

FACULTY PROFILE

1. Personal Details.

Name : Dr. SHILPA K C
Designation : Professor
Father's Name : R CHICKABASAVIAH
Mother's Name : N C SAROJA
Job Type: : PERMANENT

Employee ID : ECU22

Photo



2. Contact Information.

Postal Address : #1991, 6th Block Vishweshwaraiah Layout, BDA Layout, Manganhalli, Bangalore 560056

Official E-mail ID : shilpakc.ec@drait.edu.in

Telephone No. : 9591915533

Mobile No. : 9591915533

3. Educational Qualification.

Degree	Specialization	Board/ University	Year of Passing	Class Obtained
Ph.D.	Electronic Circuits & VLSI Design	VTU	2017	
M.E./M.Tech.	Electronics	VTU	2007	FCD
B.E./B.Tech.	Telecommunication	VTU	2004	FC

4. Experience.

		Institution/Company	Designation	Duration
Teaching	:	Dr.AMBEDKAR INSTITUTE OF TECHNOLOGY	Professor	19
Industrial	:	NIL	NA	--
Total Experience				19

5. Areas of Specialization.

- VLSI
- Electronic Circuit Design
- Basic Electronics, Electronic Devices

6. Courses Taught.

UG Courses: Basic Electronics, Cmos Vlsi Design, AMVLSI

PG Courses: Digital VLSI Design, Low Power VLSI Design

Laboratory Courses: VLSI LAB, LIC LAB, Electronic Devices

7. Research Publications.

List of Publications @ Journals

SL.NO.	Paper Titled	Journal Name	Year of Publication	SCI/UGC/AICTE
1.	Low Power/ High Speed Design in VLSI with the application of Pipelining and Parallel Processing	International Journal of Computers & Technology Volume 2 No. 3, ISSN: 2277-3061 https://rajpub.com/index.php/ijct/article/view/2699	June, 2012	UGC Approved https://www.ugc-journal-list.website/subject/computer-science
2.	Time-Period Minimization of Circuit Execution in High Level Synthesis	International Journal of Advanced Research in Computer Engineering & Technology (IJARCET), Volume 3 Issue 7, ISSN: 2278 – 1323	July 2014	UGC Approved https://www.researchgate.net/profile/Md-Alam-459/publication/332780165_Journals_Removed_from_UGC-Approved_List_of_Journals/links/5cc92cf9299bf120978b98e0/Journals-Removed-from-UGC-Approved-List-of-Journals.pdf (Pg no 171/267)
3.	Particle Swarm Optimization for ILP Model Based Scheduling	International Journal of Advanced Research in Computer Engineering & Technology (IJARCET), Volume 3 Issue 6, ISSN: 2278 – 1323	June 2014	UGC Approved https://scholar.google.co.in/citations?view_op=view_citation&hl=en&user=dZNEfYsAAAAJ&cit

				ion_for_view=d ZNEfYsAAAAJ :IjCSPb-OGe4C
4.	Optimal Resource Schedule in Architectural Level Synthesis using Evolutionary Computations	Indian Journal of Science and Technology, Vol 9(31), DOI: 10.17485/ijst/2016/v9i31/96819 .	August 2016	UGC & Scopus Indexed https://www.scopus.com/sourceid/21100201522
5.	A Comparative Study of Different Strategies using adaptive Differential Evolution for Best Scheduling in Architectural Level Synthesis	Indian Journal of Science and Technology, Vol 9(40), DOI: 10.17485/ijst/2016/v9i40/96821	October 2016	UGC & Scopus Indexed https://www.scopus.com/sourceid/21100201522
6.	High Performance Systolic Architecture by Evolutionary Design	IOSR Journal of VLSI and Signal Processing (IOSR-JVSP) Volume 4, Issue 4, Ver. II PP 06-11 e-ISSN: 2319 – 4200, p-ISSN No. : 2319 – 4197	Jul-Aug. 2014	UGC Approved Journal, Sl.No.- 5081 https://www.iosrjournals.org/iosr-jvlsi/papers/vol4-issue4/Version-2/B04420611.pdf
7.	Adaptive Differential Evolution for Optimal Schedule in Behavioral Level Synthesis		Jul-Aug. 2016	UGC Approved Journal, Sl.No.-5081 https://www.iosrjournals.org/iosr-jvlsi/papers/vol6-issue4/Version-1/K0604015559.pdf

