

Dated: 16/2/2024

## **REPORT**

### **NITTTR FDP on “Wireless Networks”**

**Date of Event:** 12<sup>th</sup> – 16<sup>th</sup> February 2024

**Venue:** AIML Smart Room (2202)

**Objectives:** The Faculty Development Program (FDP) on "Wireless Networks" aimed to deepen participants' the skills necessary for designing, implementing, and optimizing wireless networks. The program fosters collaboration among participants and experts while exploring advanced topics and emerging trends in the field. Ultimately, it empowers educators to integrate wireless networking solutions effectively into research and curriculum development, addressing real-world challenges and fostering innovation.

**Delegates (Speakers, Outsiders):**

- Dr. C Rama Krishna, Professor, CSE Department, NITTTR Chandigarh
- Er. S.K. Chopra, Sr.GM(O&M), BBNL Punjab
- Dr. Sujata Pal, Assistant Professor, CSE Department, IIT Ropar
- Mr Sandeep Singhai, Senior Principal Scientist, CSIR-AMPRI, Bhopal
- Dr. Garima Saini, Assistant Professor, ECE Department, NITTTR Chandigarh
- Dr. Dilip Kumar, Professor, Department of Electronics and Communication Engg, SLIET Longowal
- Dr. Nilesh Patil, Dept. of CSE, Government Polytechnic, Maharashtra
- Sh. Vipin Gupta, Director, U-Net Solution Moga, Punjab
- Dr. Rishu Chhabra, Professor, Chitkara University, Punjab

**Activities:** NITTTR FDP on “Wireless Networks”

**Key Takeaways:**

- Enhanced Understanding of Wireless Networks
- Proficiency in Modern Network Technologies
- Insights into Research Opportunities
- Practical Skills Development

**Description:** The Department of AIML has organized an FDP on “Wireless Networks” from 12<sup>th</sup> – 16<sup>th</sup> February 2024 by NITTTR in the AIML Smart Room.

**12/02/2024 (Monday):**

Inauguration (CRK): The program kicks off with an inaugural session, setting the tone for the

FDP on Wireless Networks.

Overview of Wireless Networks & Challenges (CRK): Participants delve into an exploration of the foundational concepts of wireless networks and the associated challenges in their implementation and management.

Evolution of Mobile Networks from 2G to 5G (SKC): This session provides an insightful journey through the evolution of mobile networks, tracing their development from 2G to the latest advancements in 5G technology.

Research Areas in Wireless Networks (SP): Participants gain insights into the diverse research areas within the realm of wireless networks, offering inspiration and direction for future academic endeavors.

### **13/02/2024 (Tuesday):**

Software Defined Networks-I (VG): This session introduces participants to the concept of Software Defined Networks (SDN) and its implications for modern network infrastructure.

Software Defined Networks-II (VG): Building upon the previous session, participants delve deeper into the practical aspects and applications of Software Defined Networking.

New Radio Technologies (GS): Participants explore emerging radio technologies shaping the future of wireless communication, providing a glimpse into cutting-edge innovations.

### **14/02/2024 (Wednesday):**

Wireless Adhoc Networks: Research Challenges (CRK): Participants examine the unique challenges and opportunities presented by wireless adhoc networks, paving the way for innovative research endeavors.

Energy Efficient Routing Protocols for Wireless Sensor Network (DK): This session focuses on energy-efficient routing protocols tailored for wireless sensor networks, crucial for optimizing resource utilization and extending network lifespan.

Zigbee: The Wireless PAN Standard (SS): Participants gain insights into Zigbee, a popular wireless Personal Area Network (PAN) standard, and its applications in various domains.

### **15/02/2024 (Thursday):**

Intelligent Transportation Systems (RC): Participants explore the intersection of wireless networks and transportation systems, delving into the role of technology in enhancing mobility and safety.

Simulation Tools: SUMO/NS-3 (RC): This session introduces participants to simulation tools like SUMO and NS-3, enabling them to simulate and analyze wireless network scenarios for research and development purposes.

Bluetooth: The State of Art (SS): Participants gain an understanding of the latest advancements in Bluetooth technology, exploring its applications and potential impact on wireless communication.

### **16/02/2024 (Friday):**

Troubleshooting Tactics: Unmasking Network Issues with Wireshark Insights (NP): Participants learn essential troubleshooting tactics using Wireshark, a powerful network analysis tool, to identify and resolve network issues effectively.

Navigating the Landscape of DDoS Defense: Motivations, Challenges, and Research Directions (NP): This session delves into the landscape of DDoS (Distributed Denial of Service) attacks, discussing defense strategies, challenges, and future research directions.

Assessment, Feedback & Valediction (CRK): The FDP concludes with an assessment of participants' learning outcomes, feedback collection, and a valedictory session, reflecting on the knowledge gained and fostering future collaboration.

**Outcomes:** Faculty and students benefited from the workshop FDP.

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**Beneficiaries:** Faculties and Students of ADGIPS and other Colleges and Universities.  
Beneficiaries includes the following:

Institute	No. of Participants
Dr. Akhilesh Das Gupta Institute of Professional Studies	11
Raj Kumar Goel Institute of Technology	4
Bosco Technical Training Society, Don Bosco Technical School	2
KCC Institute of Technology and Management	1
ABES Engineering College	1
Aligarh Muslim University	1
HMR Institute of Technology and Management	1
Bhagwan Parshuram Institute of Technology	1

**Photographs of event with title: NITTTR FDP on “Wireless Networks”**











**Prof. (Dr.) Mohd. Izhar**  
**Local Coordinator**

**Prof. (Dr.) Ankit Verma**  
**Head of Department**