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## Report on IEEE Future Networks World Forum-2025

The **IEEE Future Networks World Forum (FNWF) 2025** was held from **10th to 12th November 2025** in **Bangalore, India**. The event brought together global researchers, industry leaders, policymakers, and academicians to discuss advancements in **6G, future networks, wireless evolution, smart cities, testbeds, Internet of Things (IoT)**, and emerging communication technologies.

The forum served as a platform for keynote addresses, technical paper presentations, tutorials, workshops, demonstrations, panels, and networking sessions.

### Event Overview

#### Dates:

10 – 12 November 2025 (Monday to Wednesday)

#### Venue:

Ballroom & Scarlet Rooms (1/2/3) and breakout rooms including Amaryllis, Petunia, Poinsettia I & II, Heliconia I & II.

#### Format:

- Keynote Sessions
- Technical & Vertical (T&V) Sessions
- Workshops (WS)
- Tutorials (T-Series)
- Industry Workshop Sessions (IWS)
- Symposium Tracks (S-Series)
- Paper Technical Tracks (Trk)
- Student/YP Summits
- CTU Summit
- Demonstrations & Networking Sessions

- Opening, Valedictory & Banquet

## Day-Wise Report

### DAY 1 – 10 November 2025 (Monday)

#### Opening Ceremony

The forum began at **09:00 AM** with:

- Welcome address, invocation, and lamp lighting
- Remarks from General Chair
- Remarks from TPC/Symposium Chair
- Address by FNTC Chair (Fawzi Behmann)



#### Keynote Sessions (09:30 AM – 12:45 PM)

Keynotes by:

1. **Dr. Abhay Karandikar**
2. **Peter Vetter**
3. **Dr. Vint Cerf**
4. **Dr. Riccardo Trivisonno**
5. **Mr. Saurabh Mittal**

These talks highlighted 6G architectures, network evolution, global research collaborations, and future connectivity challenges. 6G (Sixth-Generation wireless) is the future evolution of telecommunications expected around **2030–2035**. It is designed to overcome the limitations of 5G by offering extreme performance, deep intelligence, and fully immersive communication.

13:45 – 17:15

Tracks included:

- Industry Workshops (IWS-1a, IWS-1b, IWS-2b) – Nokia, TSDSI
- Symposium S-G1a (FN/6G Challenges)
- CTU Summit Session 1
- Paper Technical Tracks (1a, 1b, 1c)
- Tutorials (T-04, T-10)
- Workshops (WS-01)
- IFP Sessions (IFP-02, IFP-05a)
- T&V Sessions (02a, 02b, 04a, 04b)

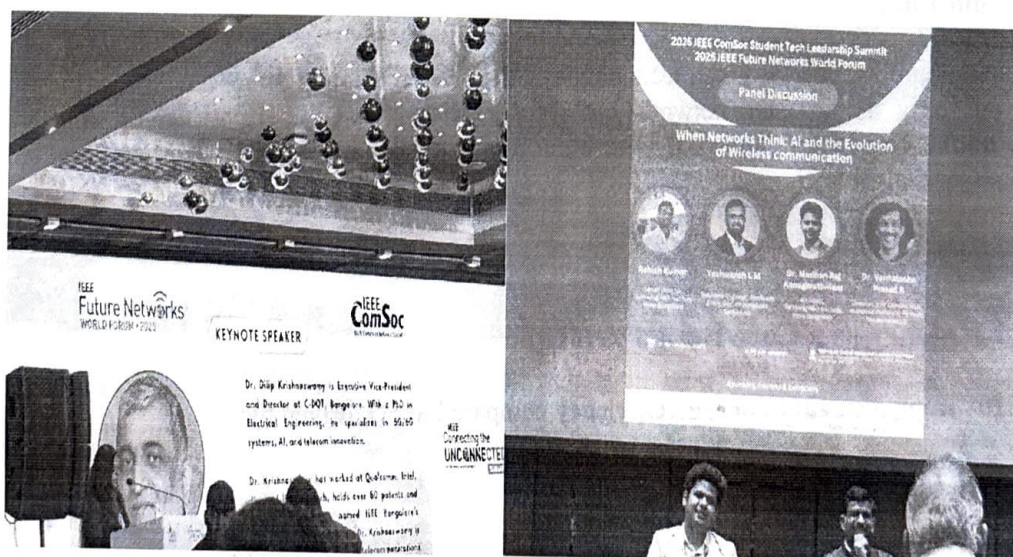
## DAY 2 – 11 November 2025 (Tuesday)

Keynote Sessions (11:00 AM – 12:45 PM)

Speakers included:

- Dr. Dhananjay Gore
- Dr. Sukant K. Mohapatra
- Mr. Mohamedsaeed Mombasawala
- Dr. Anand Srivastava

Topics included advancements in wireless standards, 6G research prototypes, and standardization pathways.