8.	TECH-DRIVEN Earthquake Rescue A GSM AND GPS Integrated Human Detection Robot	International Journal OF Research And Analytical Reviews (IJRAR.ORG) IJRAR August 2018, Volume 5, Issue 3 www.ijrar.org www.ijrar.org (E-ISSN 2348-1269, P- ISSN 2349-5138)	August 2018	https://www.ijrar.org/papers/IJRAR19D7153.pdf , UGC Approved Journal,
9.	RFID-Based Zone Recognition and speed adaptation system	International Journal OF Research and Analytical Reviews (IJRAR.ORG) IJRAR September 2018, Volume 5, Issue 3 www.ijrar.org (E-ISSN 2348-1269, P- ISSN 2349-5138)	September 2018	UGC Approved E-ISSN 2348-1269, P- ISSN 2349-5138)
10.	Vehicle Number Plate Recognition	Journal of Emerging Technologies and Innovative Research, Volume 6, Issue 1, pp 541-542, ISSN: 2349-5162.	January 2019	UGC Approved Sl.No- 63975 https://www.jetir.org/view?paper=JETIR1901173
11.	Gesture-Operated Keyboard Inputs and Color detection for Blinds with Arduino and Python Using Gesture Sensor.	Journal of Emerging Technologies and Innovative Research, March 2019, Volume 6, Issue 3, pp 213-216, ISSN: 2349-5162	March 2019	UGC Approved Sl.No- 63975 https://www.jetir.org/view?paper=JETIR1903P24
12.	Resource Scheduling in High Level Synthesis of Digital Filter using Differential Evolution Algorithm	Journal of Digital Integrated Circuits in Electrical Devices Volume 1 Issue 2 Page 13-22 © MAT Journals 2016	MAT Journals 2016	Peer reviewed journal
13.	Design of EDDR Architecture Based on Approximate Arithmetic	Journal of Digital Integrated Circuits in Electrical Devices Volume 2 Issue 2 Page 1-4 © MAT Journals 2017	MAT Journals 2017	Peer reviewed journal

14.	IoT based Anti-Poaching System for Trees and Wildlife Monitoring System in Remote Area	International Journal for Research in Applied Science & Engineering Technology (IJRASET) ISSN: 2321-9653; IC Value: 45.98; SJ Impact Factor: 7.429 Volume 8 Issue VII	July 2020	UGC Approved Sl.No- 45842 https://www.researchgate.net/publication/343346550_IoT_based_Anti-Poaching_System_for_Trees_and_Wildlife_Monitoring_System_in_Remote_Area
15.	Design and simulation of High performance 32-bit RISC architecture based on MIPS	IJRAR, Volume 7, Issue 3 www.ijrar.org (E-ISSN 2348-1269, P- ISSN 2349-5138) 780-786	July 2020	UGC Approved Journal NO: 43602 https://ijrar.org/viewfull.php?&p_id=IJRAR19S1475
16.	IOT Based Environment Monitoring System	Journal of Emerging Technologies and Innovative Research, 2021 , Volume 8, Issue 8	August 2021	UGC Approved Sl.No- 63975 https://www.jetir.org/view?paper=JETIR2108498
17.	Smart Movable Road Divider, Ambulance	NOVIY MIR Research Journal Volume 6, Issue 10, 2021 ISSN No: 0130-7673	2021	UGC CARE Approved Group II Journal

