organised many guest Lectures for  
students on various fields and recent  
Technologies.**

<b>9. STAFF ACHIEVEMENTS:</b>	<b>Received Lilavati Award from AICTE under the theme WOMEN EMPOWERMENT</b>
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<b>Sl No.</b>	<b>Name of the college</b>	<b>Position held</b>	<b>Period</b>		
			<b>From</b>	<b>TO</b>	<b>Total</b>
1.	Sri Saraswathi Velu College of Engineering	Lecture	14/3/2005	14/5/2006	1.2 Year
2.	Adhiparasakthi Engineering College	Lecturer	17/5/2006	15/5/2007	1 year
3.	Jaya Engineering College	Sr.Lecturer	6/6/2007	5/5/2010	2.11 years
4.	Valliammai Engineering College	Assistant Professor	28/6/2010	16/5/2011	11 Months
5.	A.C.T College of Engg& Technology	Assistant Professor	25 /7/2013	31/5/2015	1.9 Year
6.	Sri SaiRam Engineering college	Assistant Professor	8/6/2015	Till date	9.7 years

### **ACADEMIC RESPONSIBILITIES:**

- Scope member as Executor- Women Empowerment cell
- Coordinator - Student Value added program.
- Department Coordinator-VLAB
- Department Coordinator- SDG
- Department Coordinator- L&T EDUTECH COURSE
- Scope member –Executor – start-up
- NBA - criteria 3- Member
- NAAC - criteria 2

### **AWARDS and ACCOLADES:**

**Won the AICTE Lilavati Award 2021-2022 as first Runner-up in the subtheme Women Entrepreneurship for unique intervention carried out under the theme "WOMEN EMPOWERMENT" on 8th March 2022.**

### **PATENT**

**1. Published a patent based on "SOLAR BASED VENDING MACHINE", Appln No.202441101294, dated: 03/01/2025**

**2. Patent Grant** of "AN AUTOMATIC WET GRINDING APPARATUS", Appln no. 202241075488, dated: 26/12/2022 with Granted Application, Patent Number :544684 Dated on 11/7/2024.

**3. Published a patent on “MACHINE LEARNING TECHNIQUE AND SYSTEM FOR SOLVING PREDICTION PROBLEM” Application No. 202141047297- Nov 2021**

**4. Published a patent on “AN INTELLIGENT SMART STREET LIGHT SYSTEM WITH SAFETY TECHNOLOGY AND ENVIRONMENT MONITORING” Application Number-202041047228 ,dated : 06/11/2020**

**5. Patent Grant** of “VOICE BASED OUTDOOR NAVIGATION AND LOCATION ANNOUNCEMENT GUIDANCE SYSTEM FOR BLIND” Application Number-- : 2020103056, dated : 9/12/2020

### **INTERNSHIP :**

1. Industry internship on ‘**Design and development of Dual Regulated smart DC power supply**’ from 25<sup>th</sup> January 2021 to 6<sup>th</sup> February 2021 by AnandTechno creations, NRIT Incubation Centre, RIT, Islampur.
2. Technical training on **DCS & PLC OVERVIEW** by Technical school of Yokogawa India Ltd , Bangalore from 14 to 15<sup>th</sup> June 2018.
3. Undergone an internship at **Kasa Anlagen** at Thirumudivakkam, for 10 days

### **INTERNATIONAL JOURNAL**

- 1.” Prognostic and power scheduling technique for EV using optimized adaptive deep belief network ” M Hemalatha, R Rengaraj - Journal of Energy Storage, 2025, Volume 108, Pages 1-13
2. FOPID controlled modified coupled inductor-based SEPIC converter with Renewable energy system paper published in TEST Engineering & Management ,ISSN: 0193-4120 Page No. 3553 – 3563, Volume 81
3. IOT based smart garbage alert system using wireless sensor network for environmental hygiene, paper indexed in International Journal of Engineering and Advanced Technology (IJEAT) ISSN: 2249 – 8958, Volume-8, Issue-6, August 2019.
4. Cloud based secured healthcare monitoring with prompt notification using connected devices, European Journal of Molecular & Clinical Medicine ISSN 2515-8260 Volume 07, Issue 06, 2020

### **INTERNATIONAL CONFERENCE:**

1. **M. Hemalatha**, S. Thennarasu, S. M. Aravind Krishna, F. Mohamed Azarudeen, S. M and R. Arunprasath, "Solar- Powered Automatic Dispenser," *2024 International Conference on Power, Energy, Control and Transmission Systems (ICPECTS)*, Chennai, India, 2024, pp. 1-4, doi: 10.1109/ICPECTS62210.2024.10779997
2. K. Rajkumar, C. Nayanathara, **M. Hemalatha**, P. T, M. W. J and B. M M, "Comprehensive Analysis and Performance Comparison of Anti-Lock Braking Controllers: Mechanisms, Variants, and Simulation Results," *2024 International Conference on Power,*

*Energy, Control and Transmission Systems (ICPECTS)*, Chennai, India, 2024, pp. 1-8, doi: 10.1109/ICPECTS62210.2024.10780165.

