



**ALVA'S INSTITUTE OF ENGINEERING & TECHNOLOGY**  
(Unit of Alva's Education Foundation (R), Moodbidri)  
Affiliated to Visvesvaraya Technological University, Belagavi & Approved by AICTE, New  
Delhi. Recognized by Government of Karnataka.  
A+, Accredited by NAAC& NBA(ECE & CSE)  
Shobhavana Campus, MIJAR-574225, Moodbidri, D.K., Karnataka  
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DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

## Report of Technical Talk- II

### Topic: "Wireless Communication"

**Resource Person:**

**Date: 21-11-2023**

**Time: 11:00AM to 1:00 PM.**





**ALVA'S INSTITUTE OF  
ENGINEERING & TECHNOLOGY**  
Shobhavana Campus, Mijar, Moodbidri, Karnataka-574225

**ELECTRONICS AND COMMUNICATION ENGINEERING**



**A TECHNICAL TALK FOR STAFF AND  
STUDENTS OF ECE**





**ECE**

**21 November 2023@ 11:00AM**  
**'Wireless Communication'**

**Talk  
#2**

**By,  
Dr. VEENA DEVI  
SHASRTIMATH V,  
Professor, Dept. of ECE,  
NMAMIT Nitte.**

**Venue: Room no .301  
Mechanical block , AIET**

**Understand the  
Appctions of  
WIRELESS  
Communications.**



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- Department of ECE conducted the first technical talk of the odd semester 2023-24 on '**Wireless Communication**' by Dr. VEENA DEVI SHASHRIMATH V, **Professor, Dept. of ECE, NMAMIT Nitte** on 21/11/2023. She completed B.E (Instrumentation Technology). First class with Distinction, from SJCE, Mysore University, 1991
- M.Tech (Digital Electronics and Advanced Communications). First class with Distinction, from MIT, MAHE, Manipal, 2002
- Awarded Ph.D. degree on 30th May 2015, in the Field of Remote sensing and Image processing under Mangalore University
- Image processing,
- Remote sensing,
- Signal Processing,
- Cryptography,
- Electromagnetic Field Theory,
- Digital Electronics and Advanced Communications.
- Life Member, ISSE
- Life Member, ISTE
- Member, WIE

She guided Ph. D – 06 M.Tech. - 11 and B.E. - 35

She published 18 International Journals and presented papers in 16 International Conferences

Wireless communication takes place over free space through RF (radio frequency), one device, a **Transmitter**, sends signal to another device, a **Receiver**. Two devices (transmitter and receiver) must use same frequency (or channel) to be able to communicate with each other. If a large number of wireless devices communicate at same time, radio frequency can cause interference with each other. Interference increases as no of devices increases. wireless communication system has become an essential part of various types of wireless communication devices, that permits the user to communicate even from remote operated



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areas. There are different types of wireless communication devices like mobiles. Cordless telephones, Zigbee wireless technology,

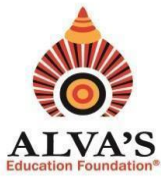
GPS, Wi-Fi, satellite television, and wireless computer parts. Current wireless phones include 3 and 4G networks, Bluetooth, and Wi-Fi technologies.

GSM, also known as Global System for Mobile Communications, is a mobile communications standard set up by the European Telecommunications Standards Institute and contains the protocols that define 2G cellular networks.

In time, GSM went beyond voice mobile telephony and now includes data communications, first through GPRS (General Packet Radio Services) and later through EDGE (Enhanced Data rates for GSM Evolution) . She explained about,

- a Home Location Register (HLR)
- a Mobile Switching Center (MSC)
- a Visitor Location Register (VLR)
- an Authentication Center (AuC)
- Equipment Identity Register (EIR)
- Mobile termination (MT)

She discussed about handover that takes place during a call, i.e. when the mobile phone is in active (dedicated) mode. A mobile phone can also be in idle mode. In this case, the mobile phone is switched on, but no resources are allocated to it to allow transmission of user data. In this mode, the mobile phone is still listening to information, broadcasted by the base station. The mobile phone is then paged in the cell. This means the Service continuation without interruption Mobile phone is active, e.g. a call takes place 4 phone receives information that there is a mobile terminated call. A cellular system may consist of hundreds of cells. If the mobile network does not know, in which cell the mobile phone is located, it must be paged in all of them. To reduce load on networks, paging is done in small parts rather to a group of cells of a mobile network.