	Clearance and Intelligent Street lights using IoT	Volume 6, Issue 10, 2021 ISSN No: 0130-7673 Page No: 125-Page No: 134 DOI:16.10098.NMRJ.2021.V6I10.256342.1971		
18.	Auto Sunlight Tracking Solar Powered IOT Based Light Control System	Gradiva review journal Volume 7 issue 9 2021, Issn no : 0363-8057 Volume 7 issue 9 2021 Issn no : 0363-8057 Page no: 112page no: 123. DOI:10.37897.GRJ.2021.V7I9.21.345	2021	Scopus Active and UGC CARE Approved Group II Journal
19.	Real-Time Women Security System Using IOT	JETIR July 2022, Volume 9, Issue 7 www.jetir.org (ISSN-2349-5162)	2022	UGC Approved Journal, Sl.No- 63975 https://www.jetir.org/view?paper=JETIR2207420
20.	Optimized Low Power Dual Edge Triggered Flip-flop with Speed Enhancement	I.J. Image, Graphics and Signal Processing, 2022, 1, 50-63 Published Online February 2022 in MECS (http://www.mecspress.org/) DOI: 10.5815/ijigsp.2022.01.05	February 2022	Scopus Indexed (nonpaid journal) https://www.mecspress.org/ijigsp/ijigsp-v14-n1/IJIGSP-V14-N1-5.pdf

21.	Performance Analysis by Improving Energy Efficiency in IoT Based Wireless Sensor Network for Routing Algorithm	Indian Journal of Science and Technology 2023; 16(11):785–794785-794. https://doi.org/10.17485/IJST/v16i11.2388	2023	UGC CARE Approved
22.	Ethernet Mac Core Using VERILOG	European Chemical Bulletin (Multidisciplinary Journal) ISSN 2063 -5346	2023	Scopus Indexed
23.	AXI VIP Verification Using UVM	European Chemical Bulletin (Multidisciplinary Journal) ISSN 2063 -5346	2023	Scopus Indexed
24.	Obstacle avoidance mobile robot with Distance Monitoring Using PLX-DAQ	European Chemical Bulletin (Multidisciplinary Journal) ISSN 2063 -5346	2023	Scopus Indexed -
25.	Design and Layout Implementation of Miller Compensated Two Stage Op- Amp	International Journal of Creative Research Thoughts (IJCRT)	2024	UGC Approved Sl. No. 49023 https://www.ijcrt.org/papers/IJCRT2407198.pdf
26.	Li-FI Based Door Lock System	International Journal of Creative Research Thoughts (IJCRT)	2024	UGC Approved Sl. No. 49023 https://www.ijcrt.org/papers/IJCRT2407039.pdf
27.	Design and Implementation of UART Transmitter and Receiver Using FPGA	IOSR Journal of Engineering (IOSRJEN) ISSN (e): 2250-3021, ISSN (p): 2278-87112219	2024	UGC approved Journal with Sl. No. 4814 https://www.iosrjen.org/Papers/

				vol14_issue8/A1408010107.pdf
28.	Design and Implementation of Arithmetic Mean Filter Using Xilinx System Generator	PRAMANA RESEARCH JOURNAL, Volume 14, Issue 08, 2024 ISSN NO: 2249-2976	2024	UGC approved Journal with Sl. No. 41241 https://drive.google.com/file/d/1DpNVgWG1oxKJdHIBzowtbvyAxlITzqma/view?pli=1
29.	Design and Implementation of I2C Protocol for Reading ADT7420 Sensor on Nexys A7 Board	International Journal of Scientific Research in Engineering and Management (IJSREM) Volume: 08 Issue: 06 June - 2024 SJIF Rating: 8.448 ISSN: 2582-3930	2024	DOI: 10.55041/IJSREM35457
30.	LI-FI BASED DOOR LOCK SYSTEM	International Journal of Creative Research Thoughts (IJCRT) www.ijcrt.org	2024 IJCRT Volume 12, Issue 7 July 2024 ISSN: 2320-2882	ISSN: 2320-2882
31.	Design And Layout Implementation Of Miller Compensated Two Stage Op-Amp	International Journal of Creative Research Thoughts (IJCRT) www.ijcrt.org	Volume 12, Issue 7 July 2024 ISSN: 2320-2882	ISSN: 2320-2882

