
Report of One-Day National Workshop on "Industrial Energy Efficiency and Decarbonization Using Virtual Reality-Based Digital Twin Training Simulator"s

1 message

Communication Cell IUL <communications@iul.ac.in>
Bcc: mefc@iul.ac.in

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Department of Mechanical Engineering and the Department of Electrical Engineering at Integral University, in collaboration with Green Tree Global, under the guidance of UPNEDA, EMC Cell, and GIZ Germany, successfully organized a One-Day National Workshop on "Industrial Energy Efficiency and Decarbonisation Using Virtual Reality-Based Digital Twin Training Simulators". The workshop was conducted on January 29, 2025, from 10:00 AM to 04:00 PM at the Seminar Hall (Room No. F220, F Block).

The primary objective of the workshop was to equip students, research scholars, and faculty members with theoretical knowledge and practical exposure to energy efficiency and decarbonization through VR-based digital twin technology. Participants gained insights into monitoring, analysis, and optimization techniques for industrial energy systems and their significance across various sectors.

Inaugural Session

The workshop commenced with a formal welcome address delivered by Dr. Mohd Atif Siddiqui, Head, Department of Electrical Engineering, who emphasized the importance of industrial energy efficiency and digital transformation in modern engineering applications.

Professor Dr. Abdul Azeez, Dean, Faculty of Engineering & IT, addressed the gathering, highlighting the role of VR-based digital twin technology in industrial applications and the importance of sustainable engineering practices.

Technical Sessions

Session 1: 10:00 AM - 12:15 PM

- Resource Person: Mr. M. Natarajan
- Designation: Director (Technology Management & Energy Management), National Productivity Council
- Venue: Seminar Hall (Room No. F220, F Block)

Mr. M. Natarajan commenced the workshop with an insightful session on Industrial Energy Efficiency and Decarbonisation, focusing on key aspects of sustainable energy management. He provided an in-depth understanding of energy optimization in industries and demonstrated real-world applications through digital twin simulation models. The session included interactive exercises, enabling participants to assess energy consumption and efficiency improvements through practical exposure.

Session 2: 01:30 PM - 04:00 PM

- Resource Person: Mr. M. Joel Franklin Asaria
- Designation: Director (Energy Management), National Productivity Council
- Venue: Seminar Hall (Room No. F220, F Block)

The second session, led by Mr. M. Joel Franklin Asaria, focused on the practical implementation of VR-based digital twin training simulators. He elaborated on how industries are leveraging digital twins to enhance energy efficiency and provided hands-on experience in data analysis, system optimization, and predictive maintenance techniques. The session engaged participants in interactive discussions and simulations, reinforcing their understanding of cutting-edge energy management solutions.

Valedictory Session

The workshop concluded with a vote of thanks delivered by Professor Dr. Prem Kumar Bharti, Head, Department of Mechanical Engineering, who expressed gratitude to the organizing team, resource persons, and participants for their contributions in making the event a resounding success.

The workshop served as a comprehensive platform for participants to enhance their understanding of industrial energy efficiency and decarbonization. The integration of Virtual Reality and Digital Twin technology proved to be a transformational approach, offering an immersive and real-time learning experience.

With the enthusiastic participation of approximately 95 students and faculty members, the event facilitated engaging discussions and valuable insights, making it a highly enriching experience for all attendees.

The success of this workshop reflects Integral University's commitment to fostering innovation and sustainable industrial practices, paving the way for a greener and more energy-efficient future.

The event was successfully coordinated by Faculty Coordinators Er. Kamran Rasheed, Dr. Mohd Nawaz Khan, and Er. Parbhat Ranjan Sarkar.

Few glimpses of the events are



Best regards

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Dr. P.K.Bharti
Professor & Head
Convener (ICCMRE-2018)
Deptt. of Mechanical Engineering
Integral University,Lucknow
Mob:09839130775