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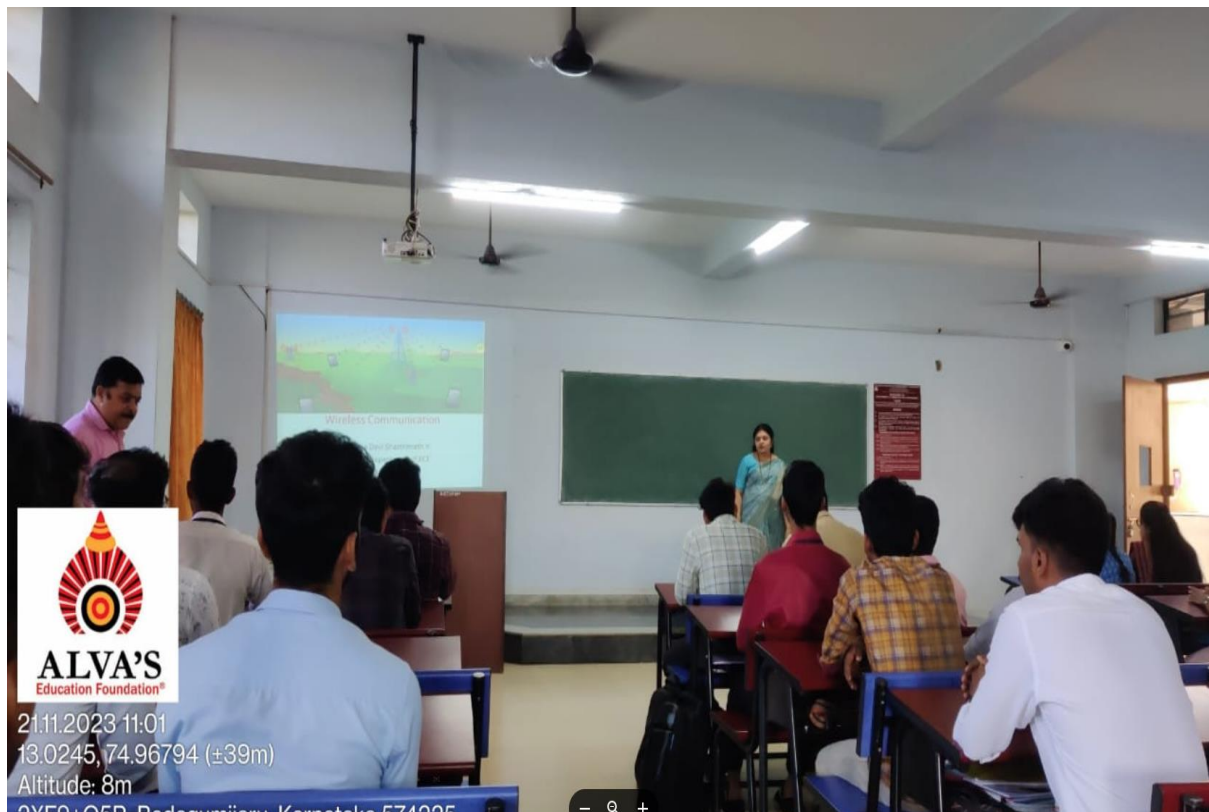
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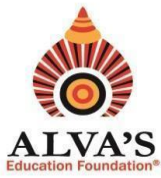


Alva's  
Wireless Communication  
21.11.2023 11:03  
13.02448, 74.96792  
2XF9+Q5R, Badagumijaru, Karnataka 574225



21.11.2023 11:01  
13.0245, 74.96794 ( $\pm 39m$ )  
Altitude: 8m  
2XF9+Q5R, Badagumijaru, Karnataka 574225





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The event concluded successfully, leaving the students inspired and equipped with knowledge to embrace the advancements in these exciting fields. Finally Dr. DV Manjunatha Professor, department of ECE expressed gratitude to the resource person for giving such an informative talk to the students.