32.	Verilog Implementation of All Digital OFDM Modulator and Demodulator	International Journal of Research Publication and Reviews, Vol 6, no 1, pp 2775-2784 January 2025	2025	https://ijrpr.com/uploads/V6ISSUE1/IJRPR37900.pdf
33.	Camera-based Security Alarming System	Journal of Digital Circuitry Innovations in Electrical Devices, Vol. 1, Issue 1 (January – April, 2025) pp: (29-37)	2025	Journal of Digital Circuitry Innovations in Electrical Devices,
34.	Design and implementation of 6T SRAM cells using cadence virtuoso	International Journal of Electronic Devices and Networking 2025;	E-ISSN: 2708-4485 P-ISSN: 2708-4477	DOI: https://www.doi.org/10.22271/27084477.2025.v6.i2a.77
35.	FPGA implementation of I2C master controller with interrupt capability feature	International Journal of Electronic Devices and Networking 2026; 7(1): 73-79	E-ISSN: 2708-4485 P-ISSN: 2708-4477	DOI: https://www.doi.org/10.22271/27084477.2026.v7.i1a.102
36.	REAL TIME DISASTER RESPONSE DRONE FOR COMMUNICATION AND SURVIVOR LOCATION	JETIR Journal of Emerging Technologies and Innovative Research	2026 JETIR February 2026, Volume 13, Issue 2	Volume 13 Issue 2 , February-2026 Date of Publication: 2026-02-05
37.	Low Power Meets High Performance: An Approximate MAC Architecture using RoBA Multipliers and Adders	IJIRCCE©2025	2025 IJIRCCE Volume 13, Issue 12, December 2025	DOI:10.15680/IJIRCCE.2025.1312066

38.	A 4 Bit Quantum Voltage Comparator Based Flash ADC for Low Noise Applications Using GPDK 90nm	International Journal of Innovative Research in Computer and Communication Engineering	2025 IJIRCCCE Volume 13, Issue 12, December 2025	DOI:10.15680/IJIRCCCE.2025.131206
39.	Quantum genetic algorithm based complementary amplitude coding for waveform optimization with sidelobe suppression	Published 29 December 2025 • © 2025 IOP Publishing Ltd. DOI 10.1088/2631-8695/ae2ce9	Engineering Research Express , Volume 7, Number 4	DOI 10.1088/2631-8695/ae2ce9

List of Publications
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Conference

SL.NO.	Paper Titled	Publication Name
1	“Scheduling in High Level Synthesis using Discrete Evolutionary Programming”	Proceedings of IEEE International Conference on Computing, Communication and Networking Technologies (ICCCNT-2012), July 26-28, Coimbatore, Tamil Nadu, India, @IEEE (Indexed in IEEE Explore)
2	“ Natural Computation for Optimal Scheduling with ILP Modeling in High Level Synthesis”	Proceedings of International Conference on Information and Communication Technologies (ICICT-2014), December 3-5,Kochi, Kerala, India, pp 167-175 @Elsevier (Indexed in Procedia Computer Science)
3	“Adaptive Particle Swarm Optimization for Best Schedule in Algorithmic Level Synthesis”	Proceedings of IEEE International Conference on Communication and Electronics Systems (ICCES2016), October 21-22, Coimbatore, Tamil Nadu, India, @IEEE (Indexed in IEEE Explore).

4	“Optimal Resource Allocation and Binding in High-Level Synthesis Using Nature-Inspired Computation”	Emerging Research in Electronics, Computer Science and Technology, Lecture Notes in Electrical Engineering 545, 24 th April 2019 Springer (pp.1107-1118), Publisher: Springer Nature Singapore.
5	Investigating Emotional Psychology in Artificial Intelligence: Key Insights and Their Role in Advancing Empathy-Driven AI Research and Applications	2026 International Conference on Intelligent and Innovative Technologies in Computing, Electrical and Electronics (IITCEE) 22nd & 23rd January 2026 DOI: 10.1109/IITCEE67948.2026.11394666 @IEEE (Indexed in IEEE Explore)
6	Combining Augmented Reality and Deep Learning in Custom Dental Implantology: Design and Implementation of the GIST-3DR Framework to Improve Accuracy and Visualization in Implant Treatments	2026 International Conference on Intelligent and Innovative Technologies in Computing, Electrical and Electronics (IITCEE) 22nd & 23rd January 2026 DOI: 10.1109/IITCEE67948.2026.11394532 @IEEE (Indexed in IEEE Explore)
7	Exploring Digital Logic Design through Quantumdot Cellular Automata Modelling and Analysis	2025 IEEE International Conference on Emerging Trends in Computing and Communication (ETCOM) DOI: 10.1109/ETCOM66606.2025.11436915 28-29 Nov. 2025 @IEEE (Indexed in IEEE Explore)
8	Development of YOLOMART: An Intelligent Retail Platform Powered by Computer Vision	INTERNATIONAL CONFERENCE AGENDA Integration of Business, Digital Technologies, and Social Sciences for a Sustainable ASEAN and Beyond (IBTSS 2026) Dates: 6–7 August 2026 Venue: American University of Phnom Penh (AUPP)

