

RAVLS

Department : Electronics and Communication Engineering
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ADDRESS FOR COMMUNICATION :

216/4, Saranya Nagar, Venkarumbur,
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Tamilnadu, India - 606105

ACADEMIC QUALIFICATIONS

Doctor of Philosophy (Ph.D) in VLSI Design from Anna University, Chennai, Tamilnadu, India, December 2018.

Master of Engineering in VLSI Design during 2005-2007 at Vel Tech Engineering College, Avadi, Affiliated with Anna University, Tamilnadu, India. Percentage obtained 78 % (First class with distinction).

Bachelor of Engineering in Electronics and Communication Engineering during 2000-2004 at Karunya Institute Of Technology, Coimbatore, Bharathiyar University, Tamilnadu, India. CGPA obtained 6.95.

HSC during 1998-2000 at Aruna Sugars Hr Sec School, Eraiyur, Cuddalore, Tamil Nadu. Percentage obtained 87.40%

SSLC during 1997-98 at Aruna Sugars Hr Sec School, Eraiyur, Cuddalore, Tamil Nadu. Percentage obtained 84.00%

EXPERIENCE (Total : 12 years)

Worked as an Assistant Professor in Sai spurthi Institute of technology, Khammam, Andhra pradesh, from 11th December 2007 to 8th May 2010 (2 Years, 5 Months).

Worked as an Assistant Professor in Sudharsan Engineering College, Pudukottai, TamilNadu, from 10th May 2010 to 30th April 2014 (4 Years).

Worked as an Assistant Professor in Global Institute of Engineering and Technology, Melvisharam, Vellore, Tamilnadu, from 16th June 2014 to 30th April 2016 (1 Year, 10 Months).

Worked as an Assistant Professor at The Kavery Engineering College, Mecheri, Salem, Tamilnadu, from 20th May 2016 to 17th May 2018 (2 Years).

Worked as an Assistant Professor at Anil Neerukonda Institute of Technology and Sciences, (Autonomous) Visakhapatnam, Andhrapradesh, from 1st June 2018 to 15th May 2019 (1 Year)

Working as an Associate Professor at Gudlavalleru Engineering College (Autonomous), Krishna District, Andhrapradesh, from 14th June 2019 to till date.

PUBLICATIONS: (Total : 19)

A. BOOK PUBLICATIONS (Total : 2)

1. **S. Ravi**, M. Kumar and N. Suresh, “Microcontroller based system design”, Sri Krishna Hi-Tech publishers, Chennai, June 2017, ISBN: 978-93-86590-14-5.
2. M. Kumar and **S. Ravi**, “Ad-hoc and Sensor Networks”, Sri Maruthi publishers, Chennai, November 2017.

