Sri Sai Ram Engineering College

Department of Electronics and Instrumentation Engineering

Name: **Dr. M. NALINI**	
Designation:	Professor
Qualification:	M.Tech, Ph.D
Area of Specialization:	Biomedical Engineering
Experience:	Teaching- 19.2 years
Number of Workshops/ Conferences/ FDP Attended:	WORKSHOPS-08 FDP- 21

Publication:	Journal:
	    National: 0
	    International: 23

	Conference:
	    National: 3
	    International: 16

Research Guidance:	Guided 18 UG projects till date
General:	Department ISO Coordinator Department Board of Studies Member & Coordinator Certified Internal Auditor for ISO 9001:2015
Staff Achievement	• Have won Cash awards for producing 100% results 6 times • **Two patent published** • **One patent granted** • **ATAL certified Mentor**
Award	• Received **Best Woman Faculty Award** for the year 2019-20 from Novel Research Academy, Pondicherry • Received **Research Inspiration Award** for the year 2020-21 from International Journal for Modern Trends in Science and Technology.
Funds Received	• Successfully completed **one lakh DST –IEDC** Funded Project • Received **Rs.3, 97,667**/- from AICTE for STTP under AQIS scheme

Memberships	- Life member in The Indian Society For Technical Education (ISTE) – LM131502 - IEEE SENIOR MEMBER

Research Interests:

Artificial Intelligence, Biomedical Instrumentation, VLSI Design and Embedded systems

Experience:

S. No	Name of the Institution	Designation	Department	Period of Experience
1.	Sri Sairam Engineering College, West Tambaram, Chennai	Professor	Electronics and Instrumentation Engg	(June 2010 to till date)
2.	Adhiparasakthi College of Engineering	Lecturer	Electronics and Communication Engineering	06 months (Jan 2010 to June 2010)
3.	Indira Gandhi College of Engineering and Technology for Women	Lecturer	Electronics and Communication Engineering	1 year 6 months (June 2008 to Jan 2010)
4.	Murugappa Polytechnic College	Lecturer	Electronics (Robotics)	4 years (July 2004 to July 2008)

Theory Subjects Handled:

- Microprocessor and Microcontroller
- Digital System Design
- VLSI design
- Robotics and Automation
- Logic and Distributed control System
- Digital Logic Circuits
- Embedded Systems

- Electrical Measurement
- Electric Circuits and Electron Devices
- Modern Electronic Instrumentation
- Fiber Optics and Laser Instrumentation
- Process Control and Instrumentation

UG projects Guided:

S. No	Title of the Project work	Period of Guidance
1.	Detection of Parkinson disease using voice and hand tremor	February 2022 to April 2022
2.	Wet leak testing using PLC and SCADA	February 2021 to April 2021
3.	Self-medication for diabetes using Machine Learning	February 2020 to April 2020
4.	Drainage Cleaning Revolutionary Robot (DCR^2)	February 2019 to April 2019
5.	Lacto Pure	February 2018 to April 2018
6.	Blood Glucose Regulation System using Model Predictive Controller	February 2017 to April 2017
7.	Energy Harvesting and Management from Ambient RF Radiation	February 2017 to April 2017
8.	Closed Loop Control for Storage Tank in Refineries Using IMC Controller Tuned with PSO Technique	February 2016 to April 2016

9.	Closed Loop Model for Blood Glucose Regulation System using LABVIEW	February 2016 to April 2016
10.	Extraction of Fetal Electrocardiogram Using Adaptive Neural Fuzzy Logic System	February 2015 to April 2015
11.	Automated Tile Analyzer using PLC and SCADA	February 2014 to April 2014
12.	Intelligent Library Management System Using Logistics	February 2014 to April 2014
13.	Smart Trains	February 2013 to April 2013
14.	Advanced Robotic Intelligent Shape Shifting Robot used in USAR for localization and lifting sapiens from Disaster Affected Areas and Bore Holes	February 2013 to April 2013

NPTEL Courses:

● Completed successfully 8 weeks course on Fiber Optics
● Completed successfully 8 weeks course as well as FDP on Biomedical Nanotechnology
● Completed successfully with Elite 8 weeks course as well as FDP on Hardware modeling using Verilog
● Completed successfully with Elite 8 weeks Course as well as FDP Body language a professional key to success
● Completed Successfully with Elite 8 weeks Course as well as FDP on Introduction to Internet of Things
● Completed Successfully with Elite 8 weeks Course as well as FDP on Digital CMOS VLSI Design
● Completed Successfully with Elite 12 weeks Course as well as FDP on Patent Law for Engineers and Scientists

Workshops Attended:

● Three day workshop on Process Automation using MATLAB conducted by Intellectz Tech at Sri Sairam Engineering College, Chennai.