	Books Published
1	Internet of Things - Concepts, Technologies, and Applications, RG International Publication, 2026.

8. Patents Applied/Granted: National. International, commercialized.

Academic Year	Patent Number & Date of filing	Title	National/ International	Published Date	Grant Date
2025-26	494798-001	AI-based Communication Network Testing Device	National		15-03-2026
2024-25	202441074565A 02-10-2024	Power efficient VLSI implementations for real time AI applications	National	11-10-2024	
2023-24	202341056622A 23-08-2023	Verilog-Based Bist Architecture Design and Implementation for Low-Power VLSI Applications	National	08-09-2023	

9 .FDPs, Workshops, STTPs, MOOCs Attended.

B. Programs Attended (Outside Institution)

S.No	Program Title	Organization/Institute	Duration	Resource Agency	Type
1.	Decoding Quantum Computing: Principles, Algorithms and Applications	Vidyalankar Polytechnic, FDP	Two Week 15 June – 27 June, 2026.	ISTE Approved	Online FDP
2.	Creative Effective Learning Ecosystem through Innovative Techno-Pedagogies in Light of NEP 2020	Vidyalankar Polytechnic, FDP	Two Week 19 TH January to 31 January	ISTE Approved Vidyalankar Polytechnic, ISTE	Online FDP
3.	Semiconductor Devices for Next Generation Field Effect Transistors (More than Moore): A Physics Perspective	FUNDED BY THE MoE, Govt. of India	Jan-Apr 2025) 12 Weeks	NPTEL – AICTE FDP	Online FDP
4.	National-Level Online Workshop on “Application Development with AI & Essential Skill	Brainvision solution India Pvt.Ltd Dr.Ambedkar Institute of Tecnology	June 23-27 2025	AICTE	Online FDP

5.	Role of AI in Next Generation Applications	Vidyalankar Polytechnic,FDP	Two Week 16 th June 2025 to 28 th June 2025.	ISTE Approved	Online FDP
6.	Semiconductor Devices: Powering the Future of Nanoarchitectonics	NIT Jamshedpur	15/12/2025 to 20/12/2025	AICTE Training And Learning (ATAL) Academy Faculty Development Program	Online FDP
7.	Online FDP on IOT and Ubiquitous Computing for Emerging Technical Applications	Vidyalankar Polytechnic,FDP	One Week 26 August – 30 August, 2024.	ISTE Approved	Online FDP
8.	Quantum Computing and its Applications at Global Academy of Technology	Global Academy of Technology from 09/12/2024 to 14/12/2024	<i>from 09/12/2024 to 14/12/2024.</i>	<i>AICTE Training And Learning (ATAL) Academy Faculty Development Program</i>	Online FDP
9.	Digital IC Design	FUNDED BY THE MoE, Govt. of India	Jan-Apr 2024, 12 Weeks	NPTEL – AICTE FDP	Online FDP
10.	AI Evolution: From Foundations to Generative AI under TechSaksham from 14th November 2023 to 18th November 2023	Microsoft, SAP & AICTE	14-18 November 2023	<i>AICTE, ATAL, SAP</i>	Online FDP
11.	Applied Cloud Computing for Full Stack Web Development	Microsoft, SAP & AICTE	4 th December 2023 to 8 th December 2023	<i>AICTE, ATAL, SAP</i>	Online FDP

