

## About the College

Geethanjali College of Engineering and Technology (GCET) was established in the year 2005 with the sole objective of providing quality technical education accessible and affordable to youth. The college has excellent infrastructural facilities and modern laboratories. It also has highly competent and dedicated faculty. The college has been recognized as an R&D center by Scientific and Industrial Research Organization (SIRO). The college offers undergraduate programs in various engineering branches, namely, CSE, CSE with specialization in Artificial Intelligence and Machine Learning, Data Science, Cyber Security and IoT, IT, ECE, EEE, ME and CE with a total intake of 1200 students. All the eligible B. Tech programs are accredited by NBA. The college is accredited by NAAC with A<sup>+</sup> grade in the AY 2022-23. "Autonomous" status by UGC was extended up to AY 2026-27. College is an ISO 9001:2015 certified institution since 2011. GCET also offers MBA program and M. Tech program in CSE discipline. The Institution was awarded under EXCELLENT band in ARIIA 2021 and a 4-star rating by MHRD-IIC and was placed in the band 101-150 in NIRF Innovation ranking 2023 and in the band 251-300 in NIRF 2021.

## About ECE Department

The Department of Electronics and Communication Engineering (ECE) was established in the year 2005. Right from its inception it is continuously striving to impart quality education and promoting competitive spirit among students for academic excellence. The department has 13 well equipped laboratories with good infrastructure. The department has qualified, experienced and dedicated faculty. A good number of technical

papers are being published regularly by faculty in various National/International Journals of repute. The department has entered into MoU with various organizations to provide real time training to students in the fields of Advanced Communications, Embedded Systems, IoT and VLSI Design. The department has two Centers of Excellence in VLSI Design; and Embedded Systems & IoT, through which intensive training is imparted to the students in core areas. Students' innovative and creative ideas are nurtured and honed under "Srujanastra" Club. The department was sanctioned consultancy and research projects by different funding agencies including SERB-DST, MTRDC (DRDO), and RCI-(DRDO), and VEM Technologies, of worth more than one crore rupees.

## Aim of the Program

The proposed Symposium on "5G Communications and Beyond" is a specialized program that delves into the mobile networking concepts for 5G wireless communication networks. Wireless communication has changed the social fabric of humanity like no other technology. Over the last few decades, the mobile communication industry is working to provide the seamless data connectivity and explicit quality of service. 5G/6G is going to play a significant role in modern Machine Learning based applications. This Symposium focuses on exploring the fundamentals and some of the important technological developments, specifically in the radio access technology that are expected to drive 5G and beyond. Participants will be able to gain knowledge of fundamentals and developments in 5G communications and the journey towards 6G.

## Registration Fee

No registration fee for participation. A maximum of 50 participants are allowed to attend this Symposium on a first come first serve basis.



## SERB sponsored National Symposium on "5G Communications and Beyond"

(Offline Mode)

02-03 February 2024

*Organized  
By*

**Department of  
Electronics and Communication Engineering**



## Geethanjali College of Engineering and Technology

(Accredited by NAAC with 'A+' grade & NBA, UGC Autonomous  
Institution and permanently affiliated to JNTUH)

**Cheeryal (V), Keesara (M), Medchal (Dist.),  
Telangana State- 501301**

**Visit us:** [www.geethanjaliinstitutions.com](http://www.geethanjaliinstitutions.com)  
[www.gcetece.edu.in](http://www.gcetece.edu.in)

## Course Contents

- Evolution from 2G to 5G and technical challenges, Technology drivers for 5G NR.
- New 5G Scalable waveforms
- Machine to Machine Communication
- Massive MIMO and millimeter wave MIMO
- Software Defined Networks
- Small Cell
- Energy Efficient green networks
- Non-Orthogonal Multiple Access (NOMA)
- Channel codes for 5G communication- LDPC codes
- V2X Technology
- 5G Use cases and scenarios.
- Application of ML in 5G and beyond
- 6G waveforms

## Resource Persons

Eminent personalities with expertise in related fields from IITs, NITs, and other Universities of repute and stake holders from different organizations such as M/s Chander Research Labs and M/s National Instruments, will form the core faculty for delivering the content.

## Organizing Committee

### Chief Patron

**Sri. G.R. Ravinder Reddy**  
Chairman

### Patron

**Dr. S. Udaya Kumar**  
Principal

### Coordinator

**Dr. P. Srihari**  
Dean R&D and Professor, ECE

### Convener

**Dr. M. Jagan Mohana Rao**  
Associate Professor, ECE

### Co-Coordinator

**Dr. M. Shoukath Ali**  
Associate Professor, ECE

### Advisory Committee

Prof. B. Hari Kumar, Dean, SE & CE  
Dr. G. Sreelakshmi, HoD, ECE  
Dr. P. Vijai Bhaskar, Dean (Academics)  
Dr. B. L. Prakash, Professor, ECE  
Prof. O.V.P.R. Siva Kumar, Professor, ECE

### Steering Committee

Dr. P. Sudhakar, Associate Professor  
Dr. U. Applu Raju, Associate Professor  
R. Odaiah, Associate Professor  
A. Shankar, Associate Professor  
S. Jyothirmaye, Associate Professor  
M. Sowjanya, Associate Professor  
T. V. Chandra Sekhar, Assistant Professor

## Target Participants/ Eligibility

Faculty from AICTE approved engineering colleges, institutions, and from R&D organizations with basic degree in Electronics and Communication Engineering, Electrical and Electronics Engineering, Electronics and Instrumentation Engineering, Electronics and Computer Engineering and those who are associated with research in Wireless Communications domain.

## Certificate

Participation Certificate will be issued to all the participants, for which the attendance for the symposium on both days is mandatory.

## For further details contact:

**Dr. M. Jagan Mohana Rao**

**Convener**

Mobile: 7680923199

**Email ID:** [mjaganmohanarao.ece@gcet.edu.in](mailto:mjaganmohanarao.ece@gcet.edu.in)

## Note:

Faculty members desirous of participating in the symposium shall send the following particulars for registration:

Name, Affiliation, Contact Number, and mail-id to the convener by not later than 25.01.2024.