

Department of  
**Electronics and Communication  
Engineering**



# Jaypee University of Information Technology Waknaghat

## Event Report: Session-2

10<sup>th</sup> July, 2021

Department of Electronics and Communication Engineering of Jaypee University of Information Technology, Solan organized an amazing second session of “Workshop on Industrial Revolution 4.0” on 10<sup>th</sup> July 2021. The topic of the second session was **Introduction to IOT: Research Issues and Challenges** conducted by an honourable speaker **Dr. Vijay Chaurasiya**, Associate Professor, Department of Information Technology at IIIT Allahabad.



Student Member of Technovatorz Club, **Ms. Pragya** and **Ms. Sagrika** welcomed and introduced the second session speaker **Dr. Vijay Chaurasiya**. Our eminent speaker served as an inspiration to participants by delivering his motivation towards the domain of Internet of Things and his immense great work in various fields including Computer Networks, Machine Learning, Applications and Protocols and Wireless Networks.

REC Dr. Vijay K. Chaurasiya is presenting

## Use of IoT: Making Things Smart

Now we want everything to be smart like:

- Smart Home
- Smart City
- Smart Transport System
- Smart Watch
- Smart TV
- Smart Car
- Smart Healthcare
- Smart Workplace
- Smart Industries.....

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11:27 AM | cxu-ziaj-dvv

DR. ISHA MALH... pkpoonguzhali ... Parsaa Azam  
 Dr. Vijay K. Ch... Pardeep Garg Ms. Sofia Kuma...  
 Vikas Baghel naveen jaglan Aruna E  
 Rishi Rana 80 others You

He explained that IoT solutions have become a regular part of our lives from the smartwatch on your wrist to industrial enterprises, connected devices are everywhere. Having things work for us is no longer sci-fi fantasy and also highlighted the industry 4.0 concept to participants and presented examples of solutions that are altering the manufacturing industry. He gave an overview of recent trends in Industrial Revolution 4.0 trends of wireless connectivity, AI, ML, Computation, Research issues and IoT Industry applications.

REC Dr. Vijay K. Chaurasiya is presenting

## Wireless Communication options for IoT Network

Internet of Things

Mahesh Kamalakar Bhiwapurkar has been removed from the meeting

PRAGYA TIWARI... Dr. Vijay K. Cha... Nishant Jain  
 pkpoonguzhali ... SAGRIKA GAR... Parsaa Azam  
 Prabhat Ranjan ... 91 others You

His experience in the field of IOT changed our perception from the primitive knowledge of communication to interaction between sensors, devices, gateways, servers, and user applications is the essential characteristic that makes the Internet of Things and what enables all this smart stuff to talk and interact are the IoT protocols which can be seen as languages that the IoT gear uses in order to communicate.

Dr. Vijay K. Chaurasiya is presenting

## A 7-Layer Model for IoT

Services	Energy, Entertainment, Health, Education, Transportation, ...	S e c u r i t y
Apps and SW	SDN, SOA, Collaboration, Apps, Clouds	
Analytics	Machine learning, predictive analytics, Data mining, ...	
Integration	Sensor data, Economic, Population, GIS, ...	
Interconnection	WiFi, Bluetooth, ZigBee, IEEE 802.15.4, IEEE 802.11ah, LoRaWan...	
Acquisition	Sensors, Cameras, GPS, Meters, Smart phones, ...	
Market	Smart Grid, Connected home, Smart Health, Smart Cities, ...	

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11:51 | cxu-ziaj-dwv

Dr. Vijay K. Chaurasiya is presenting

## Gartner Hype Cycle for Internet of Things for 2020

Hype Cycle for the Internet of Things, 2020

As of July 2020

Platforms will be reached:  
 ● less than 2 years ● 2 to 4 years ● 5 to 10 years ● more than 10 years ● obsolete before plateau

Source: Gartner © 4170

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11:38 | cxu-ziaj-dwv

The two-hour long workshop was appreciated by the participants and helped them gain a good amount of knowledge in the domain of Internet of Things.

