

## PROFILE

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|-------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------|
| Name                          | <b>Ms. CHAITHRA S</b>                                                                                                                                 |
| Position & Affiliation        | Assistant Professor, Department of ECE                                                                                                                |
| Areas of Interest             | Digital Communication, 5G, 6G, Wireless communication, Digital Electronics using Verilog, VLSI, and Computer networks                                 |
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| LinkedIn ID                   | <a href="https://www.linkedin.com/in/chaithras.ece@cambridge.edu.in">chaithras.ece@cambridge.edu.in</a>                                               |
| Google Scholar ID             | <a href="https://scholar.google.com/citations?user=YqdqujoAAAAJ&amp;hl=en">https://scholar.google.com/citations?user=YqdqujoAAAAJ&amp;hl=en</a>       |
| Orchid ID                     | 0009-0007-6376-3354                                                                                                                                   |
| Vidwan ID                     | 270510                                                                                                                                                |
| Scopus ID                     | 59410862300                                                                                                                                           |
| Professional Webpage (if any) |                                                                                                                                                       |

### **Educational Qualifications:**

|       |                                  |       |          |
|-------|----------------------------------|-------|----------|
| Ph.D  | Presidency University, Bangalore | India | Pursuing |
| MTech | MSRIT under VTU, Belgaum         | India | 2010     |
| BE    | KIT , under VTU, Belgaum         | India | 2004     |

### **Areas of Research:**

RF amplifier , wireless communication using EDA tool , VLSI Design

### **Brief Profile:**

Presently working as Assistant Professor in Department of Electronics & Communication and Engineering, Cambridge Institute of Technology-KR Puram, Bangalore. She has received her B.E. and M.tech Degree in Digital Communication Engineering from MSRIT, Bangalore and pursuing PHD at Presidency University. with 17 years of teaching experience and research interests include Digital Communication, Wireless communication, Digital Electronics, VLSI, and Computer networks. She is a member of Professional Bodies like ISTE, IEEE, etc. She has published 20 research papers in peer reviewed /Scopus/UGC listed international/national journals. She has published 07 patents and has authored two textnooks book, one lab manual published by Sapna publications and two book chapters. She has coordinated many Guest Lectures, Workshops, Academic programs, and organizing committees for conferences and FDPs.

***Setting up labs: INTEL FPGA Academic programme by INTEL, Bangalore***

***Guiding students at various levels (BE, MTech and PhD):***

- Guided student batch and Completed Worklet “CTO07-RISC-V Vector implementation of

MobileNet-v2 on Arianne RISC-V simulator” given by **SAMSUNG PRISM**.

- Guided students to participate in Intercollege Ideathon & Hackathon competitions held at NMIT, BMSIT, Presidency University, VKIT mysore, TCS Techbytes and made them to submit proposals under AICTE Yukti portal & MSME.
- Guided many UG projects like A flexible fpga approach to image Cryptography using Pynqt board, Assistive Technology for Hands-Free Computing Using Eye Movements , Performance Evaluation of ML Models in Prediction of Heart Disease, Real -Time image encryption and decryption using Chaotic system and AI on FPGA , Real time sign language interpretation using Computer Vision, hands free PC control using Eye movement, Enhancement of image using Verilog & Matlab, Local and Remote Controlled Robotic Arm, Attendance System using RFID, Metal Detector Robo Car using Node MCU, Traffic Prediction using Machine Learning, IOT based patient Health Monitoring system etc.

#### **Awards/Achievements/Others:**

- **Advisory Committee member for the conference ICETSE-25 by AIT, Tumkur in association with VTU Belgaum.**
- Received Best Paper Award in International Conference ICETSE-25 held at Akshaya Institute of technology for the title “Deep Learning-Based Real-Time Sign Language Interpretation via Fingerspelling Detection” during 19-20 June 2025.
- Received Best Paper Award in International Conference ICETSE-25 held at Akshaya Institute of technology for the paper "Assistive Technology for Hands-Free Computing using Eye Movements” during 19-20 June 2025.
- Received Best Paper Award in IEEE International Conference held at Presidency University during March 15<sup>th</sup> -16<sup>th</sup> 2024 for the paper “LoRawan – The technology of Sewage Monitoring and Alerting system”.
- Organized workshop on Arduominds, for 5<sup>th</sup> semester UG students by experts from Oracle from 30<sup>th</sup> Nov to 1<sup>st</sup> Dec-25

**Courses Taught:** Digital Communication, Information theory & coding, Digital system design using Verilog, Hardware description language, Wireless communication, Digital Electronics, Verilog HDL, VLSI, Digital Image Processing, Principles of Communication Systems, Wireless and Cellular Communication, Satellite Communication, Basic Electronics, GSM, CMOS RF Design, Digital VLSI Design, Computer Communication Network, Speech Processing etc.

#### **Publications/Patents:**

Publications

- Presented paper on “Real-Time Image Encryption and Decryption Using Chaotic System and AI on FPGA” at **IEEE International Conference, Nepal** College of Information Technology, Nepal. ICOIICS 2025 from November 19–21, 2025.