3.K. L, P. T, P. Gayathri, V. Malini, **M. Hemalatha** and M. K. C, "Cascaded Neural Network Controller Development for Electric Vehicle Energy Management," *2024 International Conference on Power, Energy, Control and Transmission Systems (ICPECTS)*, Chennai, India, 2024, pp. 1-7, doi: 10.1109/ICPECTS62210.2024.10780029.

4. **M. Hemalatha**, D. S, T. Porselvi, R. G, L. Kurinjimalar and R. K, "IoT Based Ignition System By Insertion And Verification of Driving License," *2023 Intelligent Computing and Control for Engineering and Business Systems (ICCEBS)*, Chennai, India, 2023, pp. 1-5, doi: 10.1109/ICCEBS58601.2023.10448943.

5. Cold Supply Chain Logistics with IoT to Ensure Quality and Security of the Transported Goods Priya, J.S., **Hemalatha, M.**, Porselvi, T., Rethick, T., Naathan, C.B.R. *2023 Intelligent Computing and Control for Engineering and Business Systems, ICCEBS 2023*, 2023

6. An IoT Enabled Air Pollution Meter with Digital Dashboard on Smartphone **Hemalatha, M.**, Shalini Priya, J., Rajkumar, K., .Shivashankari, A.M., Jeyashri, R. *2023 Intelligent Computing and Control for Engineering and Business Systems, ICCEBS 2023*, 2023

7.T. Porselvi, A. K. Saranraj, B. P. Rikthish, M. Prabakaran, S. Priya and **Hemalatha**, "Industrial Automation Using IoT," *2023 Intelligent Computing and Control for Engineering and Business Systems (ICCEBS)*, Chennai, India, 2023, pp. 1-5, doi: 10.1109/ICCEBS58601.2023.10448809

8.T. Porselvi, M. Nandhagopal, P. J. Shalini, **M. Hemalatha**, S. Jaiakash and G. C. Sai, "FPGA Based Power Quality Improvement of Grid Connected EV Battery System," *2023 4th International Conference on Signal Processing and Communication (ICSPC)*, Coimbatore, India, 2023, pp. 400-405, doi: 10.1109/ICSPC57692.2023.10125991.

9.S. K, J. S, **H. M** and R. R, "Hybrid Energy Sources using Current Fed Inverter for High Gain in Single Phase to AC Loads," *2023 Third International Conference on Artificial Intelligence and Smart Energy (ICAIS)*, Coimbatore, India, 2023, pp. 281-285, doi: 10.1109/ICAIS56108.2023.10073877.

10.J.Shalini Priya, S. Thennarasu, **M.Hemalatha**, M.Karthikeyan, B.Meenakshi, R.Sivaprasad, presented a paper entitled "Voice Based Motile Video Surveillance System with Violence Detection " in 3rd International Conference on Power Energy Control and

## Transmission Systems 2022

11.J.Shalini Priya , Suraj Kumar K B, T.Porselvi, S.Thennarasu, **M.Hemalatha**, L.Kurinjimalar, presented a paper entitled “Smart Wearable for Pulmonary Fibrosis Patient Monitoring with Oxygen Saturation Prediction ” in 3rd International Conference on Power Energy Control and Transmission Systems 2022

12.**M.Hemalatha** , J. Shalini Priya, Jeyashri.R, Preethi.S, Dr.T.Porselvi, Suji.S , presented a paper entitled “An Intelligent Authentication System for Improved Security” in 3rd International Conference on Power Energy Control and Transmission Systems 2022.

13.Porselvi T , Shalini Priya J , **Hemalatha M** , Jeeva C , Aishwarya K , Suruthi B presented a paper entitled “Microcontroller Based Wet Grinder System For Domestic Applications ” in 3rd International Conference on Power Energy Control and Transmission Systems 2022

14.**M.Hemalatha**, T.Porselvi, Deepashri.R, Jeyashri.R, L.Kurinjimalar, J.ShaliniPriya. Presented a paper entitled “An Intelligent Reading Aid for Stone blind Individuals” in 3rd International Conference on Power Energy Control and Transmission Systems 2022

15.Porselvi T<sup>1\*</sup>, Praveena D<sup>2</sup>, Shalini Priya.J<sup>3</sup> ,**Hemalatha M**<sup>4</sup>, Meenakshi B<sup>5</sup>, Thennarasu S<sup>6</sup> presented a paper entitled “PV based Multilevel Inverter with 15 Levels using Pod Control Method ” in the 2022 International Conference on Communication Computing & internet of things (IC3IoT), 2022, pp. 1-4, doi: 10.1109/IC3IOT53935.2022.9767729.