B. INTERNATIONAL JOURNALS (Total : 10)

1. **S. Ravi**, et al, “FPGA implementation of low power 16x16 bit Vedic Multiplier”, International Journal of Future Generation Communication and Networking, Vol. 13, No. 3, (2020), pp. 3982–3989. (**Web of Science Indexed**)
2. B. Vamsi Krishna, M. Durga Prakash, and **S. Ravi**, “Recent trends in Graphene based Field Effect Transistors”, Materials today Conference proceedings from Elsevier, (Accepted for Publication), (**Scopus Indexed**)
3. **S. Ravi** et al, “FPGA Implementation of filters for the removal of various noises in digital images”, Journal of Applied Science and Computations (JASC), Vol. 5 Issue - 12, pp. 707 - 712, December 2018, DOI: 16.10089.JASC.2018.V5I12. 453459. 1500187. (**UGC Approved Journal No: 41238**)
4. **S. Ravi** and M. Joseph, “TTHLS: An HLS Tool for testable hardware generation”, Design Automation for Embedded Systems (DAEM), Vol. 21, Issue 3-4, pp. 231- 246, December 2017, ISSN : 0929 – 5585, DOI: 10.1007/s10617-017-9192-x. (Impact Factor: 0.52) (**SCI Indexed**)
5. **S. Ravi** and M. Joseph, “FPGA Implementation of Low Power Self Testable MIPS Processor”, American-Eurasian Journal of Scientific Research, Vol. 12, No. 3, July 2017, pp. 135 – 144, ISSN: 1818-6785, DOI: 10.5829/idosi.aejsr.2017.135.144
6. **S. Ravi** and M. Joseph, “High-Level Test Synthesis: A survey from synthesis process flow perspective”, ACM Transactions on Design Automation of Electronic Systems (TODAES), Article No. 38, Vol. 19, Issue 4, August 2014, ISSN : 1084 – 4309, DOI:10.1145/2627754. (Impact Factor: 0.82) (**SCI Indexed**).
7. Nithya. R, Paviya. M, Poornimadevi. A, and **S. Ravi**, “A performance Comparison of Low Power LFSR structures”, International Journal of Recent Research in Science, Engineering and Technology (IJRRSET), Vol.1, Issue 1, April 2015, pp. 23 – 28.
8. **S. Ravi**, R. Ganga, K. Gayathri, K. Suganya and A. Hema, “Smart Home Control System Using PLCC and ZigBee”, International Journal of Research in Science & Technology (IJRST), Vol. 7, Issue 1, Jan-Mar, 2017, pp. 89 – 99.
9. **S. Ravi**, P. Ajithkumar, S. Dineshkumar, S. Muralidharan, and S. Sivanandhan, “Smart Railway System in Real time Emergency condition”, International Journal for Research & Development in Technology (IJRDT), Vol. 7, Issue 4, April 2017, pp. 169 - 172. ISSN:- 2349-3585

10. **S. Ravi**, G. Balu, M. Kannan, S. Ashik Ahamed, and K. Kavın Kumar, “Testability of Combinational and Sequential Circuits by Fault Injection Technique”, International Journal of Recent Advancement in Engineering & Research (IJRAER), Vol. 3, Issue 3, March 2017, pp. 7 – 14, DOI: 10.24128/IJRAER.2017.HI89uv

C. INTERNATIONAL CONFERENCES (Total : 4)

1. **S. Ravi**, G. L. Chandini, G. Pradeep, G. Divya Lakshmi, J. Alekhya, “Green house Monitoring using IoT”, Thiruvalluvar University, Vellore, Tamilnadu, India, 26-28, Feb., 2020.

2. **S. Ravi**, V. Sathiyasuntharam, and Ch. Ravikumar, “Wavelet based feature extraction and T-set evaluation for automatic brain tumor detection and classification”, International Conference on Communications and Cyber-Physical Engineering (ICCCE – 2020), dated 1-2 February, 2020. CMR Engineering College, Hyderabad, India.

3. **S. Ravi** and M. Joseph (2016) “Open Source HLS Tools: A stepping stone for modern Electronic CAD”, In proc. of IEEE International conference on Computational Intelligence and Computing Research (IEEE ICCIC’16), Dec. 15th - 17th, organized by Agni College of Technology, Chennai, Tamilnadu, India, pp. 457 – 464, ISBN – 978 -1-5090-0611-3, DOI: 10.1109/ICCIC.2016.7919615

4. G. Sathishkumar, Dr. V. Saminathan, and **S. Ravi**, “VLSI Implementation of low power 8-bit DSP Processor”, In proc. of International Conference on Science, Engineering, and Management (ICSEM’13), 17th - 18th May 2013, Organized by Srinivasan Engineering College, Perambalur, pp. 48 – 55.

D. NATIONAL CONFERENCES (Total : 3)

1. **S. Ravi**, S. Dinesh Kumar, P. Ajith Kumar, S. Sivanandhan and S. Muralidharan, “FPGA Implementation of Low power Test pattern generators”, In. Proc. of National Conference on Advanced Technologies in Computing, Communication and Electrical Engineering NCATCCEE’16), 30th Sep. 2016, organized by The Kavery Engineering College, Salem, Tamilnadu, India.

