

An Autonomous Institution Affiliated to Visvesvaraya Technological University (VTU) Belagavi Approved by All India Council for Technical Education (AICTE), New Delhi,Recognized by Govt. of Karnataka, UG Programs Accredited by National Board of Accreditation (NBA): CSE, ECE & ISE www.epcet.edu.in

## **Research Center- Electronics and Communication Engineering**

The Department of Electronics and Communication Engineering at East Point College of Engineering and Technology (EPCET) has made remarkable progress in its research journey since its establishment in April 2007. With the R&D center approved by Visvesvaraya Technological University (VTU), Karnataka, the department fosters research-driven minds and is committed to making significant contributions to the fields of science, technology, and engineering.

### **Faculty and Scholar Achievements**

EPCET has become a center for innovation and exploration, supported by eleven dedicated research supervisors mentoring scholars. Currently, nine research scholars are registered under the R&D center, and eight have successfully earned their doctorates within the stipulated timeframe. The college emphasizes strong mentorship and practical support, empowering students and staff to pursue innovative ideas and address real-world challenges effectively.

## Research Philosophy and Infrastructure

The R&D center at EPCET is dedicated to cultivating a culture of learning, innovation, and experimentation. By inspiring scholars to think creatively and push boundaries, the department provides the tools, resources, and guidance needed to tackle critical technological challenges.

#### **Active Research Domains**

The department engages in a wide range of active research areas, addressing emerging technologies and practical applications. Key focus areas include:

- **Signal Processing**: Concentrates on analysing, transforming, and manipulating signals to extract valuable information or enhance specific features.
- **Wireless Communication**: Serves as a foundation of modern connectivity, facilitating data exchange over distances without physical cables.
- **Image and Video Processing**: A crucial domain in Electronics and Communication Engineering, focusing on analysing, enhancing, and manipulating visual data.
- **Control Systems**: Plays an essential role in various industries by enabling system regulation and automation to achieve desired performance.

• **VLSI Design**: Developing tailored and adaptable hardware solutions to meet the needs of specific applications.

#### **Additional Focus Areas**

The R&D center at EPCET continually broadens its focus by tackling contemporary challenges in areas such as the Internet of Things (IoT), Industrial IoT (IIoT), Artificial Intelligence (AI) in Electronics and Communication, Advanced Signal Processing, VLSI, and Nanoelectronics. Scholars are encouraged to collaborate with industry partners, leading academic institutions, and government organizations to produce impactful and meaningful research outcomes.

#### **Commitment to Excellence**

The mission of the R&D center is to empower research scholars to achieve academic excellence while transforming their ideas into practical solutions. This vision is driven by cutting-edge laboratories, advanced computational resources, and a collaborative culture that seamlessly connects academia with industry.

### **Open-Source Software:**

Open-source software is a cornerstone of Electronics and Communication Engineering (ECE), offering students, researchers, and professionals the freedom to access, modify, and distribute software. It promotes innovation, collaboration, and learning, making it an indispensable resource across various fields of study and application.

**ECE Research Center Facilities** 

Name	R&D Center		
No of Systems	13		
System Configurations	Processor: Intel(R) Cote 9TM) i5-6500 CPU @ 3.20GHz RAM: 16 GB HDD : 250 GB		
Operating System	Windows 10 Pro		
Internet Bandwidth	1Gbps		
Softwares	<ul> <li>MATLAB with Simulink, communications, DSP system, Image processing, statistical and machine learning toolbox</li> <li>LabVIEW</li> <li>Silvaco Simucad</li> <li>Code Composer Studio</li> </ul>		
Hardwares	PSoc-first touch the ultimate starter kit		

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	by cypress
	<ul> <li>Logic Analyzer</li> </ul>
	<ul> <li>Spectrum Analyzer</li> </ul>
	<ul> <li>Vector Network Analyzer</li> </ul>
	<ul> <li>TMS320C6748 Digital Signal</li> </ul>
	Processing Kit
	<ul> <li>Analog Device Kit</li> </ul>
	ASLK Pro Kit
	<ul> <li>TINA-TI Simulation Tool</li> </ul>
Open-Software	• Keil
	<ul> <li>Octave</li> </ul>
	• PSpice

# List of Research Scholars from Electronics and Communication Engineering-R&D Center:

SL. No.	Name of the Research Supervisor/ Co-Supervisor	Name of the Research Scholar	Area of Research	Year of Registration	Year of Award	Status
1	Dr. Chaitanya Kumar M V	Mrs. Uma Reddy	VLSI	2007	2016	Awarded
2	Dr. N G Kurahatti	Mr. Neelappa M D	VLSI	2008	2017	Awarded
3	Dr. Josephine Prem Kumar	Mrs. Ganashree	VLSI	2010	2016	Awarded
4	Dr. Elumalai	Mrs. Jenitha A	Bio Medical Applications	2012	2021	Awarded
5	Dr. Keshaveni	Mrs. Mamatha R B	VLSI	2012	2020	Awarded
6	Dr. Keshaveni	Mrs. Priyamvada Singh	Image Processing	2012	2018	Awarded
7	Dr. Keshaveni	Mrs. Sunitha H D	VLSI	2012	2018	Awarded
8	Dr. T Christy Bobby	Mrs. Namana Vijaya Madhavi Murthy	Image Processing	2014	2023	Awarded
9	Dr. Rohini Deshpande	Mrs. Hemavathi N V	Image Processing	2014	-	Course Work completed
10	Dr. Rohini Deshpande	Mr. Ayazpasha S	Signal Processing	2014	-	Course Work to be completed
11	Dr. Rohini Deshpande	Ms. Gloria N	Signal Processing	2014	-	Course Work completed
12	Dr. E. Krishna Kumar	Mr.Santhosh Kumar B	Instrumentation & Control	2015	-	Change of Research Centre
13	Dr. Rohini	Mr. Ullas Kumar	Signal	2014	-	Course

	Deshpande		Processing			Work completed
14	Dr. Ganapathi D M/Dr. Yogesh G S	Mr. B. Somashekar	VLSI	2019	-	Comprehe nsive Viva completed
15	Dr. Rajashree Narendra	Mrs. Asha S	Wireless Communication	2019	-	Course Work completed
16	Dr.Rajashree Narendra	Mrs. Madhushri N Kumar	Wireless Communication	2019	-	Course Work completed
17	Dr. Jayanthi Kumari T R	Mrs. Shilpa S	Speech Processing	2023	-	Course Work to be completed
18	Dr. K Harshavardhana Reddy	Mrs. Vetrikani R	Power Electronics	2023	-	Course Work completed

# List of Research Supervisors from Electronics and Communication Engineering-R&D Center:

SL.	Name of the Research	No. of Research	No. of Research	No. of Research
No.	Supervisor/	Scholars Registered	<b>Scholars Pursuing</b>	Scholars Awarded
	Co-Supervisor			
1	Dr. Ganapathi D M/	01	01	-
	Dr. Yogesh G S			
2	Dr. Rohini Deshpande	04	04	-
3	Dr. Rajashree Narendra	02	02	-
4	Dr. Jayanthi Kumari T R	01	01	-
5	Dr. K Harshavardhana	01	01	-
	Reddy			