## Sessions & Tracks

13:45 – 17:15

Key sessions:

- Workshops (WS-06, WS-04)
- Symposiums (S03, S04, S11, S14, S16, S17)
- IFP Sessions (IFP-01, IFP-03, IFP-04, IFP-06)
- PhD EDITS Sessions (1 & 2) presenting advancing academic research
- Industry Workshops (IWS-3, IWS-4a, IWS-4b, IWS-5a, IWS-6)
- Paper Tracks (Trk-1d, 1e, 1f, 1g, 2, 3b, 4, 5)
- T&V Sessions (03)
- MENTOR-MENTEE session (WIE)

## Banquet (Evening)

A formal networking banquet provided a platform for industry-academia collaboration.

## DAY 3 – 12 November 2025 (Wednesday)

### Keynote Sessions

Delivered by:

- Tanzeb Anwar
- Dr. Maneesha Vinodini Ramesh
- Dr. Tsunahiko Chiba
- Dr. Chih-Lin I

Focused on sustainable networks, green technologies, AI-powered 6G, and future testbeds. 6G is envisioned not only as a faster network but as a **carbon-aware, energy-efficient, and intelligence-native ecosystem**. The goal is to build networks that are highly performant *and* environmentally sustainable.

### Sustainable & Green 6G Networks

#### ◆ Energy Efficiency as a Core Design Principle

6G aims for **10× improvement in energy efficiency** compared to 5G, driven by:

- Low-power hardware
- Efficient signal processing
- Green spectrum utilization

### ◆ Zero-Carbon Communication Infrastructure

6G research focuses on:

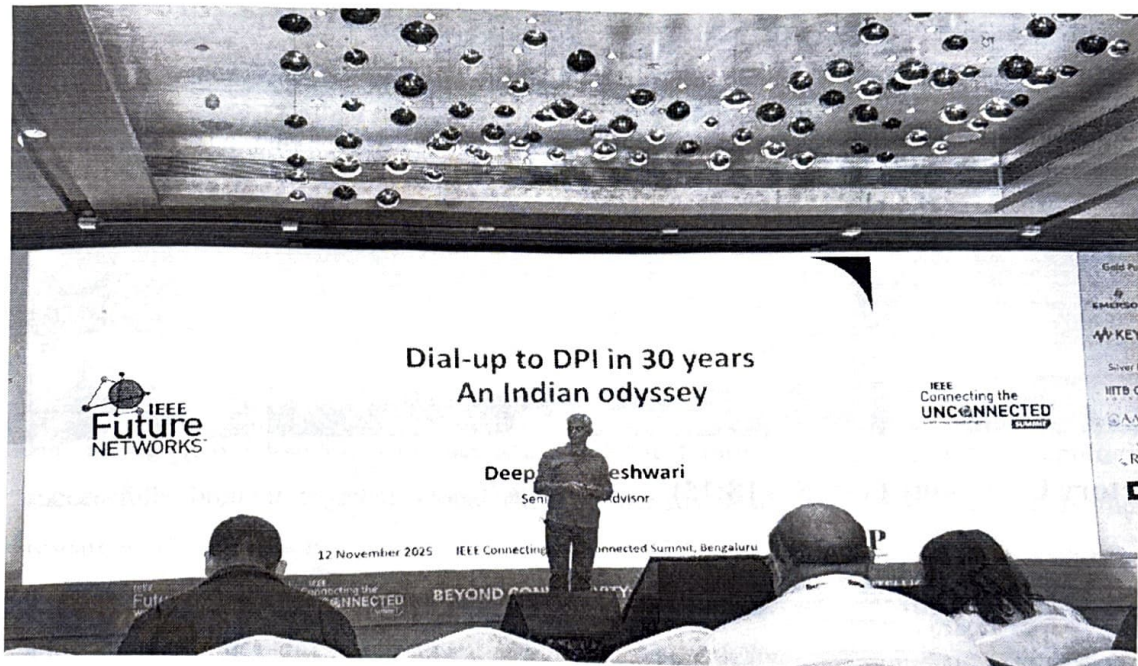
- Renewable-energy-powered base stations (solar, wind, hybrid)
- Energy harvesting IoT devices
- Carbon-neutral data centers

### ◆ Network Densification Without Power Explosion

Dense small-cell deployment can increase power consumption.

