Sri Sai Ram Engineering College

Department of Electronics and Instrumentation Engineering

Name: **Mr.R.Premkumar**	
Designation:	Associate Professor
Qualification:	M.E ,(PhD)
Area of Specialization:	Process Control and Instrumentation
Experience:	Teaching- 13 yrs 6 months
	Industry/Polytechnic: NA
Number of Workshops/ Conferences/ FDP Attended:	WORSHOPS-16 FDP-20

Publication:	Journal:
	    National: -
	    International: 14

	Conference:
	    National: 03
	    International: 12

Research Guidance:	Guided 16 UG projects till date
General:	Assistant Controller of Examinations
Staff Achievement	Have won Cash awards for producing 100% results 6 times Young Researcher Award 2020 Best Project Award 2023 IEEE Ethics Champion –Region 10 Best Faculty Award 2023 Reviewer in InSc, ITERATIVE INTERNATIONAL PUBLISHERS

Experience:

S. No	Name of the Institution	Designation	Department	Period of Experience
1.	Sri Sairam Engineering College, West Tambaram, Chennai	Assistant Professor	Electronics and Instrumentation Engg	12 yrs (June 2010 - May 2022)
2.	Sri Sairam Engineering College, West Tambaram, Chennai	Associate Professor	Electronics and Instrumentation Engg	1 yrs and 6 months (June 2022 - Dec 2023)

Theory Subjects Handled:

- Power Electronics
- Industrial Electronics
- Power Plant and Instrumentation
- Circuit Theory
- Electrical Machines
- Industrial Data Networks
- Control Systems
- Process Control
- Electrical Measurements
- Computer Control of Process
- Logic and Distributed Control Systems

UG projects Guided:

S. No	Title of the Project work	Period of Guidance
1.	Virtual Guidance using Context Aware System	February 2012 to April 2012
2.	Temperature control system using 2-D IR bitmap generation using thermopile array sensor	February 2013 to April 2013
3.	Implementation of Wireless Electricity Billing And Power management System	February 2013 to April 2013
4.	Smart Grid System	February 2014 to April 2014
5.	Performance and Stability Analysis of a Second order Liquid level interacting System	February 2014 to April 2014
6.	Self Hiring Rent cycle using secured embedded system	February 2015 to April 2015
7.	Non-Invasive Blood Sugar Measurement using IR Spectroscopy	February 2016 to April 2016
8.	Design Of IMC Controller for higher order system	February 2017 to April 2017
9.	Smart Dumpster Monitoring System	February 2018 to April 2018
10.	Smart Movement using Eyeball Techniques	February 2019 to April 2019
11.	Wet Charging	February 2019 to April 2019
12	Tyre Pressure Monitoring System	February 2020 to April 2020
13	Electricity generation from kitchen waste	February 2021 to April 2021
14	Dual Axis Solar Tracker	February 2022 to April 2022
15	Enhancement of safety in Fuel gas Compressor using PLC	February 2023 to April 2023
16	AGRIBOT- The Technology of smart and sustainable farming	June 2023 to April 2024

Workshops / FDP Attended:

| S.No | Participant or Resource Person | Duration | | No. of days | FDP / Short term Course/ Training | Name of the Course / Programme | Held at |
		From	To				
1	Participant	1/12/2010	2/12/2010	2	Training	Workshop on Smart MEMS and Sensor systems	St.Peter University
2	Participant	27/1/2011	-	1	FDP	FDP on Power Flow Analysis	Sri Sairam Engineering College
3	Participant	6/9/2011	7/9/2011	2	Training	Workshop on Industrial Automation	Sri Sairam Engineering College
4	Participant	16/2/2012	22/2/2012	7	FDP	work life balance for Engineering and Management	Sri Sairam Engineering College
5	Participant	24/2/2012	24/2/2012	1	training	renewable Energy	Sri Sairam Engineering College
6	Participant	2/3/2012	3/3/2012	2	FDP	Advances in Process Control system design and implementation	Annamalai University
7	Participant	7/3/2012	7/3/2012	1	FDP	Matlab applications in Electrical Engineering	Sri Sairam Engineering College
8	Participant	3/9/2012	5/9/2012	3	Training	Hands On Training In PLC and SCADA	Sri Sairam Engineering College
9	Participant	21/7/2014	25/7/2014	5	Training	DCS and PLC overview	Sri Sairam Engineering College
10	Participant	1/6/2015	8/6/2015	7	FDP	Power Electronics	Sri Sairam Engineering College
11	Participant	20/06/2016	27/06/2016	7	FDP	Microcontroller Based System Design	Sri Sairam Institute of Technology

