



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	

2. Experience

Total Experience in Years	Teaching: 17 Years	Industry: 2.years	Research: 07 Years
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3. 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.				

4. Research & Publications

Papers Published in Web of Science indexed Journals	International: 04	National: nil
Papers Published in SCOPUS indexed Journals	International: 02	National:nil
Papers Published in other Journals	International: 06	National: nil
Papers Presented in Conferences / Symposium	International:10	National: 04
Books / Book chapters Published	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	
	Name of the book: Publisher: Year of Publication:	

5. Research Guidance

PhD Guide? Give field & University	Yes, VLSI Design, Communication	University: a. Visvesvaraya Technological University, Belagavi,
PhDs / Projects Guided	Ph.D. Awarded: nil Guiding: 03 students applied.	Projects at Master's Level: 06 Projects at Bachelor's Level: 16

6. Grants

i. Funds Received (Projects)

Project Name	Grant Amount	Date of receiving the Grant	Duration	Grant issuing authority/ Body / Organization

ii. Patents

Sl. No.	Title Details	Details of award of patent / Filed

iii. Consultancy

Title of the work	Amount in	Date of	Duration	Grant issuing authority/ Body /

	Rs.	receiving the Grant		Organization

7. Awards Received

	Awarded for getting highest marks in II PUC PU Board Examination
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8. 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	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
2	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/ijcnc.2020.121011	WOS	0.31 H- Index- 11	Science & Engineering Research Support Society (SERSC)
3	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_inde x : 6	Academy and Industry Research Collaboration Centre (AIRCC) publishing Corporation, India
4	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
5	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

6	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 pp: pp.435-442 Year: September 2016	WOS		Elsevier
7	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
8	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
9	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
10	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 (IAERD)	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
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 (IJEECS)	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. National 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

iii. 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	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
2	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
3	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)

iv. Workshops /Conferences Attended/ presented

Sl. No.	Name of the workshop / Conference	Organiser	Date
1	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

2	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
3	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
4	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
5	Title "Bit Error Rate Analysis Using QAM Modulation for Satellite Communication Link" Global Colloquim 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
6	Title "Implementation of Digital Modulator Using Digital Multiplier for Wireless Applications in Verilog and Cadence" Global Colloquim 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
7	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
8	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
9	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
10	Title "Software Defined Radio with an	Organized by the Dept.	ISBN: 978819210471

	Advanced direct Digital Frequency Synthesizer” Proceedings of the Second National conference on Wireless Control and Communication Technologies NCWCT-2014	of Telecommunication Engineering, Dr. AIT Bangalore.	pp. 17-19 on Year : 24th -25th April 2014
11	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
12	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
13	Faculty Knowledge Program National Symposium on “Internet of Things-Trends and opportunities” IBS ICFAI BUSINESS SCHOOL Canpus, 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.
14	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. JSS Academy of Technical Education, Bengaluru.	14th December, 2017.
15	Maplesoft Product Overview-LEVEL -1 with Mapple Soft Binary Semantics	Organized by JSS Academy of Technical Education, Bengaluru. (june 2017)	(june 2017)
16	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
17	Participated one week workshop on “Electronics System Design, Manufacturing & Testing” (ESDMT)	Department of Electronics and Instrumentation Engineering, BMSCE, Bangalore	27th -31th July 2015, Bengaluru
18	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

v. Workshops / Conference (Orgained)

Sl. No.	Name of the workshop / Conference	Organised by	Date	Role
1	International conference on	Department of Electronics and	6 th & 7 th	Organizing

	Signal, Image Processing, Communication & Automation (ICSIPCA-2017)	Communication Engineering, JSS Academy of Technical Education, Bangalore	July, 2017	Committee member
2	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
3	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

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

Sl. No.	Name of the workshop / Conference	Organiser	Date
1	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,
2	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
3	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
4	FDP on Entrepreneurship Development Institute of India	EDII SRO, Bangalore in association with SJB Institute of Technology, Bengaluru	28th December 2017- 03rd January 2018
5	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.
5	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

9. 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%

10. 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

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

Dr. USHA S.M
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