2. **S. Ravi**, K. Gayathri, A. Hema, K. Suganya and R. Ganga, “Robot Design using Arduino and Raspberry pi”, In. Proc. of National Conference on Advanced Technologies in Computing, Communication and Electrical Engineering (NCATCCEE’16), 30th Sep. 2016, organized by The Kavery Engineering College, Salem, Tamilnadu, India.

3. **S. Ravi**, “VLSI Implementation of High-Resolution Time-To-Digital Converter”, in the proceedings of AICTE Sponsored National Conference on Soft computing Techniques in Process control and Instrumentation (SCTPCI-07), Feb. 15 – 17, 2007.

PROFESSIONAL BODY MEMBERSHIP

- ✓ Life member of Indian Society for Technical Education (ISTE) (No. LM 53904)
- ✓ Member of The Institution of Engineers (IE) – (No: M-1573985)
- ✓ Life Member of International Association of Engineers (IAENG) (No. 180485)

SUBJECTS HANDLED:

UG Level:

Network analysis and synthesis, Electronic Devices and Circuits, Electronic Circuits I, Electronic Circuits II, Pulse and Digital circuits, Linear Integrated Circuits, Digital Electronics, Electronics and Microprocessors, Microprocessors and Microcontrollers, Microcontrollers and Embedded Systems, Computer Architecture, Advanced Computer Architecture, VLSI Design, Cellular mobile Communication.

PG Level:

Advanced digital system design, VLSI architecture and design methodologies, ASIC Design.

AREA OF INTEREST:

CMOS VLSI Design, Testing of VLSI Circuits, Low power VLSI Design, Embedded Systems, Digital IC Applications.

ACHIEVEMENTS:

- ✓ Produced 100 % Result in the Subject “EC6009 – Advanced Computer Architecture”, at The Kavery Engineering College, Salem, during April / May 2017 Examinations.
- ✓ Produced 100 % Result in the Subject “EC6464 - Electronics and Microprocessors”, at Global Institute of Engineering and Technology, Vellore, during April / May 2015 Examinations.
- ✓ Received Gold Medal from Vel Tech Engineering College, Chennai for M.E., (VLSI Design) Class topper in Anna University Examinations.
- ✓ Ratified by JNT University, Hyderabad, as an Assistant professor, during the interview conducted by the Selection committee on 14.11.2009.
- ✓ Being a Journal reviewer for SCI indexed Journals (Wireless personal Communications, Multimedia Tools and Applications)
- ✓ Journal reviewer for Scopus indexed Journal (International Journal of Advanced Intelligence Paradigms (IJAIP), from Inderscience online).
- ✓ Secured Elite + Silver Medal in NPTEL exam for the MOOCs course on “Effective Engineering Teaching in Practice”, organized by IIT Madras, during March 2019.
- ✓ Secured Elite + Silver Medal in NPTEL exam for the MOOCs course on “Microelectronics : Devices to Circuits”, organized by IIT Kharagpur, during November 2019.

GUEST LECTURES DELIVERED (Total : 15)

1. Delivered a lecture on “Design Technology”, for the faculties of ECE Department Gudlavalleru Engineering College, on 31.07.2020 for the One Week Refresher course on Embedded System design, from 27th July 2020 to 1st August 2020.
2. Delivered a Webinar on “Digital VLSI design using Verilog HDL” to the Students and Faculties of Department of ECE, PMC Tech, Hosur, on 05.05.2020.
3. Delivered a talk on “Effective Teaching Practices in Electronics and Communication Engineering”, for Faculties and students of Department of ECE, PMC Tech, Hosur, on the occasion of Electrovision’19, Fest Inaugural on 20.09.2019.
4. Delivered a guest lecture for the subject “VLSI Design” for III ECE Students of Mother Terasa College of Engineering and Technology, Pudukkottai, Tamilnadu on 03.04.2018.

