



JSS Mahavidyapeetha

JSS Academy of Technical Education

Dr. Vishnuvardhan Road, Srinivasapura post Bangalore 560060
Department: Electronics & Communication Engineering



FACULTY PROFILE

1. Personal Details

NAME	Dr. USHA S.M	
DEPARTMENT	Electronics & Communication Engineering	
DESIGNATION	Associate Professor	
PHONE	+91 9900499787	
EMAIL ID	ushasm@jssateb.ac.in	
Date of Joining (JSSATEB)	19-01-2004	
Teaching Experience	21	
Industry	2	
Research	08	

2. Qualifications

COURSES	SPECIALIZATION	Year of Award	INSTITUTION	UNIVERSITY
B.E. / M.Sc.,	Electronics & Communication Engineering	December 2000	PES College of Engineering (PESCE) Mandya 571401 Karnataka INDIA	MYSORE University, Mysore, Karnataka INDIA
M.E. / M.Tech. / M.Sc.	VLSI Design and Embedded Systems	November 2011	Visvesvaraya Technological University (VTU) Extension Centre, UTL Technologies Ltd, Bengaluru, Karnataka, INDIA	Visvesvaraya Technological University (VTU), Belgaum, Karnataka, INDIA
Ph.D.	Electronics & Communication Engineering (VLSI Design and Wireless Communication)	Nov. 2017	Visvesvaraya Technological University (VTU), Belgaum, Karnataka, INDIA	Visvesvaraya Technological University (VTU), Belgaum, Karnataka, INDIA
Post Doc.				

3. Research & Publications

Papers Published in Web of Science indexed Journals	International: 13	National: nil
Papers Published in SCOPUS indexed Journals	International: 12	National:nil
Papers Published in other Journals	International: 12	National: nil
Papers Presented in Conferences / Symposium	International:13	National: 04
Books / Book chapters Published	<ol style="list-style-type: none"> 1. Usha S. M, Kavitha H. S & Mahesh H. B. Artificial Intelligence to Predict the number of Antennas in MIMO Network, 24th ISTE Karnataka State Level Faculty Convention & 32nd Dr. L.S. Chandrakant Memorial Lecture, on 26th November 2022, jointly organized by Indian Society for Technical Education & JSS Academy of Technical Education. 2. Usha, S. M., & Mahesh, H. B. (2020). Optimization and Performance Analysis of QPSK Modulator. In <i>Advances in Electrical and Computer Technologies: Select Proceedings of ICAECT 2019</i> (pp. 691-702). Springer Singapore.Scopus, <u>Lecture Notes in Electrical Engineering</u> DOI:10.1007/978-981-15-5558-9_60 3. Usha, S. M., & Nataraj, K. R. (2015). Theoretical Survey on Low Power and High Throughput QPSK Modulator Designs.7th International Conference on Electrical, electronics, computing and Communication Systems (EECCS'15).paper-ID 22 EECCS-9JAN15BANG-043 98-101, Vol (11), national conf others 4. Mahesh H.B, Aliahammed s of PAM and QAM over AWGN, Rayleigh and Rician Channels for Mobile Communication Third .National conference on Engineering Innovations and Solutions. (NCEIS – 2019) GSSS INSTITUTE OF ENGINEERING & TECHNOLOGY FOR WOMEN, 23rd April 2019.Other national conference. I2OR Publication Services LLP. 7(2). pp. 1247-1251 ISSN 2393-2098, 2393_2098 5. Usha, S. M., & Nataraj, K. R. (2017). Low Power and Area Optimized BASK Modulators for Optical Communication. International Conference on Signal, Image Processing Communication and Automation - ICSIPCA- 2017, McGraw-Hill. 4(3), (263-270)other int conf 6. Name of the book: Internet of Vehicles and Computer Vision Solutions for Smart City Transformation- springer Publisher: Springer Publishing House Year:2024 Title: Enabling Sustainable Urban Ecosystems: Uniting AI and IOT in Smart City Frameworks (ID IOVCV SMART-04) 7. Name of the book: Internet of Vehicles and Computer Vision Solutions for Smart City Transformation- springer Publisher: Springer Publishing House Year:2024 Title: Revolutionizing Climate Monitoring: A Comprehensive Exploration of the Synergy between LoRa Technology and Artificial Intelligence for Sustainable Environmental Solution (ID IOVCV SMART-04) 8. Name of the book: The book of proceedings titled “Advances in Electrical and Computer Technologies” published in the Lecture Notes in Electrical Engineering (LNEE) series by the Springer Publishing House and indexed in ISI Proceedings, EI-Compendex, SCOPUS, MetaPress and Springerlink. Springer Verlag Publisher: Springer Publishing House Year of Publication: August 2020 	

