Department of Electronics and Communication
and
Skill Development Center

Faculty Development Programme Report

1. Basic Details

Title of the Programme: 5-Day Faculty Development Programme titled Innovative Pedagogies and Technological Advances in Wireless Communications, VLSI, and Artificial Intelligence.

Category: Titled Innovative Pedagogies and Technological Advances in Wireless Communications, VLSI, and Artificial Intelligence.

Date(s): 8/9/2025 to 12/9/2025

Time: Day 1: Session 1 (10:30 AM – 12:30 PM), Session 2 (2:30 PM – 4:30 PM)
Day 2: Session 3 (10:30 AM – 12:30 PM), Session 4 (2:30 PM – 4:30 PM)
Day 3: Session 5 (10:30 AM – 12:30 PM), Session 6 (2:30 PM – 4:30 PM)
Day 4: Session 7 and Session 8 (10:30 AM – 12:30 PM) Industrial Visit to KHMDL
Day 5: Session 9 (09:30 AM – 11:30 AM), Session 10 (2:00 PM – 4:00 PM)

Venue / Mode (Offline/Online): Tejas Seminar Hall, NHCE (Offline)/ Google meet (Online)

Organizing Department / Unit: Department of Department of Electronics & Communication in collaboration with Skill Development Centre.

Coordinator(s): Dr. Monika Gupta (Associate Professor- ECE), Dr. Ishani Mishra (Associate Professor- ECE)

Target Audience: Faculty Members of NHCE and External Participants from other engineering colleges.

Number of Participants Attended:
Teaching Staff: 22 participants
Non-Teaching / Technical Staff: Nil

Others (if any): Nil

2. Objective of the Programme

To equip faculty with cutting-edge knowledge and innovative teaching methodologies in the domains of Wireless Communications, VLSI, and Artificial Intelligence. The FDP aims to bridge theoretical foundations with practical advancements, fostering interdisciplinary learning and research.

3. Resource Person(s) Details

Name	Designation	Affiliation / Organization
Mr. Mahesh Devagiri	Engineering Manager	Qualcomm
Dr. Sujatha S	Associate Professor,	Christ University, Bangalore
Dr. Girish G K	Physical Design Engineer	Synopsys
Dr. Bibhudendra Acharya (Online)	Head of Central Computer Center & Associate Professor	Department of ECE, NIT Raipur
Mr. Satheesh Kumar	Head, Teaching-Learning Center & Corporate Relations	BNM Institute of Technology
Dr. Runa Kumari (Online)	Associate Professor	BITS Pilani, Hyderabad Campus
Mr. Padmanaban K	Software Enabling and Optimization Engineer,	Altera (an Intel Company), Bengaluru
Shirshendu Das (Online)	Assistant Professor	Department of CSE, Indian Institute of Technology Hyderabad, Telangana, India

4. Summary of Sessions / Activities Conducted

Session No.	Topic / Activity	Resource Person	Highlights
1	Pre & Post Silicon Bring-up and System Validation Emulation Flow	Mr. Mahesh Devagiri	The session provided valuable insights into **Pre & Post Silicon Bring-up and System Validation Emulation Flow**, emphasizing industry practices for efficient verification and validation of modern VLSI designs.

2	Design and Implementation of VLSI Circuits for 5G Networks – Technological Challenges	Dr. Sujatha S	The session focused on the **design and implementation challenges of VLSI circuits for 5G networks**, addressing key issues in performance, power, and scalability.

3	Technological Advances in VLSI and AI	Dr. Girish G K	The session highlighted recent **technological advances in VLSI and AI**, showcasing innovative design methodologies and applications driving next-generation intelligent systems.
4	Information Security in 5G	Dr. Bibhudendra Acharya (Online)	The session emphasized the importance of **information security in 5G networks**, covering vulnerabilities, challenges, and strategies for secure communication.
5	Innovative Pedagogies in Teaching and Learning in Engineering	Mr. Satheesh Kumar	The session explored **innovative pedagogies in engineering education**, focusing on learner-centric approaches to enhance engagement, adaptability, and effective knowledge transfer.
6	Challenges and Issues in the Design of Dielectric Resonator Antennas (DRA)	Dr. Runa Kumari (Online)	The session discussed the **challenges and issues in designing Dielectric Resonator Antennas (DRA)**, with emphasis on performance optimization and advanced applications in modern communication systems.
7	Altera FPGAs and SoCs with AI Suite and OpenVINO Toolkit for Embedded, AI/Machine Learning Applications	Mr. Padmanaban K	The session demonstrated the use of **Altera FPGAs and SoCs with AI Suite and OpenVINO Toolkit**, showcasing their applications in embedded systems and AI/ML solutions.