5. Delivered a lecture at Podhigai College of Engineering and Technology, Tiruppattur, Vellore District, on 09.03.2017, for One day workshop on “VLSI Design & Simulation”.
6. “EC6601 – VLSI Design”, III ECE, Mahath Amma Institute of Engineering and Technology, Pudukkottai, Tamilnadu on 14.04.2016.
7. “Verilog HDL”, One day workshop on “Digital system design using FPGA”, organized by Sudharsan Engineering college, Pudukkottai, on 08.03.2014.
8. Delivered lectures for M.E., Embedded systems students (MBCBS Course) of Anna University, Regional office Tiruchirappalli, on VLSI Design, and Operating systems, during the academic year 2012-2013.
9. “Advanced Digital System design”, I ME, Embedded systems, Mahath Amma Institute of Engineering and Technology, Pudukkottai, Tamilnadu on 25.11.2013.
10. “Recent Trends in VLSI Technology”, Final Year ECE, Sudharsan Polytechnic College, Pudukkottai, Tamilnadu on 19.11.2012.
11. “Synchronous sequential circuits”, II ECE students of MAM college of Engineering, Trichy, Tamilnadu, October 2012.
12. “Social skills” for Ist Year students of Sudharsan Engineering College, Pudukkottai, Tamilnadu, September 2011.
13. “IC Fabrication process and Fundamentals of VLSI” for IIIrd Year ECE Students of Oxford Engineering College, Trichy, December 2010.
14. “VLSI Design” and “Digital IC Applications” for IIIrd Year ECE students of Sarathi Institute of Technology, Nuziveed, Andhra Pradesh, February 2010.
15. “Adapting to Corporate life”, for Ist Year students of Sai Spurthi Institute of Technology, Khammam, Andhra Pradesh.

ATTENDED AS CHIEF GUEST FOR SYMPOSIUM / CONFERENCES (2) :

1. Played the role of Chief Guest and adjudged the Paper Presentation Competition as a Jury member for the Symposium (Electrovision’19), organized by Department of ECE, PMC Tech, Hosur, on 20.09.2019.
2. Played the role of Chief Guest and adjudged the Paper Presentation Competition as a Jury member for the Symposium conducted at Mother Theresa College of Engineering and Technology, Pudukkottai, Tamilnadu, on 09.03.2018.

WORKSHOPS / TRAINING PROGRAMS ORGANIZED:

1. Played the role of workshop Coordinator for Three Days workshop on “IoT using Arduino”, at Anil Neerukonda Institute of Technology & Sciences, Visakhapatnam, Jointly organized by APSSDC Vijayawada, from 07.02.2019 to 09.02.2019.
2. Organized an One day Intra college workshop on “Demystifying concepts using MATLAB” at The Kavery Engineering College, Salem on 14.09.2017.
3. Organized a Two day workshop on “Recent Trends in Raspberry Pi” at Global Institute of Engineering and Technology, Vellore from 19.02.2016 to 20.02.2016.
4. Organized and acted as a resource person for Hands on Training on “Digital system design using FPGA”, at Sudharsan Engineering College, Pudukkottai, on 08.03.2014.
5. Played the role of Workshop Coordinator for MHRD Sponsored Two Weeks Workshop on Analog Electronics, at Sudharsan Engineering College, Pudukkottai, from 4th to 14th June, 2013.

ONLINE FDP/WEBINAR/TRAINING PROGRAMS ATTENDED :

1. Participated in A National Level Webinar on “Intellectual Property Rights & Patents - A View” organized by IQAC, Gudlavalleru Engineering College, Gudlavalleru held during 10 - 12 August 2020.