REC Dr. Vijay K. Chaurasiya is presenting

### What are Things?

- Things = Not a computer
- Phone, watches, thermostats, cars, electric meters, sensors, clothing, band-aids, TV...
- Anything, Anywhere, Anytime, Anyway, Anyhow (5 A's).

11:27 AM | cxu-ziaj-dwv

DR. ISHA MALH... pkpoonguzhali ... Parsaa Azam  
 Dr. Vijay K. Ch... Pardeep Garg Ms. Sofia Kurma...  
 Vikas Baghel n n n n n n Aruna E  
 Rishi Rana B B B B B B 80 others P P P P P P You

REC Dr. Vijay K. Chaurasiya is presenting

### A 7- Layer ISO –OSI and TCP/IP Reference Model for Networking

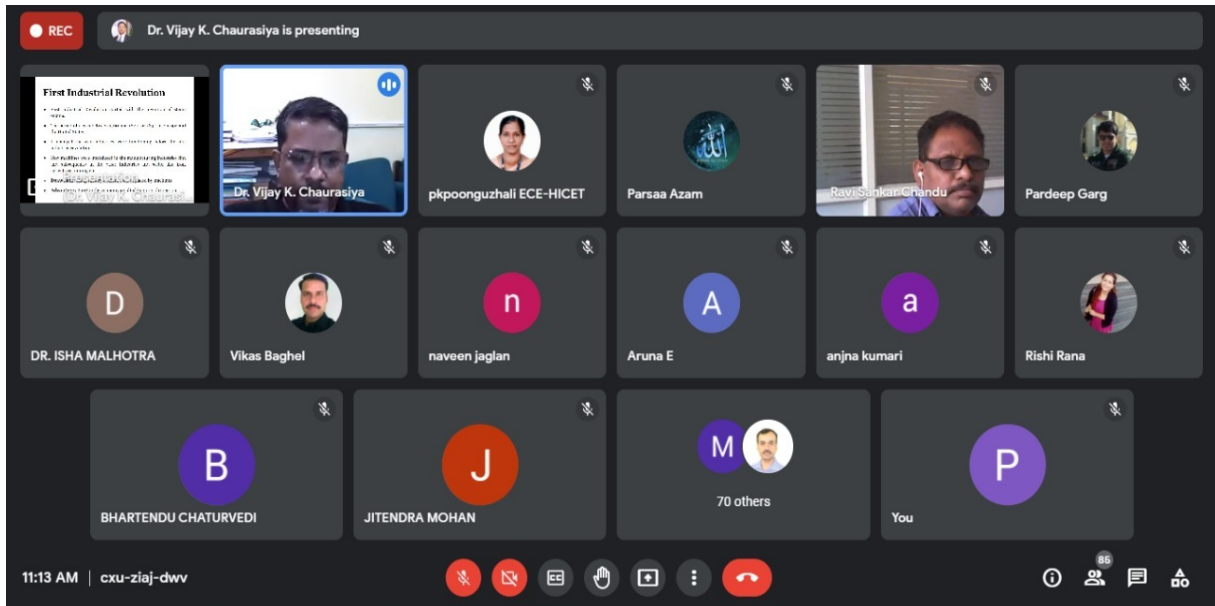
Application Layer	Application Layer
Presentation Layer	Transport Layer
Session Layer	
Transport Layer	
Network Layer	Network Layer
Data Link Layer	Host to Network Layer
Physical Layer	

ISO –OSI Reference Model TCP/IP Reference Model

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11:40 AM | cxu-ziaj-dwv

DR. ISHA MALH... pkpoonguzhali ... Parsaa Azam  
 Dr. Vijay K. Ch... Pardeep Garg Ms. Sofia Kurma...  
 Vikas Baghel Aruna E Manoj Kumar R  
 Mehboob ul A... 85 others P P P P P P You



At last the several queries raised by the participants were answered and developed immense interest in various fields and applications.