12	Participant	6/4/2018	7/4/2018	2	Training	Industrial IOT	Crescent Institute of Science & Technology
13	Participant	8/6/2018	8/6/2018	1	ISO 9001:2015 Training	Quality Management system and Audit Training	Sri Sairam Engineering College
14	Participant	23/7/2018	25/7/2018	3	Workshop	Process Automation using MATLAB	Sri Sairam Engineering College
15	Participant	11/06/2019	15/06/2019	5	FDP	Process Modelling and Control	Sri Sairam Engineering College
16	Participant	9/3/2020	10/3/2020	2	FDP	Applied Machine Learning	MIT, Chrompet
17	Participant	10/4/2020	14/4/2020	5	FDP	Internet on Things	NITTR, Chandigarh
18	Participant	6/6/2020	-	1	webinar	Process Automation and Instrumentation	SNS College of Technology
19	Participant	19-5-2020	-	1	webinar	Robots for safety and Security	Dhaanish Ahmed College of Engineering
20	Participant	27-05-2020	-	1	webinar	Digital Transformation	
21	Participant	17-8-2020	21-8-2020	5	FDP	Start, Run , Grow-The Nitty Gritty of Entrepreneurship	MHRD-RUSA 2.0 University of Madras
22	Participant	7 –9-2020	11-9-2020	5	FDP	ATAL FDP on Data Sciences	Erode Sengunthar Engineering College
23	Participant	14 Oct 2020	-	1	Webinar	Webinar on Art & Entrepreneurship	University of Madras
24	Participant	17–10-2020	21-10-2020	5	FDP	ATAL FDP on Control systems & Sensor Technology	Madan Mohan Malaviya University of Technology, Gorakhpur
25	Participant	31 Oct 2020	-	1	Webinar	Webinar on Influence of Electromagnetic Theory in 5G Applications	Sri Sairam Engineering College

26	Participant	7 -12- 2020	11-12-2020	5	FDP	ATAL FDP on Machine Learning	RMK College of Engineering and Technology
27	Participant	28-12-2020	01-01-2021	5	FDP	ATAL FDP on Artificial Intelligence	NIT Trichy
28	Participant	15 - 23 Oct 2020		One week	Webinar	Kalam Program for IP Literacy and Awareness	Ministry of Education, India
29	Participant	16 Feb 2021	-	1	Training	Innovation Ambassador Training	Ministry of Education, India
30	Participant	13.09.2021	17.09.2021	5	FDP	Design and Optimization of EV Charging Technology in Smart Grid Platform"	ATAL
31	Participant	06.09.2021	10.09.2021	5	FDP	RENEWABLE ENERGY FOR INDUSTRIAL & DOMESTIC APPLICATIONS"	ATAL
32	Participant	05.06.2021	16.06.2021	2	Workshop	MELSEC iQ-R PLC	CVR College Hyderabad
33	Participant	24.08.2021	-	1	Training	Data Science using R Programming	Sri Sairam Engineering College
34	Participant	26.07.2021	30.07.2021	5	FDP	Inculcating Universal Human Value in Technical Education	AICTE
35	Participant	17.01.2022	22.01.2022	6	FDP	Industry 4.0 and Electric vehicles	PSG Institute
36	Participant	26.09.2022	30.09.2022	5	FDP	Electric Vehicles Trends	PSG Institute
37	Participant	10.03.2023	10.04.2023	30	Internship	AWS IoT Core using Industry Grade Microcontroller	ORIGIN TECH
38	Participant	5.04.2023	-	1	WORKSHOP	Prototype / Process Design and Developments	VIT, Chennai
39	Presenter	12.07.2023	13.07.2023	1	All India Workshop	Electrical Charging Systems	SRM Institute of Science and Technology
40	Organizer	10.10.2023	-	1	Workshop	Workshop on Development for Industry 4.0	Sri SaiRam Engineering College
41	Participant	08.06.2021	11.06.2021	4	Conference	International Conference on Examination	SkillsSlate Foundation, Pune