6G counters this through:

- Reconfigurable Intelligent Surfaces (RIS) to redirect signals with minimal power
- THz band efficiency improvements
- Intelligent sleep modes for base stations

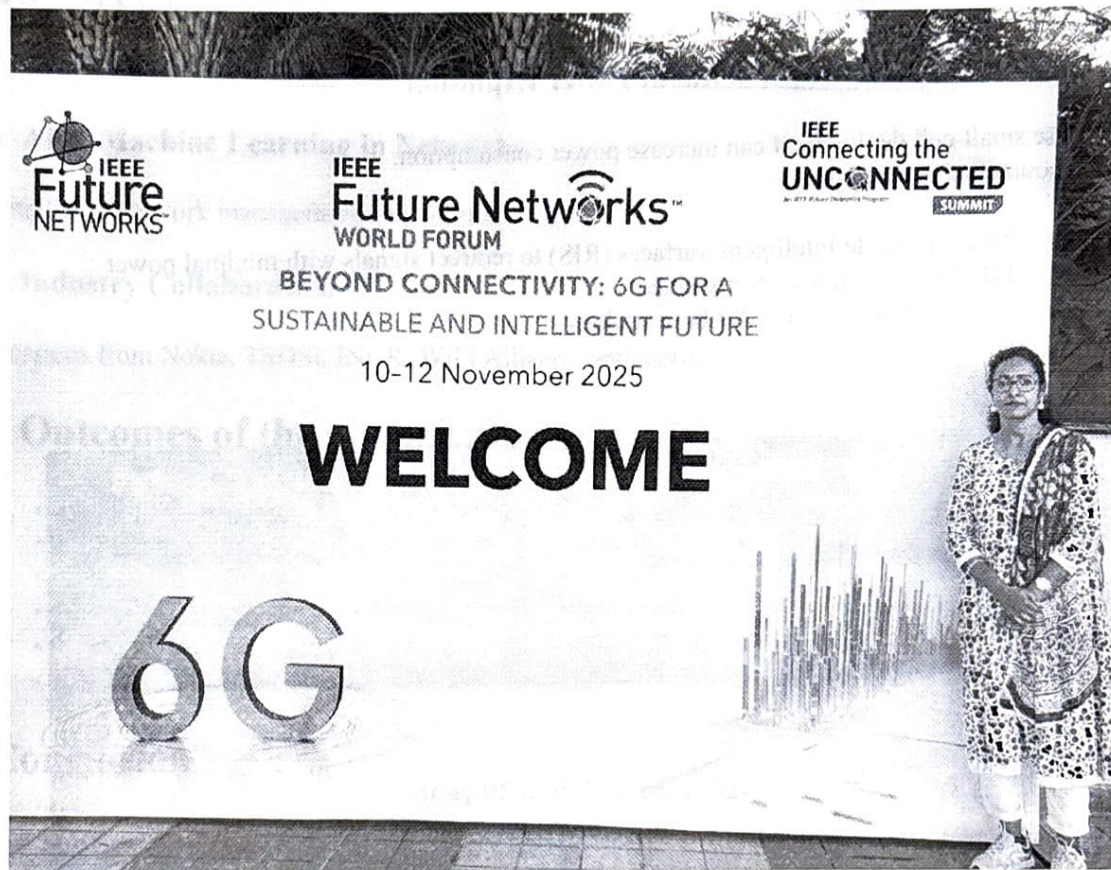


13:45 – 17:15

Key activities:

- CTU Summit Session 3
- Symposium S07, S09, S12

- Workshops (WS-04)
- IFP-07
- Industry Workshops (IWS-5b)
- Tutorials (T-06, T-11, T-03)
- Paper Tech Tracks (CTU Track, 3a)
- ENT Session 2



### **Valedictory Ceremony (17:15 – 18:15)**

The closing session recognized:

- Best paper awards
- Workshop contributors
- Student & YP achievers
- Organizing committee appreciation

### **Thematic Focus Areas**

FNWF 2025 concentrated on the following domains:



- **6G Architectures & Standards**

Research, standardization progress, and testbeds.

- **Future Wireless Technologies (WLAN, WiFi evolution, NTN).**

- **Smart Cities & Urban Networks**

Industry Workshops on Future Cities.

- **AI & Machine Learning in Networks**

Intelligent network management and optimization.

- **Industry Collaboration**


Sessions from Nokia, TSDSI, INGR, WiFi Alliance, and more.

- **Outcomes of the Forum**

- Strengthened global partnerships in **6G development**.
- Shared latest testbed results and industry innovations.
- Facilitated interactions between academia, government, and industry.
- Presented over **100+ research papers** in various tracks.
- Launched collaborative initiatives for future network technologies.
- Provided a platform for students and researchers to showcase work.

## **Conclusion**

The **IEEE Future Networks World Forum 2025** successfully brought together global experts and emerging researchers to discuss and shape the future of communication technologies. It successfully brought together global experts, industry leaders, policymakers, and emerging researchers to collaboratively explore and shape the future of communication technologies. Over three days, the event highlighted cutting-edge innovations, groundbreaking research outcomes, and strategic policy directions aimed at building resilient, intelligent, sustainable, and scalable networks for the coming decades. With a strong focus on sustainable networks, green technologies, AI-driven architectures, and 6G testbed developments, the forum set a strong foundation for the evolution toward next-generation communication systems and the upcoming 6G era.

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