● One day Workshop on Instrumentation Detail Engineering Workshop conducted by Trend Instrumentation and Automation Pvt Ltd at Sri Sairam Engineering College, Chennai.

● One day Workshop on Virtual Instrumentation Using Labview at St.Joseph's Engineering College, Chennai.

● Two days Workshop on VLSI Design Methodology &Tools at Sri Sairam Engineering College, Chennai.

● Two day Workshop on Industrial Automation at Sri Sairam Engineering College, Chennai.

● Two day Workshop on Smart Sensors for Industrial Applications at Sri Sairam Engineering College, Chennai.

- One day workshop on Intellectual Property Rights and Innovations at Sri Sairam Engineering College, Chennai.

- Two day workshop on Deep Learning and Image Processing For Medical and Industrial Control Applications at GKM College of Engineering and Technology, Chennai.

FDPs/SDPs Attended:

- 7 day Faculty Development Programme Process Control at Madras Institute of Technology.

- 7 day Faculty Development Programme Process Control at Sri Sairam Engineering College.

- 7 day Faculty Development Programme on Microcontroller Based System Design at Sri Sairam Institute of Technology.

- 7 days Faculty Development Programme on Embedded and Real time Systems Sri Sairam Engineering College.

- 14 days Faculty Development Programme on Robotics Technology for Manufacturing at Madras Institute of Technology, Chennai.

- 7 day Faculty Development Programme on Work Life Balance for Engineering & Management Faculty at Sri Sairam Engineering College, Chennai.

- 1 day Faculty Development Programme on Role of Academic Excellence in Developing World Class Higher Learning Institutions and Faculties at Sri Sairam Institute Of Management Studies, Chennai.

- 2 day Faculty Development Programme on LabView Programming at SCSVMV University, Kanchipuram.

- 5 day Faculty Development Programme on Engineering Teaching Pedagogy and Effective Learning Process at Sri Sairam Institute of Management Studies.

- 5 day Faculty Development Programme on Artificial Intelligence at Sri Sairam Engineering College, Chennai.

- 6 day Faculty Development Programme on Machine Learning and Data Manipulation using R and SQL at Sri Sairam Engineering College, Chennai

- 5 day Online Short Term Course on Neural Networks and CNN conducted by NITTTR Chandigarh

- 5 day Online Short Term Course on Image and Embedded Processing conducted by NITTTR Chandigarh

- 5 day Online ATAL FDP on Artificial Intelligence conducted by IIIT, Nagpur.

- One Week online FDP on Scilab conducted by Geetanjali Institute of Science and Technology, Nellore in association with Spoken Tutorial IIT Bombay.

- One Week Online FDP on Biopython conducted by Sathyabama Institute of Science and Technology in association with Spoken Tutorial IIT Bombay.

- One Week Online FDP on Arduino conducted by Prakasam Engineering College, AP in association with Spoken Tutorial IIT Bombay.

- One Week Online FDP on R Programming conducted by Prakasam Engineering College, AP in association with Spoken Tutorial IIT Bombay.

- 5 day Online FDP on Nest Generation Intelligence conducted by St. Peter's Institute of Higher Education and Research.

- 5 day Online Short term Course on Nano materials and Devices conducted by NITTTR, Chandigarh.

- 5 day Online ATAL FDP on Robotics Conducted by NIT, Jamshedpur.

- 5 day online ATAL FDP on Biomedical Instrumentation conducted by UNIVERSITY B D T COLLEGE OF ENGINEERING DAVANAGERE.

- 5 day online ATAL FDP on Deep Learning conducted by Indian Institute of Information Technology Vadodara.

Training Attended

- 3 month training on CALIBRATION OF ELECTRICAL AND ELECTRONIC INSTRUMENTS at Regional Testing Centre (southern region) – Guindy, Chennai.

- 5 day training on DCS & PLC overview conducted by Yokogawa India Pvt. Ltd at Sri Sairam Engineering College, Chennai.

- 2 day training on DCS & PLC overview conducted by Technical School of Yokogawa India Ltd., at Bangalore.

- 6 day online Guru Cool Program (6 Days Training on Emerging Technologies followed by a Project Build-a-Thon) CONDUCTED BY IBM INDIA UNIVERSITY RELATIONS.

- 3 day online Electronic Product Build-A-Thon, A 3 Days Training Program on Electronic Product Designing Followed by 7 Days Product Development Conducted by SmartBridge Educational Services Pvt Ltd in Association with Voltera Inc.

