

Report

Expert Lecture

(Session: - 2022-23)

Topic of Talk: An Energy efficient smart space system using LoRa Network with security constraint

Resource Person Name and Affiliation: - **Dr. Hari Prabhat Gupta**, Associate Professor, in the Department of Computer Science and Engineering, Indian Institute of Technology (BHU) Varanasi, INDIA.

Date: - 03/02/2022

Keynote Session Time: 10:30 am - 11:00 am

Link of the Session: - <https://meet.google.com/maq-nnib-wbh>

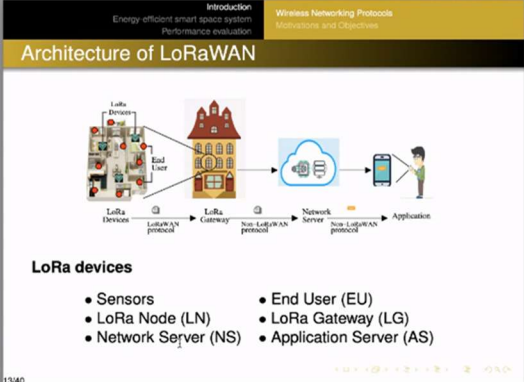
No. of Participant: - 81

Summary of the keynote session:-

- Sir has talked about the different architectures for performance evaluation of efficient smart space systems like LoRaWAN.
- Sir has also discussed the devices used in architectures like Sensors, nodes, gateway etc.
- Sir has also explained wireless networking protocol resources.
- Sir has emphasized on the motivation and limitations of interference problem, data transmission problem, Duty cycle problem.

Screenshots of the Session:-

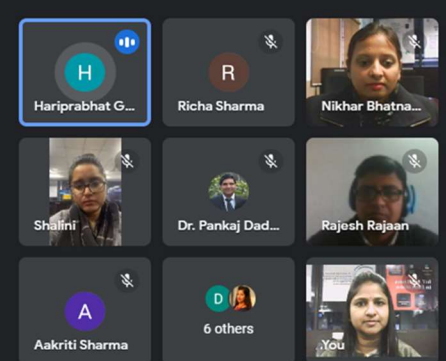
The top screenshot displays a presentation slide titled "Short and long range protocols". The slide includes a graph showing "Data rate & Power Consumption" (Y-axis, ranging from 1 Kbps to 100 Mbps) versus "Range" (X-axis, ranging from 1 m to 10 km). The graph compares various protocols: Wi-Fi, Bluetooth, Zigbee, 4G LTE, 5G, Cellular, LoRaWAN, and NB-IoT. A legend indicates "Cost: Low (blue) to High (red)". The bottom screenshot displays a presentation slide titled "Smart Space System using LoRaWAN". The slide features a map of India with various IoT devices and a globe. Both screenshots show a grid of participants on the right side of the screen, including Dr. Hari Prabhat Gupta, Nikhar Bhatnagar, Shalini, Dr. Pankaj Dadhech, Dr. Meenakshi Nawal, and You.



Architecture of LoRaWAN

LoRa devices

- Sensors
- LoRa Node (LN)
- Network Server (NS)
- End User (EU)
- LoRa Gateway (LG)
- Application Server (AS)



10:51 AM | maq-nnib-wbh

GROUP PHOTOGRAPH

meet.google.com/maq-nnib-wbh
11:58 AM | maq-nnib-wbh

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