4. Research Guidance

PhD Guide? Give field & University	Yes, VLSI Design, Wireless Communication, Wireless Networks, Satellite Communication Signal & Image Processing , Machine Learning & Artificial Intelligence	University: a. Visvesvaraya Technological University, Belagavi,
PhDs / Projects Guided	Ph.D. Awarded: nil Guiding: 03 1.Shaista Tarannum Performance Enhancement and Security Analysis in LoRaWAN Using Machine Learning 2 RAVI M Breast Cancer Detection with Deep Learning Using CAD Systems 3D Mammography Images 3 Meghashree A C A Novel Model Framework for Early breast Cancer Detection in Medical Imaging to enhance Cancer Diagnosis	Projects at Master's Level: 09 Projects at Bachelor's Level: 20

Patents

Sl. No.	Title Details	Details of award of patent / Filed
1	An AI Based Self-Learning Seat Belting System for Automotive	Application No.202241048728 A Date of filing of Application :26/08/2022 Publication Date : 02/09/2022 Applicant Name: 1)Dr. Usha S. M. 2)Dr. Vemula Venkata Kondaiah 3)Shivashankar R 4)Dr. Rapaka Satish 5)Dr. Vishwas Mahesh 6)Anand Gudnavar
2	A Smart Navigative Eyewear for Visually Challenged and System Thereof	Application No.202241043851 A Date of filing of Application :01/08/2022 Publication Date : 19/08/2022 Applicant Name: 1)Dr. Surakasi Raviteja 2)Dr. Usha S M 3)Dhruva R. Rinku 4)Dr. Katta Subba Rao 5)Ms. Sreedevi S 6)Dr. Pratik Gite
3	The Implementation of IOT In Greenhouse Farming: Protocols And Applications	Application No : 202341075524 Date of filing of Application: 06/11/2023 Publication Date : 22/12/2023 Applicant Name: 1 . Ms.Naru Divya Jyothi 2 . Dr.Usha S. M 3 . Dr. D Khalandar Basha 4 . Dr. Ayesha Riyajuddin Mujawar 5 . Dr.S.Sakthivel Padaiyatchi 6 . P.Uppiliraja 7 . Mr. Nitin B. Raut 8 . Dr. Rajesh B. Survase 9 . A.Stephen Rufus

		10 . S. Gopalakrishnan 11 . Dr. Harikumar Pallathadka
4	Implementation And Analysis of An Aqi-Powered Fuzzy-Based Internet of Things Health Alert System	Application No : 202441001215 Date of filing of Application: 06/01/2024 Publication Date : 02/02/2024 Applicant Name: 1 . Dr. S. Malathi 2 . Dr. Usha S. M 3 . Dr. Dilip Kumar Nayak 4 . Mr. I. Anantraj 5 . Dr. K. Shriram 6 . Dr. S.Vengatesh Kumar 7 . Karunamoorthy B 8 . Ms. Abinasha. S 9 . V. Kumararaja 10 . Dr. Anil Kumar Singh 11 . Dr. Harikumar Pallathadka

5. Awards Received

	Awarded for getting highest marks in II PUC PU Board Examination
--	--

7. Publications

i. International Journals

Sl . No.	Title of the paper	Name(s) of Author(s)	Name of the Journal	Volume No. Issue No. Year	WOS / Scopus / Both	Impact Factor	Publisher
1	The Next Generation Wireless Network Deployment Using Machine Learning Based Multi-Objective Genetic Algorithm	Mahesh, H. B., Ahammed, G. F. A., & Usha, S. M.	EMITTER International Journal of Engineering Technology (2024) (wos)	Accepted	(wos)	4.424	Politeknik Elektronika Negeri Surabaya
2	Optimized Efficiency of IoT-Based Next Generation Smart Wireless Sensor Networks Using a Machine Learning Algorithm. <i>International</i>	HB, M., Ahammed, A., & SM, U. (2024).	<i>Journal of Computing and Digital Systems,</i>	<i>Accepted</i>	Scopus-Q3	1.08	the University of Bahrain
3	A Comprehensive study of LPWAN, LoRaWAN for IoT: Background, Related Research,	Shaista Tarannum &Usha S.M. G. F. Ali Ahammed 2023	<i>American Institute of Physics</i>	3122, 080001 (2024) https://doi.org/10.1063/5.0216057	scopus	1.4	AIP Publishing.