Publications:

International:
Authored

S. No	Paper Title	Journal Details	Publication details (Vol/Edition/Year and month of publication)
1	Application of IoT with PIR and Air Quality Gas Sensors for Classrooms and Buildings	IEEE Explore Digital Library	2022 **Scopus**
2.	Automatic Optimized Voice Based Gender Identification for Speech Recognition	IEEE Explore Digital Library	2022 **Scopus**
3.	An Investigation Report on Spoting and Diagnosing Diseases from the Images of Brain by Convolutional Neural Method Using Fusion Support Vector Machine	IEEE Explore Digital Library	2022 **Scopus**
4.	Brain Tumor Detection Using Soft Computing	IEEE Explore Digital Library	2022 **Scopus**
	Enhanced Quality Analysis of Fuel Tank Using Pressure Drop Method Using PLC and SCADA	IEEE Explore Digital Library	2021, pp. 444–447 **Scopus**
5.	M-Health Technology Using IOT	IEEE Explore Digital Library	2021, pp. 197–199 **Scopus**
6.	Eye power and pressure detection using MEMS sensor	Materials Today: Proceedings	2020, 46, pp. 3772–3774 **Scopus, WOS**
7.	IoT based smart medicine kit	Materials Today: Proceedings	2020, 46, pp. 4125–4127 **Scopus, WOS**
8.	Hand gesture base bore well rescue robot	Materials Today: Proceedings	2020, 46, pp. 4203–4206 **Scopus, WOS**
9.	Developing a model based on meal-detection in patients for type-1 diabetes using factorial switching Kalman filter	Materials Today: Proceedings	2020, 46, pp. 4190–4194 **Scopus, WOS**
10.	Self-Medication For Diabetes Mellitus Using Machine Learning	Journal Of Critical Reviews	ISSN- 2394-5125VOL 7, ISSUE 15, 2020
11.	Pollution Monitoring System Enabled with IoT	Journal of the Gujarat Research Society	ISSN – 03748588 Vol 21, Issue – 17, December 19 **UGC CARE 1**
12.	A Straightforward solution for visually impaired using smart assistive navigation and accessibility system	International Journal of Innovative Technology and Exploring Engineering (IJITEE)	ISSN:2278-3075, Volume Number 9,November 2019 **Scopus**
13.	LACTO PURE	Journal of Advanced Research in Dynamical and Control Systems	Special Issue 5, 2018 **Scopus**

14.	Rescue Robot	International Journal of Advance Research in Science and Engineering	Vol. No. 6, Issue no.10, October 2017 **Scopus**
15.	Efficient Control of Glucose Level in Blood Using Different PID Tuning Techniques	Journal of Advanced Research in Dynamical and Control Systems	Issue 2, June 2017, ISSN: 1943-023X. **Scopus**
16.	Wearable Real Time Health and Security Monitoring Scheme for Sports Person	Journal of Advanced Research in Dynamical and Control Systems	Issue 2, June 2017, ISSN: 1943-023X **Scopus**
17.	Blood Glucose Regulation System using Model Predictive Controller	IEEE Explore Digital Library	Date Added to IEEE *Xplore*: 02 November 2017, DOI: 10.1109/IGEHT.2017.8094062 **Scopus, WOS**
18.	Energy Harvesting and Management from Ambient RF Radiation	IEEE Explore Digital Library	Date Added to IEEE *Xplore*: 02 November 2017. INSPEC Accession Number: 17317506 DOI: 10.1109/IGEHT.2017.8094073 , **Scopus, WOS** Publisher: IEEE
19.	Controlling Of Blood Glucose Including The Effect Of FFA Dynamics	Pak. J. Biotechnol.	Vol. 14 (Special Issue II) Pp. 14- 16 (2017) **Scopus**
20.	Emergency Alert For Caged Animals	Pak. J. Biotechnol.	Vol. 14 (Special Issue II) Pp. 106- 108 (2017) **Scopus**
21.	Non Conventional Energy Harvesting Using Foot Pressure	Pak. J. Biotechnol	Vol. 14 (Special Issue II) Pp. 72- 74 (2017) **Scopus**
22.	Closed loop model for Blood Glucose Regulation System Using LABVIEW	International Journal of Control Theory and Application	vol. No. 9, issue copy .28. page no 205-210.2016. **Scopus**
23.	Challengers Media	International Journal of Advances in Engineering and Technology	Vol No.7 Issue 4,pp.1254-1260.