❖ ONLINE COURSES COMPLETED DETAILS

S No	Topic	Completed Date	PLATFORM
1	AI For Everyone	11.05.2020	COURSERA
2	Introduction to Big Data	01.06.2020	COURSERA
3	Biomedical Visualisation	25.06.2020	COURSERA
4	Control of Mobile Robots	25.05.2020	COURSERA
5	Digital Manufacturing & Design	16.05.2020	COURSERA
6	Effective Problem-Solving and Decision-Making	16.05.2020	COURSERA
7	Electric Industry Operations and Markets	3.07.2020	COURSERA
8	Electric Power Systems	14.05.2020	COURSERA
9	Electric Utilities Fundamentals and Future	11.05.2020	COURSERA
10	Electrodynamics: An Introduction	08.05.2020	COURSERA
11	Electrodynamics: Analysis of Electric Fields	08.05.2020	COURSERA
12	Electrodynamics: Electric and Magnetic Fields	08.05.2020	COURSERA
13	Energy Production, Distribution & Safety	24.05.2020	COURSERA
14	Energy: The Enterprise	24.05.2020	COURSERA
15	Essentials of Entrepreneurship: Thinking & Action	21.05.2020	COURSERA
16	Excel Skills for Business: Essentials	03.09.2020	COURSERA
17	Fundamentals of Management	27.05.2020	COURSERA
18	Intelligent Machining	27.05.2020	COURSERA
19	Introduction to Electronics	21.07.2020	COURSERA
20	Introduction to Google Docs	21.05.2020	COURSERA
21	Introduction to TCP/IP	9.05.2020	COURSERA
22	Introduction to the Internet of Things and Embedded Systems	29.06.2020	COURSERA
23	Linear Circuits 1: DC Analysis	30.06.2020	COURSERA
24	Linear Circuits 2: AC Analysis	08.07.2020	COURSERA
25	Materials Science: 10 Things Every Engineer Should Know	08.05.2020	COURSERA
26	Electrodynamics: In-depth Solutions for Maxwell's Equations	26.06.2020	COURSERA
27	Natural Gas	13.05.2020	COURSERA
28	Renewable Energy and Green Building Entrepreneurship	10.05.2020	COURSERA
29	RPA Lifecycle: Introduction, Discovery and Design	21.06.2020	COURSERA
30	Safety in the Utility Industry	23.05.2020	COURSERA
31	The Sustainable Development Goals – A global, transdisciplinary vision for the future	24.05.2020	COURSERA
32	Introduction to solar cells	02.06.2020	COURSERA

33	Solar Energy Basics	19.05.2020	COURSERA
34	Spreadsheets for Beginners using Google Sheets	08.05.2020	COURSERA
35	Structuring Machine Learning Projects	21.05.2020	COURSERA
36	Wind Energy	20.05.2020	COURSERA
37	Data Science 101	30.03.2020	Future Skills Nasscom- IBM
38	Deep Learning Fundamentals	31.03.2020	Future Skills Nasscom- IBM
39	Python 101 for Data Science	01.04.2020	Future Skills Nasscom- IBM
40	Deep Learning with TensorFlow	01.04.2020	Future Skills Nasscom- IBM
41	Machine Learning with R	02.04.2020	Future Skills Nasscom- IBM
42	Deep Learning A-Z: Hands on Artificial Neural Networks	31.03.2020	Udemy
43	Machine Learning A-Z: Hands on Python & R in Data Science.	19.11.2019	Udemy
44	Step into Robotic Process Automation	01.06.2020	GUVI- UiPath

NPTEL Courses

S No	Course Name	Completed Year
1	Electrical Measurement And Electronic Instruments	2023
2	Accreditation And Outcome Based Learning	2023
3	Transducers For Instrumentation	2023
4	Introduction To Industry 4.0 And Industrial Internet Of Things	2023
5	Fuzzy Sets, Logic and Systems & Applications	2023
6	High Power Multi Level Converters-Analysis Design and operational issues	2022
7	Developing soft Skills and Personality	2021
8	Electrical Machines	2021
9	Control Engineering	2019
10	Analog Circuits	2018