	Performance, Potential Challenges and Proposed Methodology						
4	a New Approach to Improve the Performance of OFDM Signal for 6G Communication.	Usha, S. M., & Mahesh, H. B. (2022).	<i>Int. J. Comput. Networks Commun.,</i>	14, 121-134.	scopus	0.5	Academy and Industry Research Collaboration Center
5	AI/ML for next generation wireless networks.	Usha, S. M, .Mahesh, H. B., Ahammed, G. F.,	<i>American Institute of Physics</i>	(Vol. 2901, No. 1). (2023, December).	scopus	1.4	AIP Publishing.
6	Design and Performance Analysis of Massive MIMO Modelling with Reflected Intelligent Surface to Enhance the Capacity of 6G Networks	Usha, S. M. Mahesh, H. B., Ahammed, G. F. A	<i>.Engineering, Technology & Applied Science Research</i>	13(6), 12068-12073.WOS (2023).	(wos)/scopus- Q2	1.054	EOS Association, a nonprofit organization based in Peloponnisos , Greece aiming to promote culture, science & education.
7	The Network Slicing and Performance Analysis of 6G Networks using Machine Learning.	Usha, S. M. Mahesh, H. B., Ahammed, G. F. A.,	<i>EMITTER International Journal of Engineering Technology</i>	, 11(2).wos	wos	4.424	Politeknik Elektronika Negeri Surabaya
8	Monitoring and Analysis of Agricultural Field Parameters in Order to Increase Crop Yield through a Colored Object Tracking Robot, Image Processing, and IOT.	Usha, S. M., & Mahesh, H. B. (2022).	<i>Engineering, Technology & Applied Science Research,</i>	12(4), 8791-8795.Wos/scopus	Wos/scopus-Q2	1.054	EOS Association, a nonprofit organization based in Peloponnisos , Greece aiming to promote culture, science & education.
9	Accurate and High-Speed Garbage Detection and Collection Technique using Neural Network and Machine Learning.	Usha, S. M., & Mahesh, H. B. (2022, October).	<i>Materials Science and Engineering</i>	(Vol. 1258, No. 1, p. 012055)..	wos	4.0	Elsevier

10	Minimization of Power and Area of Digital Modulator for Cellular Communication using Cadence in 180nm, 90nm and 45nm CMOS Technology	Usha S.M Mahesh H.B	Indian Journal of Science and Technology	Volume No. 13 Issue No.: 25 Year 2020 Page No 2537-2546..	WOS	0.60 H-index-41	Indian Society for Education and Environment
11	Image Detection and Processing using Edge Detection for Military Application	Usha S.M Mahesh H.B	International Journal of Grid and Distributed Computing	Volume No. 13 Issue No. 1 Year 2020 Page No. 18781-1793 ISSN: 2005-4262 DOI: 10.5121/ijgcd.2020.121011	WOS	0.31 H-Index-11	Science & Engineering Research Support Society (SERSC)
12	Least Square Channel Estimation for Image Transmission with OFDM over Fading Channel	Usha S.M Mahesh H.B	International Journal of Computer Networks & Communications (IJCNC)	Volume No. 12 Issue No. 1 Year JAN 2020 ISSN:0975-2293 (print) 0974-9322 (E-ISSN)	Scopus	0.17 H_index : 6	Academy and Industry Research Collaboration Centre (AIRCC) publishing Corporation, India
13	A Novel Approach to Optimize Area and Power Parameters of 64QAM for Radio Communication	Usha S.M Mahesh H.B	Journal of Adv Research in Dynamical and Control Systems (JARDCS)	ISSN: 1943-023X Volume No. 11 Issue No.03 Year: June 2019 Page No.1866-1873	Scopus	0.13 h_index : 17	Institute of Advanced Scientific Research, USA
14	Bit Error Rate Analysis Using QAM Modulation for Satellite Communication Link	Usha S.M K.R Nataraj	Science Direct Procedia Technology Elsevier	Vol. No.:25 DOI: 10.1016/j.protcy.2016.08.132 ISSN:2212-0173 pp:456-463 Year: September 2016	WOS		Elsevier
15	Implementation of Digital Modulator Using Digital Multiplier for Wireless Applications in Verilog and Cadence	Usha S.M K.R Nataraj	Science Direct Procedia Technology Elsevier	Vol. No.: :25 ISSN:2212-0173 DOI: 10.1016/j.protcy.2016.08.129	WOS		Elsevier