8	When Security Meets Performance: Challenges in Modern Computing	Shirshendu Das (Online)	The session addressed **the intersection of security and performance in modern computing**, highlighting the trade-offs, challenges, and strategies to achieve both efficiency and protection.

5. Participant Feedback (Summary)

- Participants appreciated the coverage of innovative pedagogies and emerging technologies in Wireless Communications, VLSI, and AI.
- The industry expert sessions and hands-on activities were found to be highly relevant and practical.
- Faculty members gained valuable insights into advanced tools, methodologies, and applications.
- Participants recommended conducting more FDPs on cutting-edge technologies to enhance teaching and research.

6. Outcomes of the Programme

- Faculty enhanced their understanding of innovative pedagogical approaches and their application in engineering education. The industry expert sessions and hands-on activities were found to be highly relevant and practical.
- Gained practical exposure to advanced concepts and tools in Wireless Communications, VLSI, and Artificial Intelligence.
- Strengthening their ability to integrate industry-relevant technologies into teaching and research practices.
- Reinforced their commitment to continuous learning and adapting to emerging technological trends in academia.

7. Photographs / Screenshots


Department of Electronics and Communication Engineering
Skill Development Centre
Faculty Development Program
Innovative Pedagogies and Technological Advanc
Wireless Communications, VLSI and Artificial Intel
GPS Map Camera
Bengaluru,Karnataka,India
Embassy Tech Square Main Road,
Kadubisanahalli, Bengaluru, Karnataka
560103, India
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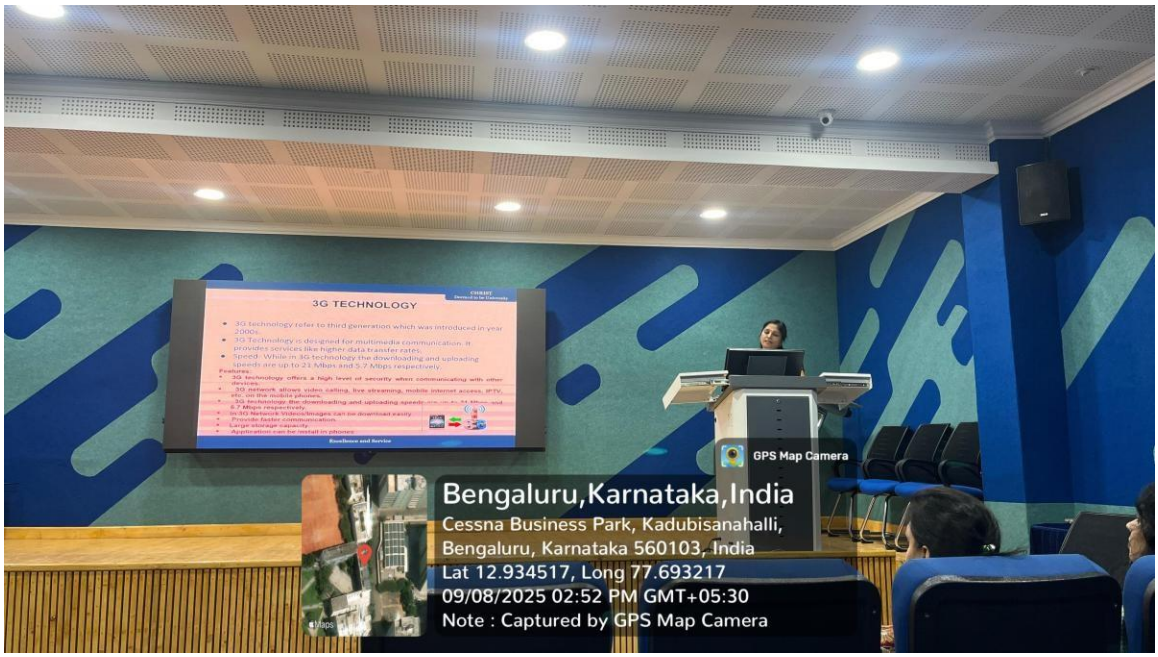
Note : Captured by GPS Map Camera