16.K. L, C. G, J. S, P. K. U, **H. M** and R. M, "Analysis of Vehicle to Grid (V2G) Integration in Renewable based Micro grid," *2022 International Conference on Power, Energy, Control and Transmission Systems (ICPECTS)*, Chennai, India, 2022, pp. 1-4, doi: 10.1109/ICPECTS56089.2022.10047328.

17.T. Porselvi, K. Sujitha, S. K. Kumar, **M. Hemalatha** and D. Thiagarajan, "Implementation and Performance Analysis of Various Converter fed Inverter with PV Applications," *2020 International Conference on Power, Energy, Control and Transmission Systems (ICPECTS)*, Chennai, India, 2020, pp. 1-5, doi: 10.1109/ICPECTS49113.2020.9336987.

18.**M. Hemalatha**, R. A. Prasath and D. Vijayakumar, "SSSSS: Sensor surveillance solar synchronous system for pedestrian pathways," *2017 International Conference on Computation of Power, Energy Information and Commuincation (ICCPEIC)*, Melmaruvathur, India, 2017, pp. 807-812, doi: 10.1109/ICCPEIC.2017.8290473

## **NATIONAL CONFERENCE**

1. Presented a paper titled “ Image Compression Through Multi wavelet Transform” in a National conference held at BIHER held on 14.03.2005
2. Presented a paper entitled ‘ solar tracking system’ in National conference on Recent Innovations in Advanced Material science held in Rajalakshmi Institute of Engineering on 13<sup>th</sup> and 14<sup>th</sup> March 2019
3. Presented a title “ An Intelligent Reader for stone blind people” in 3<sup>rd</sup> National conference (RTPEE-2022) SSN college , Kalavakkam.
4. Presented a Paper titled “” Solar Snack Vending Machine in 4<sup>th</sup> National conference (RTPEE-2023) SSN college , Kalavakkam.
5. Presented a Paper titled “A secured IOT based Monitoring and Alerting system in hazardous coal mine Industries” in 4<sup>th</sup> National conference (RTPEE-2023) SSN college , Kalavakkam.

## **PROPOSALS SUBMITTED:**

1. A proposal on “FPGA-based monitoring and control of biogas plants” was submitted to MNRE. The application number is MNRE/A/2022/2348.
2. Submitted a Proposal to TNSCST on “IoT enabled air pollution meter with digital dashboard on smartphone” in March 2022 .
3. Submitted a Proposal to TNSCST on “HOME AUTOMATION – SMART DOORBELL” in the year of March 2022.
4. Submitted a Proposal to TNSCST on “Biblio Peruser For The Typhlotic People Using Jetsonano” in the year of Jan 2021.

## **Reviewer:**

As a Reviewer for a book on Basic Electrical & Electronics Engineering by Oxford Publications.

As a Reviewer for Papers in the Conference ICISCoIS 2022 at PSG Institute Technology.

### **WORKSHOP/STTP/ SEMINAR**

1. Workshop on Embedded System Development using ARM Controllers” conducted by ISM, Bangalore on 19.11.2005
2. Workshop on Telecommunication & Information Technology on 2.12.2007 by Falconn ElectroTek Pvt.Ltd.
3. Workshop on NPTEL online certification Courses conducted at IIT Madras , Chennai on 25.2.2014.
4. National workshop on Modeling & Hardware Implementation of Power Electronic Applications at Sankara University.
5. Seminar on Recent trends in Technology for Teaching and Research at VIT.
6. National seminar on Emerging Technology on Construction & Operation of Hybrid system at Krishna Engineering College.
7. One day training on Quality Management system and Audit training held in Sri Sairam Engineering college,Chennai on 8<sup>th</sup> June 2018.
8. Attended a one day workshop on “How to do a good Ph.D? “ on 3.3.2018 held at MIT campus, Anna University.
9. Webinar on criteria-3 NBA Accreditation.
10. Attended a 6 days workshop on “Design challenges on Motors and Controllers ” From 28/2/2022 to 5/3/2022 at St.Joseph Engineering College.
11. One Week Workshop on Renewable Energy Systems Lab at SSN Engineering college.
12. Attended two days IDA Connect Workshops at Didac India 2022 in Bangalore.
13. Attended a one day training program conducted by IPR and MoE Innovation cell,India

### **FDTP Attended:**

2. Induction Training Program for Teachers in Engineering Colleges (FDTP)” held at Pondicherry Engineering college from 5.12.2005 to 17.12.2005
3. Faculty Development Program on solar photo voltaic cells sponsored by TANGEDCO in Anna University, Guindy from 23.6.2014 to



26.6.2014.

