Name:	S.USHA
Designation:	**Associate Professor**
Qualification:	**M.E. (Ph.D.)**
Area of specialization:	**EMBEDDED SYSTEM TECHNOLOGIES**

Experience : (As On Dec. 2022)	Industrial Experience		Teaching Experience	
	4 YEARS		25 YEARS	
Number of workshops / FDP attended:	Number of Workshops		Number of FDPs	
	15		30	
Publications:	Conference		Journal	
	National	International	National	International
	12	7	4	9
Professional Body Membership:	**Senior Member of IEEE, Fellow of IETE , Life Member of ISTE , Member of IEI and IAENG**			
Training and Courses Attended regarding Accreditation	Completed 1. Accreditation and Outcome-based Learning course 2. NBA Accreditation and Teaching Learning in Engineering 3. Outcome-based Pedagogic principles for Effective Teaching 4. Internal Auditor Training Course on Educational Organizations Management Systems(Based on ISO 21001:2018 Standard) 5. Attended Technical Workshop on Management System Auditing ISO 19011:2018 6. Acted as a resource person for Accreditation related talks. 7. Audited the departments for Accreditation related activities.			

Staff Achievements:	Achieved 100% result many times Ranked one among top 2% in NPTEL **Digital Circuits,Introduction to Industry 4.0 and Industrial Internet of Things** 5 % in NPTEL **Embedded system Design Accreditation and Outcome Based Learning CMOS digital VLSI** , **Design and Analysis of VLSI Subsystems** and many VLSI courses Completed more than 20 courses in **Coursera**, 5 courses in **Futureskills, Guvi, ICT Academy** Co-ordinated FDP's, Workshops, Conferences, Symposium etc. Acted as a Reviewer, Resource person and Session Chair Onboard member of two private companies Department **NBA** and **NAAC** coordinator Course Coordinator, Course Moderator, Embedded -SIG Head. Received **National Educator Award** from I2OR Completed **NITTTR MENTORSHIP CERTIFICATION – July 2021** Completed **all 8 modules in NITTTR.** Received **NITTT Achiever Award** Received **Outstanding eContent Developer Award.** Fund of **$1600** is approved and received from IEEE CASS to conduct activities in the year 2024 Got the **Regional Student Chapter Award for the year 2025 from IEEE Circuits and Systems Society** Received **ATL mentor and NPTEL mentor Certificates.** Received Fund of $1600 for IEEE CASS SBC to conduct activities for the year 2025. Selected as a Secretary for the Circuits and Systems Chapter, Madras Section.

Workshop Details:	Sl. No.	Title	Venue	Month/Year
	1	Industry Institute Interaction	Anna University	5th Sep'2006
	2	Matlab and its applications- Raguram Associates	Sri Sai Ram Engg. College	26th July2007 to 27th July2007
	3	Emerging trends on high-end FPGA's	Anna University	10th Dec'2010 to 12th Dec'2010
	4	Seminar on VLSI Design	Hotel Rain tree, Anna Salai, Chennai -2.	7th Sep'2012
	5	Recent trends in Antennas for Multifield Applications	Sri Sai Ram Engg. College	27th Dec'2012 & 28th Dec'2012

	6	Entrepreneurship Summit 2013	Sri Sai Ram Institute of Management Studies	8.1.13 – 10.1.13
	7	R&D Proposal writing for Faculties	Sri Sai Ram Engg. College	12.06.20
	8	Workshop on National Initiative for Technical Teachers Training (NITTT)	NITTT	20.02.20
	9	Advancements in Embedded System and Software Design"	SSN College of Engg.	31.7.20 & 1.8.20
	10	Webinar on CAD tools for VLSI Design	Kamaraj College of Engineering and Technology	13.06.20
	11	Webinar on Article Writing and Journal Publications	Kings Engineering College	17.07.20
	12	Workshop on PCB Design	Kings Engineering College	19.06.20
	13	Hands on workshop on Routing and Switching concepts in Data communication and Networking using Cisco Packet Tracer	Sri Sairam Enginnering College	1.12.22 to 2.12.22
	14	Latest Trends in VLSI Devices, Circuits and Tools	National Institute Of Technology Delhi	19th to 24th September, 2022