3G TECHNOLOGY
3G technology refer to third generation which was introduced in year 2000s.
3G Technology is designed for multimedia communication. It provides services like higher data transfer rates.
Speed: While in 3G technology the downloading and uploading speeds are up to 21 Mbps and 5.7 Mbps respectively.
Features:
3G technology offers a high level of security when communicating with other devices.
3G network allows video calling, live streaming, mobile internet access, IPTV, etc. on the mobile phones.
3G technology the downloading and uploading speeds are up to 21 Mbps and 5.7 Mbps respectively.
In 3G Network Videos/Images can be download easily.
Provide faster communication.
Large storage capacity.
Application can be install in phones.
Excellence and Service
GPS Map Camera
Bengaluru,Karnataka,India
Cessna Business Park, Kadubisanahalli,
Bengaluru, Karnataka 560103, India
Lat 12.934517, Long 77.693217
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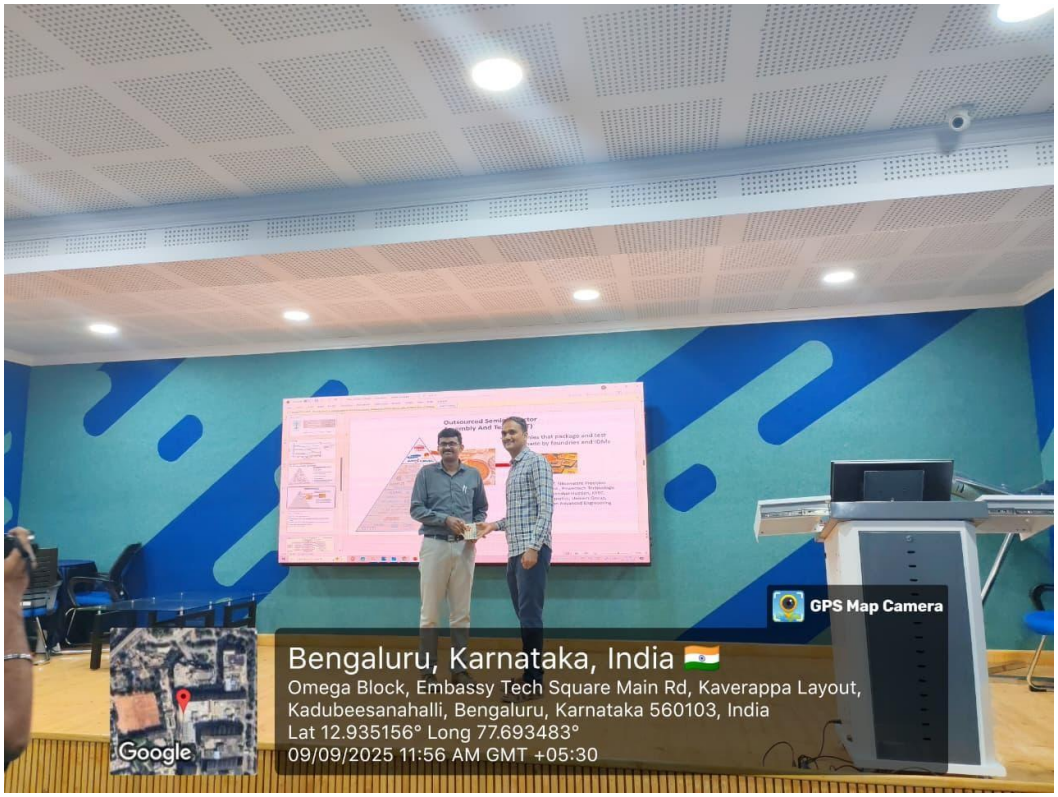
GPS Map Camera
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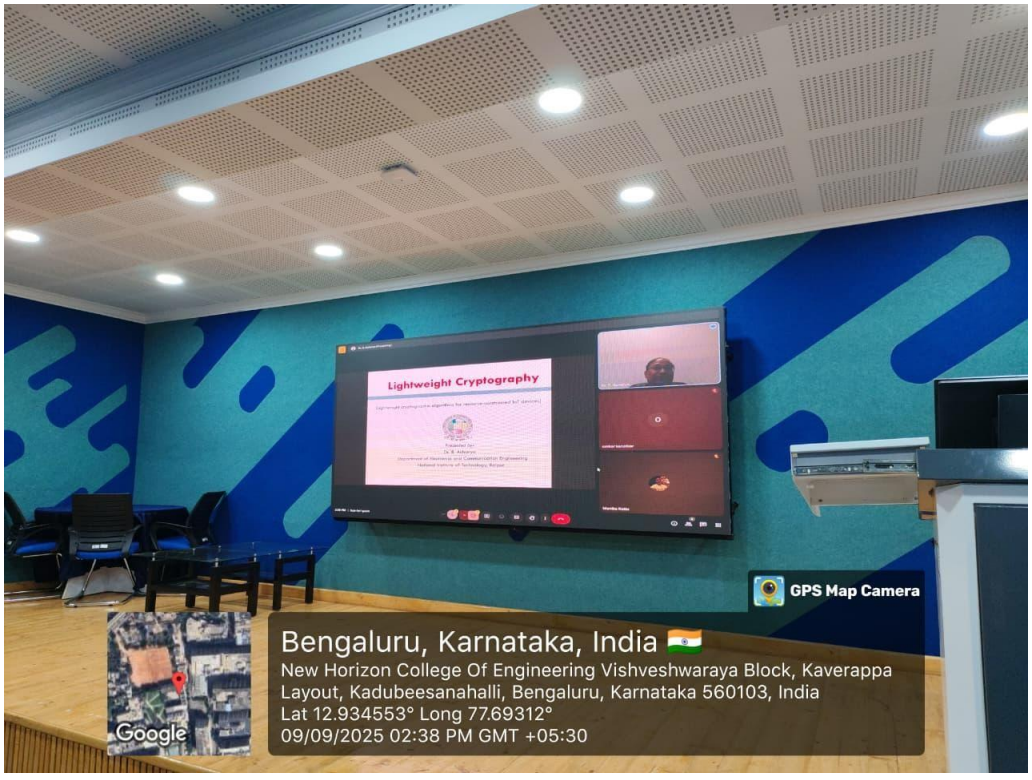
Google