				pp: pp.435-442 Year: September 2016			
16	Eb/No. Vs. BER Analysis of PAM and QAM over AWGN, Rayleigh and Rician Channels for Mobile Communication	Usha S.M Mahesh H.B	International Journal of Research In Electronics And Computer Engineering	Vol. No. 07 Issue No. 02 pp: 1247-1251 Year: June 2019 ISSN: 2393-9028		SJIF: 3.702 Global Impact factor: 0.543	I2OR Publication Services LLP
17	Low Power and Area Optimized Architectures for BPSK Modulator	Usha S.M Mahesh H.B	I.J. Information Technology and Computer Science (IJITCS)	Vol. No. 10 Issue No. 12 pp: 33-40 Year: 8/12/2018 ISSN: 2074-9007 (Print), ISSN: 2074-9015 (Online) DOI: 10.5815/ijitcs.2018.12.05		Global Impact factor: 0.716	Published By: MECS Press
18	BER Performance of Digital Modulation Schemes With and Without OFDM Model for AWGN, Rayleigh and Rician Channels	Usha S.M K.R Nataraj	International Journal of Science and Research (IJSR)	Volume No. :4 Issue :11 Month & Year : November 2015 Page Nos. : 330-335 ISSN Online: 2319-7064		Research Gate Impact factor: 0.23 Scientific Journal Impact factor : 6.391	International Journal of Science and Research
19	High Speed and Low Power QPSK Modulator Design using Verilog and Cadence	Usha S.M K.R Nataraj	International Journal of Advance Engineering and Research Development (IJAERD)	Volume 1, Issue 12, pp. 220-225 Year: December - 2014 e-ISSN(O): 2348-4470 p-ISSN(P): 2348-6406		Scientific Journal of Impact Factor (SJIF): 3.134	International Journal of Advance Engineering and Research Development
20	Theoretical Survey on Low Power and High Throughput	Usha S.M K.R Nataraj	International Journal of Electrical, Electronics and Computer Systems (IJECS)	ISSN Online: 2319-7064 Volume No. :4		2.04	Institute for Research and Development India

	QPSK Modulator Designs			Issue :11 Month & Year : November 2015 Page Nos. : 330-335			(IRD INDIA)
--	------------------------	--	--	---	--	--	-------------

Conferences

Sl. No.	Title of the paper	Name(s) of Author(s)	Name of the Journal	Volume No. Issue No. Year	WOS / Scopus	Impact Factor	Publisher
1	Optimized Crop Prediction and Monitoring Using Ensemble Machine Learning Algorithms	H.S Kavitha, SM Usha, SN sheela	2024 second international conference on NMIT	2024	scopus	NMIT, Bangalore	IEEE Xplore
2	Intelligent Fault detection and prediction in Smart in Smart Grids Using Supervised Learning Model	Usha SM, Mahesh Kumar D, Kavitha M	International conference on Recent Advances in Science and Engineering Technology ICRASET-2024	21 st -22 nd NOV 2024	scopus	Faculty of Engineering, Management and Technology (BGSIT), MAndya	IEEE Xplore
3	Prognostication of Breast Cancer: A review of Machine Learning and Deep Learning Approches	Usha S.M Ravi M	International conference on Next-Gen Semiconductor Device and Smart Computing Applications (ICNGSDSCA-24)	20 th & 21 st December 2024	Scopus	Cambridge Institute of Technology, Bangalore	Springer
4	Resource Optimization in Smart Cities: The Role of LoRaWAN Sensor Networks and Advanced Data Aggregation Techniques	Usha SM Shaista Tarannum	10 th International Conference on Engineering and Emerging Technologies (ICEET 2024)	27-28 December 2024	Scopus	Dubai UAE	IEEE United Arab Emirates Section
5	Advanced Mechanism for Efficient Data Management in Duty-Cycle-Constrained LoRaWAN IoT Networks for	Usha SM Shaista Tarannum	CANWEST Research Conference	21 st Sept 2024		Morocco, Canada	Morocco, Canada