Conference proceedings

National Conference

S. No	Paper Title	Conference Details	Date
1.	Efficient Control Of Glucose Level In Blood Using Different PID Tuning Techniques	National Conference on Recent Innovations in Engineering technology, Management and Applications RIETMA organized by Priyadarshini engineering college, Vaniyambadi.	April 2017
2.	Automated Tile Analyzer using PLC and SCADA	National Conference on Recent trends in computing and communications Organized by Sri Sairam Engineering College.	March 2014
3.	Modified Spiht Algorithm For Compression Of Images	Ganadipathy Tulsi's Jain Engineering College, Vellore.	MARCH 2010

International Conference

S. No	Paper Title	Conference Details	Date
1	IoT based pollution monitoring system.	"SCIENCE AND TECHNOLOGY FOR ENVIRONMENTAL ENRICHMENT AND PUBLIC HEALTH (STEEP)" Organized by Easwari Engineering College	29th and 30th September 2020
2	IoT based smart medicine kit	12th National Conference on Recent Advancements in Biomedical Engineering organized by Bharath Institute of Higher Education and Research, Chennai,	3rd December 2020
3	Self-medication for diabetes mellitus using machine learning	International Conference on Computing Communication and Control Organized by Sri Sairam Engineering College	Feb 2020
4	Drainage Cleaning Revolutionary Robot (DCR^2)	International Conference on Contemporary Engineering and Technology 2019 Organized by SSN College of Engineering	March 2019
5	Detection of RBC agglutination for blood group identification using Digital Image Processing	International Conference on Intelligent Computing and Sustainable Systems	September 2018
6	Non Invasive Heart Rate Monitoring System For Detecting Abnormalities In Fetal	International Conference on Engineering and Technology, Organized by Karpagam College of Engineering, Coimbatore.	December 2017
7	Non Conventional Energy Harvesting Using Foot Pressure	International Conference on Innovations in information, Embedded and Communication Systems Organized by Karpagam College of Engineering, Coimbatore.	March 2017

8	Controlling Of Blood Glucose Including The Effect Of FFA Dynamics	International Conference on Innovations in information, Embedded and Communication Systems Organized by Karpagam College of Engineering, Coimbatore.	March 2017
9	Emergency Alert For Caged Animals	International Conference on Innovations in information, Embedded and Communication Systems Organized by Karpagam College of Engineering, Coimbatore.	March 2017
10	Blood Glucose Regulation System using Model Predictive Controller	IEEE International Conference on Innovations in Green Energy and Healthcare Technologies Organized by Dr. N.G.P. Institute of Technology, Coimbatore.	March 2017
11	Energy Harvesting and Management from Ambient RF Radiation	IEEE International Conference on Innovations in Green Energy and Healthcare Technologies Organized by Dr. N.G.P. Institute of Technology, Coimbatore.	March 2017
12	Closed Loop Control for Storage Tank in Refineries Using IMC Controller Tuned with PSO Technique	International conference on Recent Advances in Technology, Engineering and Science Organized by C. Abdul Hakeem College of Engineering and Technology, Vellore.	July 2016
13	Closed Loop Model for Blood Glucose Regulation System using LABVIEW	International conference on Recent Advances in Technology, Engineering and Science Organized by C. Abdul Hakeem College of Engineering and Technology, Vellore.	July 2016
14	Advanced Robotic Intelligent Shape Shifting Robot Used In USAR For Localization And lifting sapiens from disaster affected areas and bore hole	IT Society of India, Chennai.	April 2013

Certificate Courses

- Successfully Completed 25 courses in Coursera.
- Successfully Completed 8 Udemy Courses.
- Successfully completed 4 courses in Simplilearn (NASSCOM)
- Successfully completed one course in SkillUp (NASSCOM)
- Successfully completed Module 1 , 3, 4 and 5 in NITTTR

Invited Talks

1. Delivered lecture on "Applications of Chat bots" on 21.11.2020 for AICTE sponsored STTP organized by Sri Sairam Engineering College, Chennai.

2. Delivered lecture on "Role of Chat bots in AI Industry with Hands-on" on 19.12.2020 for AICTE sponsored STTP organized by Sri Sairam Engineering College, Chennai.

3. Delivered Lecture on "Virtualization in Green Computing" on 8.1.2021 for AICTE sponsored STTP Organized by Panimalar Institute of Technology, Chennai.

4. Delivered Lecture on "Visual Recognition using Watson Studio" on 10.1.2021 for AICTE sponsored FDP Organized by Kakatiya Institute of Technology and Science, Warangal, Telangana.

