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Guest lecture organized by the

Department of Electronics and Communication Engineering

Report on the Guest Lecture

"Intelligent Reflecting Surfaces: Fundamentals and Applications Towards 6G Wireless Networks"

A guest lecture on **"Intelligent Reflecting Surfaces: Fundamentals and Applications Towards 6G Wireless Networks"** was organized by the ECE and IIOT Department on 16thOctober 2024.

ABOUT THE SESSION

The session started at 10.30AM with 330 participants, focussing on Fundamentals and Applications Towards 6G Wireless Networks with the benefits of IEEE Society.

Session (16.10.2024): Inauguration Ceremony and FN Session

The session began with Sandhya Bhat, Rachitha, 5thSemester ECE students welcoming the chief guest **Dr. PRIYANKA DAS, Assistant Professor at IIIT Bangalore ,** Uma Maheshwaran, Principal, Dr. SrinivasL Gombi, Dean Academics, Dr. Niranjanappa, Dean Research, and Dr. Shima Ramesh Maniyath, HoD-ECE, MVJCE. As a token of appreciation, a flower bouquet was presented to the chief guest by the Principal, MVJCE. Followed by the introduction, the session was continued by the chief guest on the topic "Intelligent Reflecting Surfaces: Fundamentals and Applications Towards 6G Wireless Networks".

During the session, the Chief Guest delivered an insightful and thought-provoking address on the topic of **Reconfigurable Intelligent Surfaces (RIS)**, a revolutionary concept in the field

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of wireless communications. The chief guest emphasised the significance of this emerging technology, explaining its potential to transform the future of wireless networks, particularly in the context of **5G and 6G** systems.The chief guest elaborated on how these surfaces consist of low-cost, passive reflecting elements which can intelligently redirect and modify signals to improve coverage, enhance signal strength, and reduce interference.

The session highlighted the core idea that RIS has the potential to overcome limitations faced by conventional MIMO systems and could be a game-changer in the design of green and energy-efficient wireless communication systems. This novel approach can lead to better connectivity in urban environments, smart cities, IoT-based infrastructure, and satellite communication systems.This informative session served as an eye-opener for students and faculty alike, motivating them to explore research areas that align with future technological demands.The Session ended at 12.30PM.

Dr. Uma Maheshwaran,Principal MVJCE with Chief Guest Dr. PRIYANKA DAS.

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Deleted[Microsoft account]: Future of electronics at the "Step into the Future" Expo, where cutting-edge innovations meet tomorrow's technology. This one-of-a-kind event showcases groundbreaking electronics projects developed by visionary minds. AI-driven gadgets and smart home devices to wearable tech and advanced robotics, the expo will provide a glimpse into how electronics are shaping the world of tomorrow.
Massive Multiple Input, Multiple Output (MIMO) technology will be further enhanced in 6G, allowing for more efficient use of the spectrum and improved signal quality.6G represents a transformative leap in wireless communication, promising to revolutionize how we connect, interact, and engage with the world around us.

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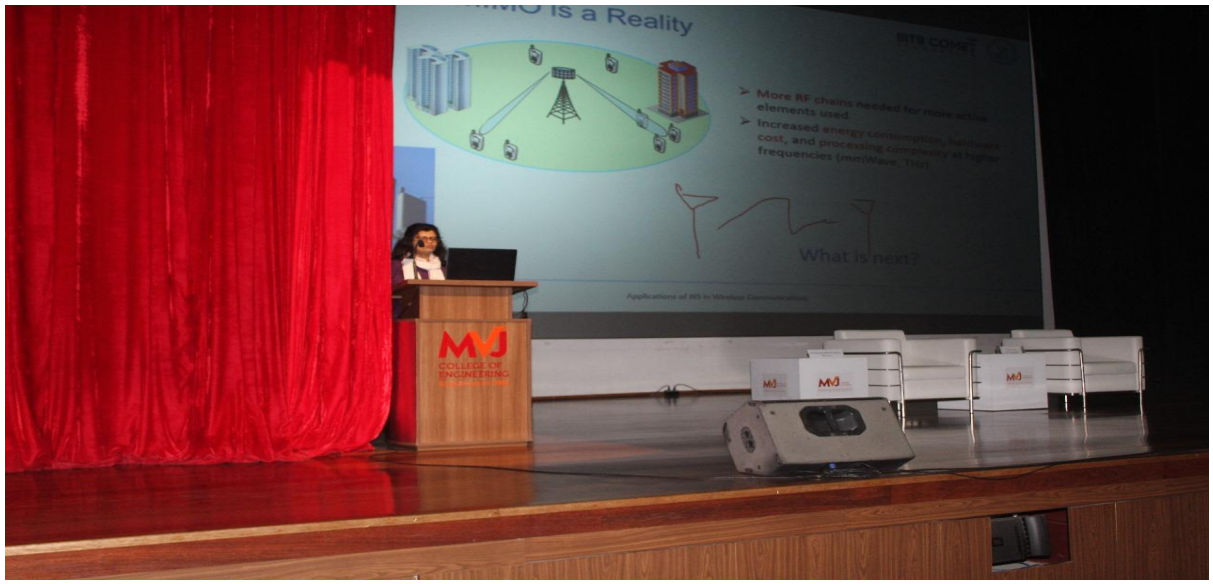

Chief Guest Dr. PRIYANKA DAS delivering the insights of Intelligent Reflecting Surfaces: Fundamentals and Applications Towards 6G Wireless Networks.

Participants attending the Guest Lecture

Outcomes:

1. Attendees gain insights into emerging trends like AI, IoT, energy-efficient devices, smart homes, and robotics.
2. The expo drives momentum for new product categories and technologies, pushing industry trends forward.