	Smart Energy Systems						
6	Secure and Adaptive Approach for Prioritized Parking Resource Allocation and Deceived Parking Congestion	Usha SM Shaista Tarannum	2 nd International Conference on Advancing Sustainable Futures (ICASF 2024) Conference Theme: Innovation and Digital Transformation for Sustainable Futures	11 th -12 th December 2024		ICASF -2024 organized by Abu Dhabi University, Abu Dhabi, UAE	scopus
7	Empowering Sustainable Development: Integrating AI, ML, and LoRaIoT for Enhanced LoRaWAN Performance and SDG Achievement.	Shaista Tarannum, UshaSM, Ali Ahammed; Moeen Fathima, (2023, December),	International Conference on Advancing Sustainable Futures (ICASF 2023), Conference Theme: Sustainable Futures and Technologies	, 5 - 6 December 2023, Waldorf Astoria, Dubai Palm Jumeirah.	scopus		
8	Traffic Signboard Recognition and Text Translation System using Word Spotting and Machine Learning. In	Usha, S. M., Kumar, D. M., & Mahesh, H. B. (2022).	<i>ITM Web of Conferences</i>	(Vol. 50, p. 01010). EDP Sciences. wos	.wos		<i>ITM Web of Conferences</i>
9	Eb/No. Vs. BER Analysis of PAM and QAM over AWGN, Rayleigh and Rician Channels for Mobile Communication	Usha S.M Mahesh H.B	International Journal of Research In Electronics And Computer Engineering	ISSN (ONLINE): 2348-2281 ISSN (PRINT): 2393-9028 PP: 1247-1251 23rd April 2019			International Journal of Research In Electronics And Computer Engineering
10	Low Power and Area Optimized BASK Modulators for Optical Communication	Usha S.M K.R Nataraj	Grenze International Journal of Computer Theory and Engineering Grenze Scientific Society and GRENZE Computer Science Group	Vol: 4 Issue:3 pp. 209-216 Year: 2017 ISSN: 2455-1694			Grenze Scientific Society and GRENZE Computer Science Group

11	Theoretical Survey on Low Power and High Throughput QPSK Modulator Designs	Usha S.M K.R Nataraj	International Journal of Electrical, Electronics and Computer Systems	ISSN Online: 2319-7064 Volume No. :4 Issue :11 Month & Year : November 2015 Page Nos. : 330-335		2.04	Institute for Research and Development India (IRD INDIA)
----	--	-------------------------	---	---	--	------	--

ii. Workshops /Conferences Attended/ presented

Sl. No.	Name of the workshop / Conference	Organiser	Date
1.	Faculty Development Program on the topic "Energetic Dimensioning & 1 D simulation for Mahindra e20 EV"	Conducted at JSS ELECTRIC VEHICLE MOBILITY CENTER OF EXCELLENCE from 20th Jan to 24th Jan 2025.	20 th to 24 th Jan 2025
2.	Capacity Building Workshop	JSSATE, Bengaluru	14 th Jan 2025
3.	Workshop on Nano Satellite Technology	JSSATEB in association with JSS Science & Technology University	24 th & 25 th Jan 2024
4.	Capacity Building Workshop	JSSATE, Bengaluru	10th & 11th November 2023
5.	Title "Low Power and Area Optimized Architecture for OQPSK Modulator" International Conference on Wireless Communications Signal Processing and Networking	SSN College of Engineering Old Mahabalipuram Rd, Kalavakkam, Tamil Nadu 603110 978-1-5386-9279-0/19/\$31.00 @ 2019 IEEE	Year:21-23 March 2019 WISPNET 2019, conference proceedings, IEEE Xplore®, (INSPEC, IET), EI Compendex and Scopus
6.	Title "Optimization and Performance Analysis of QPSK Modulator" International Conference on Advances in Electrical and Computer Technologies	Organized by SVS Educational Institutions and Diligentec International Conference on Advances in Electrical and Computer Technologies at Coimbatore	26-27 April 2019 PP:470-476 Scopus
7.	Title "Low Power and Area Optimized BASK Modulators for Optical Communication" International conference on Signal, Image Processing, Communication & Automation (ICSIPCA-2017)	Organized by JSS ATE, Bangalore, conducted on 6th & 7th July, 2017 ISBN: 978-93-526079-8-3 McGraw-Hill	Vol: 4 Issue:3 pp. 263-270 Year:6th & 7th July, 2017 ISBN: 978-93-526079-8-3
8.	Title "Low Power 8PSK Modulator using Cadence" International Conference on Recent Advances in Electronics and Communication Technology 2017 (ICRAECT 2017), IEEE Xplore and the IEEE Computer Society Digital Library (CSDL),	SJBIT, Bengaluru,	Year:16th to 17th March 2017 ISBN-13: 978-1- 5090-6701- 5 BMS Part # Scopus
9.	Title "Bit Error Rate Analysis Using QAM Modulation for Satellite Communication Link"	SJCET, Palai, Kerala	Year:21st to 22nd April 2016 ISSN:2212-0173

