MITS
MADANAPALLE INSTITUTE OF TECHNOLOGY & SCIENCE
(UGC-AUTONOMOUS INSTITUTION)
Estd 1998
NBA NATIONAL BOARD OF ACCREDITATION
CIVIL,CSE,ECE,EEE,MECH, MBA & MCA
Accredited by NAAC A+ Grade
nirf NATIONAL INSTITUTIONAL RANKING FRAMEWORK
MITS ranked in the band 251-300-NIRF 2022

# A Report on Guest Lecture
## "Future Intelligent Communication with 6G Technology"
## Organised by Department of Electronics & Communication Engineering
## on 04.09.2024


**Submitted by: Dr. Suman Saurav and Mr. Kashiraj V Kalshetti, Department of Electronics & Communication Engineering**
**Resource Person: Dr. Tasher Ali Sheikh, Lecturer, Department of Electronics & Telecommunication, Girl's Residential Govt. Polytechnique, Assam**
**Venue: Scaleup Room**
**Attendance: 70 participants, including faculty and students**
**Mode of Conduct: Online**
**Report Received on 06.09.2024**

### Program Overview:
The program commenced at 11:10 AM with a welcome address by Vice principal Dr. Ramanathan and Dr. S. Rajasekaran, Head of the Department of ECE, who introduced the resource person, Dr. Tasher Ali Sheikh, currently working as a Lecturer, Department of E&TE, Residential Girl Polytechnic, Govt. of Assam. Dr. Sheikh began the session by expressing his gratitude to the participants, organizing committee, Head of the Department, Principal, and Management of MITS for the opportunity to share his insights and research on "Future Intelligent Communication with 6G Technology."

### Key Points Discussed:

1. **Introduction to 6G Technology:**
    1. Overview of the evolution from 5G to 6G.
    2. 6G's role in revolutionizing global communication.
2. **Key Features of 6G:**
    1. Ultra-low latency and high-speed data transfer.
    2. Integration with Artificial Intelligence (AI) and Machine Learning (ML).
    3. Support for immersive augmented and virtual reality experiences.
3. **Potential Applications of 6G:**
    1. Enhancing smart cities with real-time data analytics.
    2. Advancements in autonomous vehicles and smart transportation.
    3. Improved telemedicine and remote surgery capabilities.
4. **Research and Development in 6G:**
    1. Current global trends in 6G research.
    2. Contributions from Nokia Bell Labs to the 6G ecosystem.
    3. Collaboration opportunities between academia and industry.
5. **Challenges in 6G Deployment:**
    1. Spectrum allocation and regulation issues.
    2. Ensuring cybersecurity and data privacy.
    3. Infrastructure requirements and cost implications.
6. **Career Opportunities in 6G:**
    1. Research and development roles in telecom companies.
    2. Opportunities in AI and ML integration with communication networks.
    3. Global career paths in technology-driven sectors.

7. **Q&A Session:**

    1. Addressing queries from faculty and students on research opportunities, career paths, and 6G technology's future impact, impact on health.

**Conclusion:**

The session provided an in-depth understanding of the future of communication technologies with a focus on 6G. Dr. Tasher Ali Sheikh's presentation offered a comprehensive overview of the advancements in 6G technology, its potential applications, and the challenges ahead. His experiences as a research scientist in the field helped bridge the gap between theoretical knowledge and practical implementation.

**Program Outcomes:**

- Increase awareness among students about emerging technologies and their applications.
- Encourage students to explore research opportunities in 6G and related fields.
- Strengthen academic-industry collaboration for innovative research projects in communication technology.