12	Introduction to Python Programming & its Applications	Visvesvaraya Technological University, Centre for PG Studies, VIAT, Muddenahalli	One week online 19th to 23rd June 2023	AICTE – VTU Joint Teachers Training Programme	Online FDP
13	Robotics and Artificial Intelligence	Visvesvaraya Technological University, Centre for PG Studies, VIAT, Muddenahalli	One week online 24 th April to 28 April 2023	AICTE – VTU Joint Teachers Training Programme	Online FDP
14	Introduction to Internet of Things (IoT))	Visvesvaraya Technological University, Centre for PG Studies, VIAT, Muddenahalli	One week online 17 th April to 21 st April 2023	AICTE – VTU Joint Teachers Training Programme	Online FDP
15	Machine Learning (Computer Science and Engineering)"	INDIAN INSTITUTE OF INFORMATION TECHNOLOGY DHARWAD.	2021-1-18 to 2021-1-22	AICTE Training And Learning (ATAL) Academy	Online FDP
16	<i>Integrated Circuits,Mosfets,OP-AMP and their Applications</i>	<i>FUNDED BY THE MoE, Govt. of India</i>	<i>Jan-Apr 2022, 12 Weeks</i>	<i>NPTEL – AICTE FDP</i>	Online FDP
17	Revolution on 5 G and Beyond with Industrial Instrumentation Approach,Machine Learning"	Dayananda Sagar College of Engineering	13/09/2021 to 17/09/2021	<i>AICTE Training And Learning (ATAL) Academy Faculty Development Program</i>	Online FDP
18	Smart City Solutions for Sustainable Future	BMS College of Engineering	02/08/2021 to 06/08/2021	AICTE Training And Learning (ATAL) Academy	Online FDP
19	Artificial Intelligence	Dr.AIT	04/01/2021 to 08/01/2021	AICTE Training And Learning (ATAL) Academy	Online FDP
20	Green Communication	BMS Institute of Technology	24/08/2021 to 28/08/2021	AICTE Training And Learning (ATAL) Academy	Online FDP
21	Inculcating Universal Human Values in Technical Education	All India Council for Technical Education(AICTE)	6th December, 2021 to 10th	All India Council for Technical Education(AICTE)	Online FDP

			December, 2021.		
22	Satellite Image and Video Data Analytics	Electronics & Telecommunication Engineering at Dr. Ambedkar Institute of Technology	22nd -27th March 2021	AICTE Quality Improvement Scheme (AQIS) Sponsored	Online FDP

10.Membership of professional bodies/societies and its details.

Sl. No	Society/ Professional Body	Type of Membership Ex: LM/Y/HY...
1	IETE	LM
2	ISTE	LM
3	CRYPTOGRAPHY SOCIETY OF INDIA	LM
4	IFERP	LM

11. Administrative Responsibilities.

Department Coordinator:

Sl. No	Coordinator Name
1	NIRF Co-ordinator
2	Induction Program, Graduation Co-ordinator
3	Student Mentor

NBA/NAAC Coordinator:

Sl. No	Coordinator Name
1	NBA Criteria 4 Head

Examination Duties:

Sl. No	Examination duties
1	Invigilation (CIE and SEE)
2	Question Paper Setter (CIE and SEE)
3	Valuation of Answer Scripts (CIE and SEE)
4	Internal Examiner for Practical Examinations

Other Institutional Responsibilities:

Sl. No	Institutional Responsibilities
1	IQAC Coordinator

12.Awards and Recognitions.

1. NPTEL TOPPER for the year 2020, 2021, 2022,2023 , Discipline Star

13.Professional Development Activities.

- Reviewer for Journals: Reviewer for Conference Papers
- Editorial Board Membership:
- Session Chair:
- Technical Committee Membership:

14.Publications Profile Links.

Google Scholar:

Scopus Author ID: [56690141800](#)

ORCID ID: <https://orcid.org/0000-0003-3141-5375>

Web of Science Researcher ID:

Vidwan Profile: 355052