	Global Colloquium in Recent Advancement Effectual Researches in Engineering, Science and Technology (RAEREST 2016)		Palai Kerala
10.	Title "Implementation of Digital Modulator Using Digital Multiplier for Wireless Applications in Verilog and Cadence" Global Colloquium in Recent Advancement Effectual Researches in Engineering, Science and Technology (RAEREST 2016)	SJCET, Palai, Kerala	Year:21st to 22nd April 2016 ISSN:2212-0173 Palai Kerala WOS
11.	Title "Design and Implementation of QAM for Wimax Application using Verilog and Cadence" IEEE sponsored 3rd International Conference on Electronics and Communication Systems	Organized by Dept. of Electronics and Telecommunication Engineering, Karpagam College of Engineering Coimbatore, Tamilnadu India.	PP: 3267-3272 Year:25th & 26th February 2016 IEEE XPLORE 978-1-4673-7832-1/16/\$31.00 978-1-4673-7832-1/16/\$31.00
12.	Title "Analysis and Mitigation of Adjacent and Co-channel Interference on AWGN Channel using 8-PSK Modulation for Data Communication" IEEE International Conference on Wireless Communications, Signal Processing and Networking (WiSPNET).	SSN College of Engineering Chennai, India IEEE XPLORE	Pp:961-965 Year :23rd to 25th March 2016. 978-1-4673-9338-6/16/\$31.00 2016 IEEE 978-1-4673-9338-6/16/\$31.00 2016 IEEE Scopus/WOS
13.	Title "Design and Implementation Of Digital Costas Loop Using FPGA" Proceedings of the Second National conference on Wireless Control and Communication Technologies NCWCT-2014	Organized by the Dept. of Telecommunication	Year :24th -25th April 2014 ISBN: 978819210471
14.	Title "Software Defined Radio with an Advanced direct Digital Frequency Synthesizer" Proceedings of the Second National conference on Wireless Control and Communication Technologies NCWCT-2014	Organized by the Dept. of Telecommunication Engineering, Dr. AIT Bangalore.	ISBN: 978819210471 pp. 17-19 on Year : 24th - 25th April 2014
15.	Title "FPGA Implementation for OFDM SDR using DDFS" National Conference on VLSI, signal and Image Processing	Organized by the Dept. of Electronics and communication Engineering, JSS ATE Bangalore.	pp. 142-143 Year: 22nd-23rd August 2014
16.	Title "A Mobile GPRS-Sensor Array for Air Pollution and Weather Monitoring" Wireless Control and Communication Technology (NCWCT-2011)	Proceedings of the Second National conference on NCWCT-2011 at Dr. AIT, Bangalore	NCWCT-2011
17.	Faculty Knowledge Program National Symposium on "Internet of Things-Trends and opportunities" IBS ICFAI BUSINESS SCHOOL Campus, KENGERI, BENGALURU on 20th July 2018 Centre of Inter-Disciplinary Research along-with Dept. of Electronics & Communication Engineering and Electronics & Instrumentation Engineering	IBS Campus, Kengeri, Bengaluru	. 4th & 5th July 2018.
18.	International Conference on "Cognitive Computing and Information Processing: CCIP 2017	Dept. of Computer Science & Engineering and Dept. of Information Science & Engineering on 14th December, 2017.	14th December, 2017.