Lightweight Cryptography
GPS Map Camera
Bengaluru, Karnataka, India
New Horizon College Of Engineering Vishveshwaraya Block, Kaverappa
Layout, Kadubeesanahalli, Bengaluru, Karnataka 560103, India
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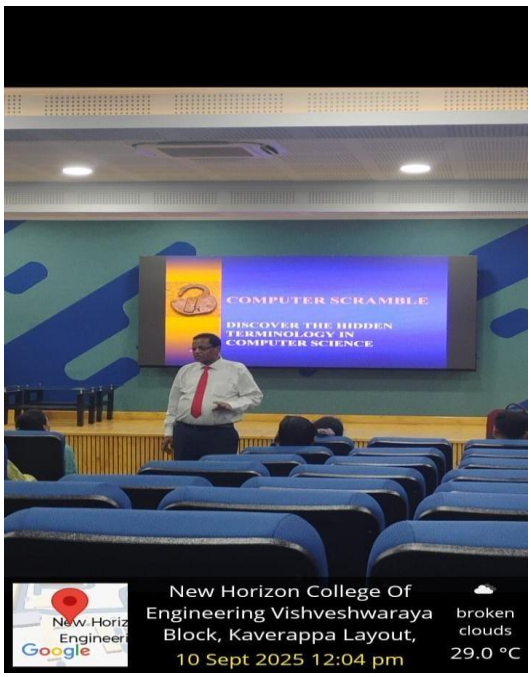
09/09/2025 02:38 PM GMT +05:30
Google