2. Participated in AICTE Sponsored Online Short Term Training Program on "Blockchain Architecture Design and Use Cases – Phase - I" Organized by Department of Electronics & Communication Engineering, Gudlavalleru Engineering College, Gudlavalleru, Andhra Pradesh-521356, from 10.8.2020 to 15.8.2020.
3. Attended One week refresher course on “Embedded Systems Design”, organized by Gudlavalleru Engineering College, Andhrapradesh, from 27th July 2020 to 1st August 2020.
4. Completed one week online Certification Course on “Digital teaching Techniques”, organized by ICT Academy from 29 June 2020 to 04 July 2020.
5. Participated in One week International online Knowledge development program on “Challenges and advancements in the design of IoT, Embedded and VLSI Systems : A researchers view”, organized by Gudlavalleru Engineering College, Andhrapradesh, from 8th – 13th June 2020.
6. Attended Five day online FDP on “Opportunities and Challenges in Next Generation Semiconductor Devices”, organized by ANITS, Visakhaptinam, Andhrapradesh during 16.6.2020 to 20.06.2020.

WORKSHOPS / INDUSTRIAL TRAINING PROGRAMS ATTENDED:

1. Attended Two week FDP on “Data Science and Data Analytics through Python & R Programming”, organized by Gudlavalleru Engineering College, Andhrapradesh, from 27.01.2020 to 08.02.2020.
2. Attended One week FDP on “Microelectronics: Devices to Circuits”, organized by IIT Kharagpur, through NPTEL Course, during November 2019, and secured 77 % as a consolidated score.
3. Attended one day workshop on “Ed-Tech tools in Teaching and Learning”, Organized by JNTUK, UCEV Campus, Vizianagaram, Andhrapradesh, on 05.10.2019.
4. Attended one day workshop on “Make in India – Transforming Research to Reality”, Anna University, Chennai, on 05.09.2017.
5. Attended Special lecture on “Research methodology and Funding opportunities”, organized by The Kavary Engineering College, Salem, on 22.02.2017.
6. Attended One day Faculty Training program at Dharmapuri District Co-operative Sugar Mills Ltd., Palacode, Tamilnadu, on 04.02.2017.
7. Attended One day Faculty Training program at Wheel Alignment and Assembly Section, Toyato Tsusho India Private Limited, Kunnavakkam, Kanchipuram, on 03.11.2016.
8. Participated in Faculty updation program on “Modeling & Thermal Analysis of Electronic Products using FloTHERM”, during 19th to 23rd May, 2014, at NIELIT, Chennai.
9. Attended Five Day Coordinator workshop on “Analog Electronics” from 1st – 5th April, 2013, at IIT Kharagpur.
10. Attended One Day workshop on Xilinx 7 Series FPGAs and Vivado Tool Flow on 22nd January, 2014, at IISc Bangalore.
11. Attended One day workshop on Research methodology, Techniques of writing Research articles for SCI Journals for Research Scholars” on 16.12.2014 at Anna University, Chennai.
12. Attended Two week AICTE sponsored FDP on “Verification and Testing of VLSI Circuits”, PSG Tech, Coimbatore, from 6th to 19th November 2013.
13. Attended the One Day workshop on “VLSI Co-design Tools”, conducted at SASTRA University, Thanjavur, on 05.10.2013.
14. Participated in Three days Hands on Training in “Digital IC Design”, organized by VLSI Division, VIT University, Vellore, from 23.02.2012 to 25.02.2012.
15. Participated in a Three day course on “Advanced Refresher program for VLSI faculty with Hands on Training on Analog-Mixed signal and Digital Design using Cadence

Tools” conducted by Cadence Design Systems and ICTACT Tamilnadu, at Pandiyan Saraswathi Yadav Engineering college, Madurai from 11.11.2010 to 13.11.2010.

16. Participated in Two weeks Faculty updation Training on “System Design using FPGA”, organized by CDAC Hyderabad as a part of Prepare Future Project, HRD Division, Department of IT, Government of India, from 16.11.2009 to 27.11.2009.