5. Delivered Lecture on "Virtualization in IoT" on 4.2.2021 for AICTE sponsored STTP Organized by Panimalar Institute of Technology, Chennai.

6. Delivered lecture on "Visual Recognition using Watson Studio" on 7.2.2021 for AICTE sponsored FDP organized by Sri Sairam Engineering College, Chennai.

7. Delivered lecture on "Deep Learning techniques using Open source tool" on 16.2.2021 for AICTE sponsored FDP organized by PSNA college of Engineering and Technology, Dindigul.

8. Delivered lecture on "GreenIoT - Research Application and future direction" on 20.3.2021 for AICTE sponsored STTP Organized by Panimalar Institute of Technology, Chennai.

9. Delivered lecture on "Object detection using IBM Watson" on 24.12.2021 for ISTE sponsored FDP Organized by Sri Sairam Engineering College, Chennai.

10. Delivered lecture in the Online Faculty Development Programme titled "Digital Electronics Applications for Process Control and Biomedical Instrumentation" held during 22.11.2021 to 27.11.2021 organized by Department of Electronics and Instrumentation Engineering, SRM Valliammai Engineering College.

Review Member/ Questing paper Setting

1. Reviewer for JISCOM journal, Technova Publications

2. Appointed as a question paper setter for fiber optics and laser instruments by Valliammai Engineering college for May –June 2020 exam.

3. Appointed as a question paper setter for Fiber Optics and Laser Instruments, Human Rights and Basic Electrical and Electronic Measurements by R.M.K Engineering College for Dec – Jan 2021 exams.

4. Core Committee member for 2nd International Conference on Multidisciplinary Innovation in Academic Research (ICMIAR-2021).

5. Steering Committee member for International Conference on Computing, Communication and Control (ICCC – 2020).

6. Reviewer for IEEE access Journal.

7. Evaluator for TOYCATHON 2021 organized by MHRD.

8. Reviewer for Journal of Medical Imaging and Health Informatics.

9. Reviewer for Journal of Microprocessors and Microsystems. Impact factor 1.161

10. Reviewer for 10th IEEE The International Conference on Communication Systems and Network Technologies CSNT2021 organized by Oriental Institute of Science and Technology, Bhopal

11. Reviewer for Journal of Wireless personal Communications, Impact factor 1.061

12. Editorial Board Member "American Journal of Science, Engineering and Technology (AJSET);ISSN Print: 2578-8345, ISSN Online: 2578-8353.

13. Session Chair for the 2022 International Conference on Communication, Computing & Internet of Things (IC31oT-2022) held on 10th & 11th March 2022, at Sri Sairam Engineering College.

14. Session Chair for the 2nd International Conference on Innovation in Technology (INOCON2023) held on 3rd - 5th March 2023, at Sai Vidya Institute of Technology Bengaluru, Karnataka.

15. Session Chair for the 1st International Conference Communication, Security and Artificial Intelligence (ICCSAI-2022) held on 23rd and 24th December 2022, at Galgotias University Greater Noida.

16. Session Chair for EAI International Conference on Intelligent Computing and Next Generation Wireless Networks" on 20-10-2023.

17. Reviewer for The Fourteenth International Conference on Computing, Communication and Networking Technologies

18. Posters and PhD Track Chair for EAI International Conference on Intelligent Computing and Next Generation Wireless Networks" on 20-10-2023.

Book Chapter & Conference Contributions

- Published a book chapter on "Electrical Type Temperature Measuring Instruments" in Management & Engineering Research Tome. ISBN number 978-93-89515-20-6 Published by Bonfring. Coimbatore.

- Editor for the book titled "Hyper Automation for next generation Industries" Publisher Wiley Scrivener Publishing, Scopus Indexed.

Name of the Book	Chapter Name	Name of the publisher	ISBN No	year of publication
Cognitive Computing for Internet of Medical Things	Toward the Internet of Things and Its Applications: A Review on Recent Innovations and Challenges	CRC Press (Taylor & Francis)	ISBN: 978-103-218-7884 (hbk)	
	Introduction to Cognitive Computing		ISBN: 978-103-218-7891 (pbk)	
			ISBN: 978-100-325-6243	Jan 2023

			(ebk)	
			DOI: 10.1201/9781003256243	
Convergence of Deep Learning and Internet of Things: Computing and Technology	Intelligent Devices, Device Management, and Device Security for Cloud Platforms	IGI Global	ISBN13: 9781668462751 ISBN10: 1668462753 ISBN13 Softcover: 9781668462768 EISBN13: 9781668462775 DOI: 10.4018/978-1-6684-6275-1.ch001	Jan 2023