COMPUTER SCRAMBLE
DISCOVER THE HIDDEN TERMINOLOGY IN COMPUTER SCIENCE
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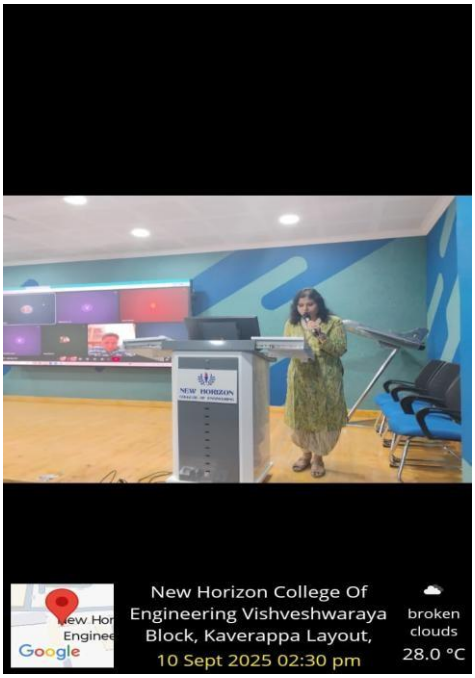
10 Sept 2025 12:04 pm
broken clouds
29.0 °C


New Horizon College Of Engineering Vishveshwaraya Block, Kaverappa Layout,
10 Sept 2025 02:30 pm
broken clouds
28.0 °C


GPS Map Camera
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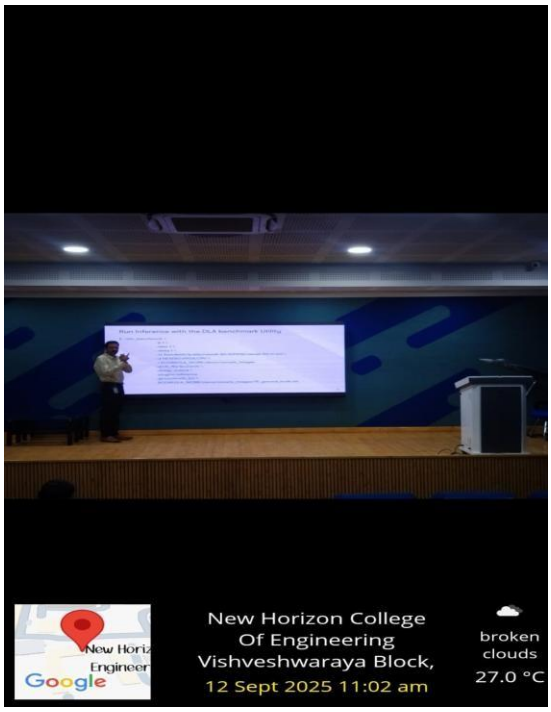

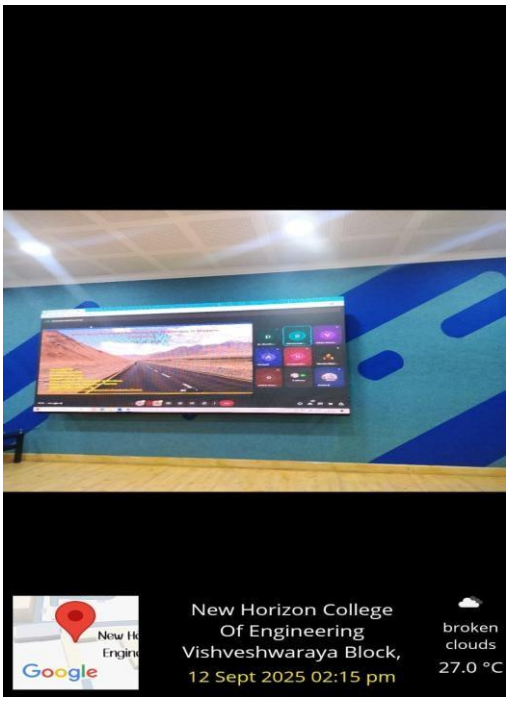

8. Remarks / Recommendations (Optional)

Future FDPs could focus on advanced hands-on training with design and ``d simulation tools, along with collaborative projects with industry experts, to help faculty practically implement concepts in Wireless Communications, VLSI, and AI within their curriculum and research.

9. Submitted by:

Name of Coordinator(s): Dr. Monika Gupta, Dr. Ishani Mishra

Designation: Associate Professor - ECE, Associate Professor-ECE

Department: Electronics & Communication

Date of Submission: 18/9/2025