SYMPOSIUM / CONFERENCES ORGANIZED:

1. Played the role of Convener for One Day National Level Technical Symposium titled “Kavery TriZone - 2K18”, on 13th Feb. 2018, at The Kavery Engineering College, Salem, Tamilnadu, India.
2. Played the role of Convener for One Day National Level Technical Symposium titled “Kavery TriZone - 2K16”, on 2nd Sep. 2016, at The Kavery Engineering College, Salem, Tamilnadu, India.
3. Played the role of Convener for One Day National Level Conference on “Advanced Technologies in Computing, Communication and Electrical Engineering” (NCATCCEE’16), 30th Sep. 2016, at The Kavery Engineering College, Salem, Tamilnadu, India.

PROPOSALS SUBMITTED FOR GRANTS:

1. Submitted a proposal to conduct Short Term Training Program (STTP) on the title, “One Week STTP on Wireless Communication and Networks” for AICTE, New Delhi, on 30.11.2017.
2. Submitted a proposal to conduct Faculty Development and Training Program (FDTP) on the title, “One Week FDTP on Recent Trends in Soft Computing Techniques” for AICTE, New Delhi, on 28.12.2016.
3. Submitted a proposal to conduct Faculty Development and Training Program (FDTP) on the subject, “EC6601 – VLSI Design”, for winter vacation 2016 to Center for faculty development, Anna University, Chennai, under self supporting scheme.
4. Submitted a proposal for MODROBS (Modernization and removal of Obsolescence Scheme) under AICTE, New Delhi, with title “Modernization of VLSI Lab”, November 2012.
5. Submitted a proposal for RPS (Research Promotion Scheme) under AICTE, New Delhi, titled “A Novel test vector compression technique for high density system on chip”, November 2011.

PROJECTS ACCOMPLISHED

***UG Project Details:** “Process Control And Data Acquisition Using Smart Card”.

Team Size	:	3
Position	:	Project Member
Duration	:	December 2003 to May 2004

***PG Project Details:** “VLSI Implementation of High resolution Time-to-Digital Converter”.

Synthesis	:	Xilinx Project Navigator
Core design	:	VHDL
Team Size	:	1
Position	:	Project Member
Duration	:	August 2006 to March 2007

***Title of the Ph.D Thesis:** “Area and Power Efficient testable hardware design using High-level Synthesis”.

PROJECTS GUIDED AT UG LEVEL

- FPGA implementation of low power 16x16 Vedic Multiplier
- Green House Monitoring and Control using Arduino Based on IOT
- FPGA Implementation of Denoising architecture for various noises in digital images
- FPGA Implementation of Low power Test pattern generators
- Smart Home Control System Using PLCC and ZigBee
- VLSI Implementation of 32-bit RISC Processor using VHDL.
- VLIW Processor Implementation using VHDL.
- Night Vision Robot for Spying in Warfield.
- FPGA Implementation of Low power BIST architectures for General purpose processor
- A Programmable truncated multiplier for low power DSP applications

TECHNICAL SKILL SET

HDL's	:	Verilog HDL, VHDL
Synthesizers	:	Xilinx Synthesis Technology (XST), Vivado, Mentor Graphics, Altera Quartus II, Icarus Verilog.
Simulators	:	Questa Sim, ModelSim 7.1g, Keil uVision MASM for Microprocessors, OrCAD
Programming Languages	:	C, C++, Embedded C
Assembly Languages	:	8085, 8086, 8051
Operating System	:	Windows 98/XP/2000, 7, 10, Fedora 22.
Target Devices	:	Xilinx FPGA Spartan – 2, 3, 3E, and Altera DE0

ADMINISTRATIVE EXPERIENCES

- Department level NAAC Co-coordinator during 2020 – 2021
- Board of studies Member of ECE Department, Gudlavalleru Engineering College, Krishna District, during 2019 – 20 and 2020 - 21.
- Board of studies Member of ECE Department, Anil Neerukonda Institute of Technology and Sciences, Visakhapatnam, during 2018 - 19.
- Head of the Department (From May 2016 to April 2018)
- Department Research Coordinator during 2016 - 2018