4.FDTP on Electromagnetic fields at Indira Institute of Engineering & Technology from.5.10.2014 To 10.10.2014

5.Attended a Fdp on “ Digital simulation of Power Electronic circuits through PSPICE software ” from 15.7.2015 to 18.7.2015 held at Sri sairam Engineering college

6.Attended the National Level FDP on Electrical Simulation Software (FDP ) from 6.11.2017 To 10.11.2017 held at Sri sairam Engineering college.

7.FDP on Power Electronics for Renewable Energy systems held at Tagore Engineering college from 18 to 20 january 2018.

8.Attended a 6 days FDP on “Digital signal Processing ”sponsored by Anna university conducted in Valliammai Engineering College ,Kanchipuram from 10 to 15 june 2019.

9.FDP on “Modeling, simulation, control and Applications of power Electronic converters” from 25<sup>th</sup> to 29<sup>th</sup> November 2019 at QIS college of Engineering&Technology,Andhra Pradesh.

10.Five days FDP on “Artificial Intelligence”from 5 to 11 December 2019 by Skill Kora Labs Pvt ltd,Chennai.

10.Attended **ATAL FDP** on ‘Electric vehicles’from 5.10.2020 to 9.10.2020

11. Attended **ATAL FDP** on ‘Biomedical Instrumentation & IOT’’.from 21.09.2020 to 29.09.2020.

12.Completed **ATAL FDP** on “Application of IoT in Agriculture” from 6-07-2021 to 10-07-2021

13.Completed **ATAL FDP** on “Electrical and Computer Engineering”from 8.2.2021 to 12.02.2021, NIT Patna.

14.Completed FDP on “Industry oriented FDP on Artificial Intelligence”at MSME.

15.Attended a 6 days FDP on Solid State Drives from 22/11/2021 to 27/11/ 2021 at Valliammai Engineering College.

16.Completed 2 weeks **ATAL FDP** on “Digital Twin in Electric vehicles” at AVIT from 12.09.2022 to 23.09.2022 in the year 2022.

17.Completed NPTEL FDP on Renewable Energy Resources in Nov 2022.

18. Attended a one week FDP on “ Biomedical sensors & Signal Processing” from 9<sup>th</sup> jan to 13<sup>th</sup> jan 2023 conducted by Loyola Institute of Technology

19. Participated in the Six Days Workshop on Unleashing the Potential of AI in Power Faculty: From Monitoring to Neuro Classifier with Hands-on” Sponsored by Scheme of Promotion of Academic and research Collaboration (SPARC) Organized by Department of Electrical and Electronics Engineering, Sri Sivasubramaniya Nadar College of Engineering, Kalavakkam, during 26<sup>th</sup> Feb 2024 to 2<sup>nd</sup> Mar 2024.

20. Took Part in the six days Faculty Development Programme on EE3032 Energy Storage Systems conducted in Physical Mode by the Department of Electrical & Electronics Engineering at Sri Sairam Engineering College Chennai From 05-02-2024 to 10.02.2024.

21. Successfully participated & completed AICTE Training And Learning (ATAL) Academy Faculty Development Program on “DESIGN AND DEVELOPMENT OF MICRO/SMART GRID INTENDED FOR SMART CITY DEVELOPMENT AND ENHANCING E-MOBILITY” at VELLORE INSTITUTE OF TECHNOLOGY from 18/11/2024 to 23/11/2024.

22. Completed NPTEL Online Certification Course “ Python for data science” and Faculty Development Programme Successfully in “ during the period of 3 months from July 2023 - Sep 2023

### **ONLINE CERTIFICATION:**

Completed a 8 month course on “ Advanced Certificate Program in Electric Vehicle Design ” by iHUB,IIT Roorkee in Association with DST

### **NPTEL courses/ NITTTR modules**

Completed 11 online certification courses through coursera ,future skills .

Completed 8 modules in NITTTR

Completed 6 NPTEL online courses

### **FDP Resource Person & Session chair**

✓ Presented a Session on Analog circuits , embedded systems, and communication in a FDP at Valliammai Engineering College on 2.12.2022

✓ Acted as a session chair in 3<sup>rd</sup> IEEE International conference (ICPECTS 2022) at Sri Sai Ram Engineering College.

Acted as a session chair in 4<sup>th</sup> IEEE International conference (ICPECTS 2024) at Sri Sai Ram Engineering College.

**Professional Membership:**

- IEEE Member since 2021
- ISTE member since 2020

**Events organized:**

- As a coordinator in National Level SDG Hackathon.
- Organized many value added courses for Department students.
- Organized National level symposium “SaiMagnicon-TESWATT 2022

● **Industry Visit:**

- Visited Gamesa-Siemens on March 3<sup>rd</sup> 2023 arranged by PALS, IIT.
- Visited GH Induction , Thirumudivakkam.
- Visited the automation industry - Shiboura, SriPerumbudur arranged by PALS, IIT.