	15	Certficate course on Digital Teaching Techniques	R systems Women Educators Program	02.02.23 to 17.02.23

FDP Details:	Sl. No.	Title	Venue	Month/Year
	1	FDP on Digital Communication	SSN College of Engg.	24th Nov'2003 to 29th Nov'2003
	2	FDP on Mechatronics	Crescent Engg. College	24th May-2004 to 29th May-2004
	3	Work life balance for Engineering and Management Faculty	Sri Sai Ram Engg. College	16th Feb'12 to 22nd Feb'12
	4	Role of Academic Excellence in Developing World Class Higher Learning Institutions and Faculties	Sri Sai Ram Engg. College	12th Dec'12
	5	FDP on Embedded Systems with ARM 7 Microcontroller	Sri Sai Ram Engg. College	25th June'15 & 26th June'15
	6	FDP on Embedded and Real time systems	Sri Sai Ram Engg. College	06th June'16 to 13th June'16
	7	FDP on Outcome Based Pedagogy	IIT, Chennai	13th Nov'18 to 15th Nov'18
	8	FDP on Outcome based Pedagogic principles for effective teaching	IIT, Kanpur	Aug – Sep'18
	9	FDP on Entrepreneurship career development program	SIMS	08/04/19 TO 12/04/19
	10	FDP on Outcome-based Education	Sri Sai Ram Engg. College	5th Apr'19

		11	FDP on CMOS Digital VLSI Design	IIT, Karagpur	Feb-Apr'19
		12	Organized FDP on CMOS Analog IC Design	Sponsored by Anna University	25.11.19 to 30.11.19
		13	Online spoken FDP on Advanced Communication Laboratory	PSNA College of Engg. & Technology, Dindugal	20.07.20 to 25.07.20
		14	FDP on Virtual Labs	IIT PALS	24.8.20 to 28.8.20
		15	"FPGA for Low Power IoT"	SRM VALLIAMMAI ENGINEERING COLLEGE	06.12.2021 to 11.12.2021.
		16	FDP on "Design Thinking"	University College of Engineering(A), JNTUK.	2020-10-12 to 2020-10-16
		17	FDP on "Artificial Intelligence"	Sri Sairam Engineering College.	2020-12-7 to 2020-12-11
		18	FDP on "Artificial Intelligence"	at Indian Institute of Technology Patna.	2020-10-19 to 2020-10-23
		19	Online FDP on "Internet of Things (IoT)"	Sri Sairam Engineering College.	2020-11-30 to 2020-12-4
		20	FDP on "Computer System Design"	at IIT Tirupati.	03/01/2022 to 07/01/2022
		21	FDP on "Research Issues in VLSI Design and Testing"	Government College of Engineering Srirangam.	2021-08-02 to 2021-08-06
		22	SciLab Programming	Information Management and Emerging Engineering Department	25/04/2022 to 29/04/2022
		23	5-day Face-to-Face UHV-II FDP	at Sri Sairam Engineering College Autonomous, Chennai	26th July to 30th July 2022

	Sl. No.	Title	Venue	Date
	24	FDP on SOC Design Methodologies using INTEL FPGA	St. Joseph's college of Engineering	20.07.22 to 22.07.22
	25	Innovation in Mentoring pedagogy and incorporation of ICT Techniques in Education	Paavai Engineering College	30.01.23 to 04.02.23
	26	Recent trends in 5G Communication Networks	Sri Sairam Engineering College	26.12.22 to 30.12.22
	27	Quantum Computing and its future scope	ATAL FDP	18.12 23 to 26.12.23
	28	Introduction to Industry 4.0 and Industrial Internet of Things	NPTEL FDP	July to Oct 23
	29	Effective Teaching in the 21st Century, Strategies and Tools for Success	JP College of Arts and Science	17.03.2025 to 21.03.2025
	30	Emerging Trends in VLSI Chip design for communication and applications using AI and ML.	JP College of Engineering	20.01.25 to 24.01.25
Conference Details:	**Sl. No.**	**Title**	**Venue**	**Month/Year**
	1	National Conference on Emerging Trends in Communication " Performance Comparison of Packet scheduling algorithms in Mobile Adhoc Networks	Dhanalakshmi Srinivasan Engineering College	28th Feb 2007
	2	AICTE Sponsored International Conference on Innovative computing, Information and	Sri Sairam Engineering College	16 to 18 Dec 2009