NITTTR Module

S No	Module Name	Completed Year
1	Orientation Towards Technical Education and Curriculum Aspects	2022
2	Professional Ethics & Sustainability	2022
3	Communication Skills, Modes &	2023

	Knowledge Dissemination	
4	Instructional Planning and Delivery	2023
5	Technology Enabled Learning & Life Long Self Learning	2023
6	Student Assessment and Evaluation	2021
7	Creative Problem Solving , Innovation and Meaningful R & D	2023
8	Institutional Management & Administrative Procedures	2022

❖ **PATENT PUBLISHED**

S. No.	Name of the Patent	Patent No.	Date	Patent Status – Indian
1	Futuristic Public Transit Pods Pickup and drop by Power Line	202041031870	21.08.2020	Published
2	Multifunctional Solar Power Operated Sprayer for Agricultural Purpose	700253815	18.01.2022	Published
3	Solar Forecasting Methods for Renewable Energy Integration Performance towards Industry Standards	202241067474	02.12.2022	Published
4	DISTRIBUTION TRANSFORMER FUSE FAILURE DETECTION AND INFORMATION PASSING SYSTEM	202341029235	05.05.2023	Published
5	A Method for avoiding Redundant Transmission of Data Messages in Communication using Machine Learning	202311020794	19.05.2023	Published
6	Communication in Circuitry system and methods using Artificial Intelligence	202341043818	01.09.2023	Published
7	AN APPARATUS FOR ALLOWING REGISTRATION TO NETWORK IN WIRELESS COMMUNICATION SYSTEM AND METHOD THEREOF	202341045590	01.09.2023	Published
8	A SYSTEM FOR PROVIDING SECURITY AND PRIVACY IN 5G WIRELESS NETWORKS AND DETECTING THREATS PROVIDING COUNTERMEASURES, AND CRYPTOGRAPHIC PROTOCOLS	202341057342	08.09.2023	Published
9	VERY LARGE SCALE INTEGRATED VLSI CIRCUIT DESIGN FOR TECHNOLOGY MIGRATION	202321057347	06.10.2023	Published
10	OIL SORPTION INVESTIGATIONS WITH MICROWAVE IRRADIATION FOR EXFOLIATED GRAPHITE	202341059484	06.10.2023	Published
11	PHOTOVOLTAIC-POWERED DC BOREWELL WITH HIGH-STEP-UP DC-DC CONVERTER	202321054566	06.10.2023	Published

❖ **Book Manuscript Acceptance "Optimization methods in solar PV array Fed water Pumping System Employing Zeta Converter BLDC motor Application" Publication in DIPTI press Private Limited by book title on Machine Learning and Applications.**

Professional Membership

➢ Membership in IEEE, Control System Society, Power Electronics Society, Industrial Applications Society, Photonics Society, Reliability Society, Intelligent Transportation Society, Circuits and System Society, IEEE Sight.

➢ Life time Membership in InSc.

➢ Life time Membership in IAE Eng.

➢ Life time Membership in ISTE.

Paper presented in International and National Conferences

S.No	Title	Conference Name	Year
1	Self Hiring Rent cycle using secured embedded system.	National level Conference	2015
2	Automated ticket vending system using RFID tags.	International Conference on Emerging Trends in Engineering and techno-Sciences.	2013
3.	Performance and Stability Analysis of a Second order Liquid level interacting System.	International Conference on Electrical, Electronics and Computer Science.	2014
4.	Smart Grid Systems.	National Conference on Electrical systems	2014
5.	Smart Dumpster Monitoring System	National Conference on Smart Innovations in Communications and Computing.	2018
6.	Smart Movement using Eyeball Techniques	International Conference on Information , Embedded , and Communication systems	2019
7	DESIGN OF SLIDING MODE CONTROLLER WITH UNMATCHED DISTURBANCE	ICCST2020	2020
8	Tyre Pressure Monitoring System	International Conference on Recent Developments in Engineering	June 2020
9	A Cost Effective Agriculture System based on IoT using Sustainable Energy	6th International Conference on Trends in Electronics and Informatics	2022
10	Design of Thirteen Level Inverter suitable for Solar Farms.	2022 International Conference on Computer Communication and Informatics	2022
11	Energy generation from bio-waste using normal and chemical decomposition technique to meet power demand in urban areas.	3rd International Conference on Electronics and Sustainable Communication	2022
12	Easy Charging of Electric Vehicle	2023 International Conference on	2023