- Presented & published a paper on “Design and Implementation of an 8-Bit DAC Using a Hierarchical Switching Approach in 45nm Technology” in a ICTSE- 25, indexed in Scopus.
- Presented & published a paper on “Assistive Technology for Hands-Free Computing Using Eye Movements” in a ICTSE- 25, indexed in Scopus.
- Presented & published a paper on “Performance Evaluation of ML Models in Prediction of Heart Disease” in a scopus indexed journal, Grenze International Journal of Engineering and Technology, June Issue.
- Presented & published a paper on “Deep Learning-Based Real-Time Sign Language Interpretation via Fingerspelling Detection.” in a scopus indexed journal, Grenze International Journal of Engineering and Technology, June Issue.
- Presented & published a paper on “A Review on Advanced CMOS High Frequency Class E RF Power Amplifier in TSMC 90nm For 6G Wireless Networks” in a scopus indexed journal, Grenze International Journal of Engineering and Technology, June Issue.
- Presented & Published a paper on Implementation of Local & Remote Controlled Robotic Arm” in a scopus indexed journal, Grenze International Journal of Engineering and Technology, June Issue.
- Presented and Received Best Paper Award in IEEE International Conference held at Presidency University during March 15<sup>th</sup> -16<sup>th</sup> 2024 for the paper “LoRawan – The technology of Sewage Monitoring and Alerting system”.
- Published a paper in International Conference on ENHANCEMENT OF IMAGE USING VERILOG & MATLAB in International Research Journal Of Modernization in Engineering Technology and Science(IJREMETS) on 12-07-23 , <https://www.doi.org/10.56726/IRJMETS43063>, Impact Factor- 7.868, e-ISSN: **2582-5208**
- Presented a paper on Published a paper in International Conference on “Local and Remote Controlled Robotic Arm” in International Conferences on advances in Engineering and technology for Intelligent systems at Dayanand Sagar College of Engineering between **16<sup>th</sup> to 18<sup>th</sup> May 2023**.
- Presented a paper on Optical Flow based object Movement tracking in IEEE International Conference on Nano composites for Aerospace applications held at CITECH, Bangalore during 2<sup>nd</sup> Feb to 4<sup>th</sup> Feb 2023.
- Published a paper in International Conference on “Automated Smart Robot Library Management System in IRJMETS during July2020. Volume: 02/Issue: 07/July-2020, e-ISSN: **2582-5208**
- Presented a paper on “Attendance System using RFID” in the National conference on Emerging trends in Engineering (NCETE-2021) during July 2021.
- Presented a paper on “Metal Detector Robo Car using Node MCU ”in the National conference on Emerging trends in Engineering (NCETE-2021) during July 2021.
- Presented a paper on “Traffic Prediction using Machine Learning ”in the National conference on Emerging trends in Engineering (NCETE-2021) during July 2021.
- Presented a paper on “Introduction of Artificial Intelligence in Power distributed Systems” in the National conference on Emerging trends in Engineering (NCETE-2021) during July 2021.
- Presented a paper on “Study of Edge Computing with Deep Learning” in the

National conference on Emerging trends in Engineering (NCETE-2021) during July 2021.

- Presented a paper on “IOT based patient Health Monitoring system” in the National conference on Emerging trends in Engineering (NCETE-2021) during July 2021.
- Presented a paper on “Sixth Sense Device Gestural Interface using MATLAB” in National conference IJMTE-2019 held at Cambridge Institute of Technology, Bangalore on 3<sup>rd</sup> May 2019.
- Presented a paper on “LI-FI Technology” in National conference RACIT-2018 at Akshaya Institute of Technology held on 20<sup>th</sup> April 2018.
- Participated in 3<sup>rd</sup> International Conference on Convergent Innovative Technologies ICCIT-2016 at Cambridge Institute of Technology, Bangalore held on 20<sup>th</sup> May 2016.- ISSN:2319-6890.
- Presented a National Level paper on “Concatenative Speech Synthesis Model” at Maratha Vidya Prasarak Samaj Karmaveer Adv. Baburao Ganpatrao Thakare College Of Engineering Nashik held on 25th to 27th March 2010 and it has been published in the conference proceedings.

#### Patents

| SI No. | Application no. | Status(P Published/Granted) | Inventors                                 | Title                                                                                           | Date (Published/Granted) |
|--------|-----------------|-----------------------------|-------------------------------------------|-------------------------------------------------------------------------------------------------|--------------------------|
| 1.     | 478018-001      | Under process-Design Patent | Prof. Chaithra S                          | IOT Medical device with charging point                                                          | 26-10-2025               |
| 2.     | 202541008549 A  | Published                   | Prof. Chaithra S                          | System and method for integration of Algebraic Topology in Neural Network Architectures         | 21-02-2025               |
| 3.     | 202241075394    | Published                   | Prof. Chaithra S                          | Smart farming for efficient Crop                                                                | 06-01-2023               |
| 4.     | 202241075397    | Published                   | Prof. Chaithra S & Prof. Raghunatha Reddy | AI based automatic dispenser for smart cities.                                                  | 06-01-2023               |
| 5.     | 202341030356    | Published                   | Prof. Chaithra S                          | System and method of local and remote controlled Robotic Arm                                    | 2023                     |
| 6.     | 202341034746    | Published                   | Prof. Chaithra S                          | Floor Cleaning Robot                                                                            | 2023                     |
| 7.     | 202211015286    | Published                   | Prof. Chaithra S                          | IOT and Block chain based detection and prevention of rice plant disease using image processing | 1-04-2022                |

Book/Book  
Chapters

- Authored & Published a Text Book on “COMPUTER NETWORK - PRACTICE AND THEORY” by Scientific International Publication House during Jan- 2025.
- Published a Book chapter on "IOT in Communication Technologies" during August 2023 in IIP series
- Authored & Published “Reference Manual for HDL Lab” for IV semester ECE and TCE and it has been published by Sapna Publications in the month of March 2009.

**Research and Consultancy:**

- Presently Pursuing PHD in the area RF amplifier Design for 5G/6G wireless communication using EDA tool.