		Communication Technology (ICICT'09)		
	3	National Conference on Advances in Electrical and Electronics Engineering-2013 Adaptive runtime reconfigurable wireless sensor nodes based on dynamic data aggregation	Sri Venkarteshwara college of Engg.	15.3.13 Page 6
	4	National Conference on Advanced Communication & Computing Techniques NCACCT'13 " Reconfigurable wireless sensor Networks	Sri Sairam Engineering College	18-19 th March 2013
	5	First National Conference on Recent Trend in Information Technology NCRTIT 2012 " A cost Effective Automatic Antifreeze fluid sprinkler for Railway Coal Conveyors " G. Sudhakar, Ms. S.Usha, Page No. 155-158	RMK College of Engg and Tech.	20th Feb 2012
	6	Research Trends in Electronics and Communication, " Implementation of speed control of	St.Joseph's College of Engineering	21st Mar'2014

		Brushless DC motors using IOPT Petri Net models		
	7	5 th National Conference on VLSI, Embedded, Communication and Networks(VECaN-2014) Speed Control of Motors using IOPT tools	, Easwari Engineering College	17.4.14
	8	Advanced Communication & Computing Techniques	Sri Sairam Engineering College	18th Mar'2013 & 19th Mar'2013
	9	Emerging Research & Advances in Mechanical Sciences" Vehicle Collision Avoidance with adaptive cruise control	Velammal Engineering College	22nd Mar'2013
	10	Future Proof your code with the latest co-processor	Taj Connemara, Binny Road, Chennai -2.	18th Sep' 2013
	11	National Instruments symposium 2014	Hotel Radisson Blu, Chennai	9th Sep' 2014
	12	Advanced Communication & Computing Techniques	Sri Sairam Engineering College	11th April 2014
	13	Construction, Computing, Control, Communication and Manufacturing, " Alert System for forest animals to avoid from Train Accidents, R.	SRS College of Engineering and Technology	23rd Feb'2015 to 28th Feb'2015

	14	5 th International Conference on Science and Innovative Engineering 2015 Alert system for Forest Animals to avoid from train accidents,	Jawahar Engineering College	5.4.15 ISBN 978-81-904760-7-2
	15	First International Conference on Recent Trends in Enigineering and Technology (ICRTET-16) Paper titled Prediction of Insulation Failure in Transformer winding using Signature analysis"	St.Joseph's Instituute of Technology	28-29 th April 2016
	16	International Conference on Communication, Computing & Internet of Things (IC3IOT 18)	Sri Sairam Engineering College	15-17th Feb 2018
	17	3rd International Conference on Computational Intelligence & IoT "Performance Analysis of Three Operand Binary Adders Using Parallel Prefix Adders for High Speed and Area Efficient Implementation"	North Eastern Regional Institute of Science and Technology, Nirjuli, Arunachal Pradesh	24th February to 25rd February 2023.
	18	ICNGWN2023 Design and comparison of 24 bit three operand adders using parallel prefix	Sri Venkateswara college of Engineering	October 19th-20th, 2023

		methods for efficient computation		
	19	2025 International Conference on Computing and Communication Technologies (ICCCT) Comprehensive Analysis and Optimization of High-Speed Multiplication Architectures and RF Energy Harvesting Techniques for Low-Power Systems	Sri Sairam Engineering College	16-17 April 2025