	through Wireless Mode	Computer Communication and Informatics	
13	AGRIBOT-The Technology of Smart and Sustainable Farming	2023 Intelligent Computing and Control for Engineering and Business Systems (ICCEBS)	2023
14	Performance Analysis for Multi-Level Inverter with Reduced Switch Count along with PWM Technique and Reduction in Harmonics	2023 Intelligent Computing and Control for Engineering and Business Systems (ICCEBS)	2023
15	Wireless Autonomous Drone Charging Hub: Revolutionizing Unmanned Aircraft Connectivity	2023 Intelligent Computing and Control for Engineering and Business Systems (ICCEBS)	2023

Paper presented in International and Scopus Indexed Papers.

- Premkumar R, Self Hiring using Secured Embedded system, International Journal on Applied Engineering Research, Page No. 199-202, Volume 6, 2015.
- Rajasekar D, Premkumar R , A study on motivation level of employees in Automobile Industry, Page No. 744-749, Volume 8, 2017.
- Premkumar R, Smart Dumpster Monitoring System, International Journal of Engineering & Technology, Page No. 172-174, Volume 7, 2018.
- Premkumar R, Smart Movement Using Eyeball Pupil Position, International Journal of Innovative Technology and Exploring Engineering, ISSN 2278-3078 , Volume 8, 2019.
- Premkumar R, Wet Charging, International Journal of Research and analytical review, ISSN 2348-1269, Volume 6, 2019.
- Premkumar R, G Irusapparajan, AK Gnanasekar, K Vijayan, G Ramprabu, Analysis of MEMS and WPAN based high power free arc switching, International Journal of Advance Research in Engineering and Technology, Volume 11, Page No. 496-504, 2020.
- Premkumar R, Balasubramaniyan S, Pushgara Rani D, A K Gnanasekar, G Ramprabu , Efficient and safe application for facial transfer with deep generative adversarial network, Journal of Green Engineering, Volume 10, Page No. 8798-8812, 2020.
- Premkumar R, Smart Enabled Tyre pressure Monitoring System, Journal of the Gujarat research Society, **ISSN: 0374 – 8588, Volume 21, 2019.**
- Vijayaraja L, Dhanasekar R, Premkumar R, Periasamy J K, Kesavan R, Ganesh Kumar S, Silicon made switches for the development of low cost asymmetric 25 level inverter, *Materials Today: Proceedings*, 2020, 46, pp. 3601–3606.
- Vijayaraja L, Sivarajeswari S Dhanasekar R, Premkumar R,Tamizhmalar D, Rupa Kesavan , Design of Thirteen Level Inverter suitable for Solar Farms, *2022 International Conference on Computer Communication and Informatics, ICCCI 2022*, 2022.
- Vijayaraja L, Dhanasekar R, Rupa Kesavan, Tamizhmalar D, Premkumar R, Saravanan N, A Cost Effective Agriculture System based on IoT using Sustainable

Energy, *2022 6th International Conference on Trends in Electronics and Informatics, ICOEI 2022 - Proceedings*, 2022, pp. 546–549.

➢ Premkumar R , Vijayaraja L, Dhanasekar R, Rupa Kesavan, Sreevaragi S, Swetha M, Energy Generation from Bio-Waste using Normal and Chemical Decomposition Technique to Meet Power Demand in Urban Areas, *3rd International Conference on Electronics and Sustainable Communication Systems, ICESC 2022 - Proceedings*, 2022, pp. 137–145.

➢ Vijayaraja L, Dhanasekar R, Premkumar R, Rupa Kesavan, Sudarshanam K, IoT based Modern Poultry House with Enhanced Accuracy, *Proceedings of the 2nd International Conference on Edge Computing and Applications, ICECAA 2023*, 2023, pp. 1302–1306.

➢ Premkumar R , Vijayaraja L, Dhanasekar R,Sai Mahalakshmi, Rakesh, Bhagyashree K, Winter Thermal Suit with AutoTemperature Control, *Proceedings of the 5th International Conference on Inventive Research in Computing Applications, ICIRCA 2023*, 2023, pp. 1612–1616.