		JSS Academy of Technical Education, Bengaluru.	
19.	Maplesoft Product Overview-LEVEL -1 with Mapple Soft Binary Semantics	Organized by JSS Academy of Technical Education, Bengaluru. (june 2017)	(june 2017)
20.	Attended three days' workshop on "SIGNAL, IMAGE PROCESSING & SDR USING LABVIEW" (SIPS-2015)	Department of Electronics and Communication Engineering, JSS Academy of Technical Education, Bangalore	22nd, 23rd and 24th June, 2015, Bengaluru
21.	Participated one week workshop on "Electronics System Design, Manufacturing & Testing" (ESDMT)	Department of Electronics and Instrumentation Engineering, BMSCE, Bangalore	27th -31th July 2015, Bengaluru
22.	Attended 3 days FDP on "Advanced Design using Cadence Tool Suite"	Department of Electronics and Communication Engineering, JSS Academy of Technical Education, Bangalore	16th ,17th and 18th July 2014

iii. Workshops / Conference (Orgained)

Sl. No.	Name of the workshop / Conference	Organised by	Date	Role
1	Workshop on Nano Satellite Technology	JSSATEB in association with JSS Science & Technology University	24 th & 25 th Jan 2024	Organizer
2	Jnanam project team visit to JSSSTU-Nanosattelite Lab	JSSSTU	01-06-2024	Organizer
3	NASA SPACE APP CHALLENGE EVENT REPORT of IDEATHON-2022	The NASA International space app challenge is a collaborative event lead by NASA Ms. PoojaTak, Co-Founder, Pravishya Tech, Mumbai & NASA Apps, Karnataka State Lead	15th & 16th December 2022	Organizer
4	International conference on Signal, Image Processing, Communication & Automation (ICSIPCA-2017)	Department of Electronics and Communication Engineering, JSS Academy of Technical Education, Bangalore	6 th & 7 th July, 2017	Organizing Committee member
5	Worked as Organizing Committee member for three days' workshop on "SIGNAL, IMAGE PROCESSING & SDR USING LABVIEW" (SIPS-2015)	Department of Electronics and Communication Engineering, JSS Academy of Technical Education, Bangalore	22nd, 23rd and 24th June, 2015	Organizing Committee member
6	Participated and organized two days conference on "VLSI, Signal and Image processing"	Department of Electronics and Communication Engineering, JSS Academy of Technical Education, Bangalore	22nd -23rd August 2014, Bengaluru	Organizer
7	PHYTHON WORKSHOP	Mr. VISHAWANATH , Miss. Sulthana, Start Career, Bengaluru, JSSATEB	29-3-2019	Organizer
8	Three days Orientation Workshop on Aerospace Engineering & Aircraft Design"	Mr Ramesh Kumar, ORNNOVA Technologies, Pvt. Ltd., Bengaluru. JSSATEB	21-2-2019 to 23-2-2019	Organizer
9	Confluence - IEEE Technical Fest	JSSATEB and inter college Technical fest	9/4/18, 10/4/18	Organizer

10	Technical Talk on Development of OFDM	Dr. K. Raghunath, RLC solutions Bangalore, JSSATEB	9/4/2018	Organizer
----	---------------------------------------	--	----------	-----------

iv. Conference Attended (those sponsored by AICTE / ISTE/IETE/TEQIP or any other sponsoring body)

Sl. No.	Name of the workshop / Conference	Organiser	Date
1	Usha S. M, Kavitha H. S & Mahesh H. B. Artificial Intelligence to Predict the number of Antennas in MIMO Network, 24th ISTE Karnataka State Level Faculty Convention & 32nd Dr. L.S. Chandrakant Memorial Lecture, on	jointly organized by Indian Society for Technical Education & JSS Academy of Technical Education	26th November 2022,.
2	Theoretical Survey on Low Power and High Throughput QPSK Modulator Designs 7th International Conference on Electrical, electronics, computing and Communication Systems (EECCS'15)	Institute for Research and Development India (IRD INDIA)	January, 9th 2015,
3	Internet of Things	JSS Academy of Technical Education, Bengaluru Dept. of Electronics & Communication Engineering. Sponsored by KSTePS and VGST, Govt. of Karnataka	18th to 23rd June, 2018
4	VLSI Design Verification & Test	Electronics & ICT Academy, NIT WARANGAL supported by Ministry of Electronics & IT, Govt. of India. Summer FDP Jointly organized through IIT Guwahati and MNIT Jaipur from 26th -30th May 2018	26th -30th May 2018
5	FDP on Entrepreneurship Development Institute of India	EDII SRO, Bangalore in association with SJB Institute of Technology, Bengaluru	28th December 2017- 03rd January 2018
6	Intellectual Property Rights- Patents	Centre of Inter-Disciplinary Research in collaboration with BITES on 8th June 2017. JSS Academy of Technical Education, Bengaluru.	8th June 2017.
7	Attended 3 days Workshop on "Research Methodologies and Latex"	VTU e-learning Centre, Mysore At K.S. school of Engineering and Management,	20th to 22nd February, 2014 , Bengaluru