Journal Details:	Sl. No.	Title	Journal Name	Volume/Date
	1	Cloud Based Reconfigurable DC Motor Controller Code Design Using IOPT models	International Journal of Research in Engg. And Advanced Technology	Volume 1, Issue 5, Oct - Nov 2013 ISSN: 2320-8791
	2	Real time System for Monitoring and Improving the flow of sewer system, M.K. Elango and S.Usha	International Journal of Emerging Technology & Advanced Engineering	Volume 4, Issue 2, February 2014 ISSN:2250-2459
	3	Alert System for forest animals to avoid from train accidents R.Vinoth and S.Usha	International Journal of science and innovative engineering and technology	Volume 2 May2015 issue ISBN 978-81-904760-7-2
	4	"Prediction of insulation failure in transformer winding using signature analysis."	SS International Journal of Multidisciplinary Research [SSIJMR].	Volume 2 Issue 6, 2016 E-ISSN: 2395-7964 Page No. 68

		5	Optimized BPSK and QAM Techniques for OFDM systems	IJCTA, International Science Press	2016 ISSN: 0974-5572; pp:2759-2766
		6	Mechanism of 3 DOF robotic needle steering model using Labview	International Journal of Recent Engineering Research and Development	Vol. 02, Issue 06, June 2017 ISSN: 2455-8761 | PP. 01-08
		7	IOT Based Anti-Theft Protection And Continuous Monitoring System For ATM	THINK INDIA Journal	April -June 2019 ISSN:0971-1260
		8	Waiter robot with billing system	THINK INDIA journal	April -June 2019 ISSN:0971-1260
		9	Process Automation in RTO offices for issuing Driving Licences	Studies in Indian Place Names (UGC Care Journal)	ISSN: 2394-3114 Vol 40 issue 1 (s1) January 2020 Page No. 54-59
		10	DOMOTICS BASED ON SEARCH ASSISTANT	Studies in Indian Place Names (UGC Care Journal)	ISSN: 2394-3114 Vol 40 issue 1 (s1) January 2020 Page No. 29-38
		11	Search Assistant-Based Home Automation	International Journal Of Electronics, Communication & Instrumentation Engineering Research And Development (IJECIERD); "	ISSN (Online): 2249-7951; Issn (Print): 2249-684x; Impact Factor(Jcc) (2020): 8.2083; Index Copernicus Value (Icv) - (2016): 61.75; Naas Rating: 2.92; Vol - 10, Issue - 2; Edition: Dec2020 Page No. 21-28

	12	Design and Comparison of 24-bit Three Operand Adders using Parallel Prefix method for Efficient Computations	EAI Endorsed Transactions on Scalable Information SystemseISSN: 2032-9407	doi.org/10.4108/eetsis.5004
	13	High-speed anaglyph image generation using a three-operand multiplier on FPGA	Analog Integrated circuits and Signal Processing, Volume 126, Article number14, (2026)	https://doi.org/10.1007/s10470-025-02533-7

Faculty Internship:

- Got a Certificate as Wipro Trained Faculty to conduct the course on VLSI Design Verification.
- Attended a week-long faculty internship at PULSARS, Thirumudivakkam, Chennai.

BOOK CHAPTER:

Societal and Ethical Implications of Robotics " ESN Publications.DOI/ISBN Number: 978-93-90781-09-6   Volume/Issue:1/1, Year published: February 2021

Book Published

Fundamentals of Embedded Networking - Ms.S.Usha, Dr. Jenyfal Sampson, Dr.N.Sharada Prasad, Dr.S.Sivasakthi Selvan, ISBN No.978-93-5757-839-4 Scientific International Publishing House (SIPH), 2023

Patent Details:

1. A Method And Device For The Deformation Of The Waste Containers Through The Pneumatic Operated, Application No.202041052263 A Publication Date : 11/12/2020
2. Security Tracking Big Data Processing System with Cloud Computing Application No.202241010451 A Publication Date : 18/03/2022
3. Computational Iot Framework Based On Smart And Low-Cost Devices For Medical Image Segmentation:Application No.202341062364 A Publication Date : 06/10/2023
4. Wearable ArmBand for real time monitoring of contagious diseases Application No.202441015732A Publication Date: 08/03/2024
5. A Compact Multiband Patch Antenna For Wireless Applications Design No.454049-001 Granted on 02.04.2025
6. FSM-Controlled Smart Glove For Sequential Motion Detection And Analysis Application No.202541114254 A Publication Date:16.01.2026

I hereby declare that the information provided above is true and correct.

S.USHA