8. Details of NPTEL / COURSERA courses completed

Sl. No.	Name of the subject	Organised by	Date of completion / Award	Grade / Marks
1	Machine Learning for All	University of London	June 12, 2020	100%
2	Introduction to Machine Learning	Duke University	May 18, 2020	98.5%
3	Mathematical Foundations for Cryptography	University of Colorado	May 13, 2020	100%
4	Architecting smart IOT Devices	Eit, Digital, iMinds/ University of Antwerp	12th June 2020	100%

5	Artificial Intelligence for Everyone	Stanford University	19th May 2020	100%
6	Introduction to IOT and Embedded systems	UCI University of California, Irvine	12th June 2020	100%
7	Diabetes- Essential facts	University of Copenhagen	21st May 2020	90%
8	Introduction to TCP/IP	Yonsei University	21st May 2020	100%
9	Introduction to IOT Markets and Security	University of Colorado Boulder	July 2020	100%
10	Leadership and Emotional Intelligence	ISB	21st May 2020	100%
11	Fundamentals of Network Communication	University of Colorado	13th June 2020	90.3%
12	Introduction to internet of things	NPTEL	27th January, 2020	99%
13	Introduction to Industry 4.0 and Industrial Internet of Things	NPTEL	27th January, 2020	96%
14	Computer Networks and Internet Protocol	NPTEL	27th January, 2020	95%
15	Natural Hazards	NPTEL	27th January, 2020	92 %
16	Emotional Intelligence	NPTEL	27th January, 2020	91%

9. Membership of Professional Bodies:

1. Example : 1. Life Membership in Indian Society for Technical Education (MISTE)
2. Life Membership in Institute of Engineers (India)
3. IEEE society, Annual membership

Invited/plenary talks delivered in Conferences (From January 2018 to till 31.1.2024)

Sl. No.	Name of the conference	Topic	Organized by	Date
1	12th International Conference on Electronics, Communications and Networks(CECNet2022), Xiamen, China November 4-7, 2022.CECNet2022	Optimization and performance analysis of QPSK Modulator	CECNet2022 Organizing Committee, Xiamen, China	November 4-7, 2022.CECNet2022
2	Fifth Summit on Education:	What India Needs? on 22nd December, 2022	Centre for Education Growth and Research (CEGR)	22nd December, 2022 in Hotel Chancery Pavilion, Bengaluru, Karnataka
3	National Conference , GSSS, Mysore	Eb/No. Vs. BER Analysis of PAM and QAM over AWGN, Rayleigh and Rician Channels for Mobile Communication.		2018
4	International Conference, Bangalore,	BER performance of digital modulation schemes with and		2018

		without OFDM model for AWGN, Rayleigh and Rician channels		
5	International Conference, JSSATE, Bangalore,	Low Power and Area Optimized BASK Modulators for Optical Communication		2019

9. Collaborators and the Research Project associated

Sl. No.	Jnanam satellite project coordinator	Institute	Organization	Year
1.	Advanced Wireless Innovation Hub - Enhancing Research and Education In 5G and Beyond	VGST, KFEST L1	20,00,000/-	2024
2.	Emerging Technologies Challenges & Research Prospective in 5G/6G Wireless Communication	VGST, FDP	3,00,000/-	2024

10. Any other information you will like to share about your professional experience

Reviewer for Journals

- 1 Transactions on Emerging Telecommunications Technologies
- 2 ETASR - Engineering, Technology & Applied Science
- 3 Journal of Circuits and Systems
- 4 IEEE conference
- 5 Manipal University Conference papers, etc

Researcher id	https://www.webofscience.com/wos/author/record/L-7603-2019
SCOPUS id	https://www.webofscience.com/wos/author/record/W-3048-2018
Google scholar id	https://www.scopus.com/authid/detail.uri?authorId=35738001100
Orcid id	https://scholar.google.co.in/citations?user=2a3MbrCAAAAJ https://orcid.org/0000-0002-1080-8236

Dr. USHA S.M
Associate Professor
JSS Academy of Technical Education
Bangalore 560060