Housing and Building
National Research Center

Housing & Building National Research Center International Conference
Future Vision & Challenges for Urban Development
"Green Smart Sustainable Building between Present & Future"
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Ministry of Housing, Utilities
and Urban Communities

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Lecture Title: The Role of Technology in Construction

Abstract :

Technology is revolutionizing construction by enhancing safety, efficiency, and decision-making. This talk is part of a broader panel discussion focusing on the Role of Technology in Civil Engineering. This talk explores advancements such as ultra precise Real-time Tracking Systems (RTLS), artificial intelligence (AI), and digital twin (DT) systems in enhancing the practice of construction. Insights from cutting-edge research will demonstrate how these technologies address critical challenges and set the stage for the future of construction innovation..

Objectives

To discuss the transformative role of technology in construction, with a focus on UWB, AI, and digital twin applications for improving safety and operational efficiency. To showcase examples of integration of RTLS, DT, and AI to improve real-time monitoring and situational awareness on construction and highlight the importance and challenges of transdisciplinary research in Civil Engineering.

Field of Experience:

Dr. Sadeghpour is a recognized expert in the application of technology in construction sites to improve safety, productivity and decision making. With over 20 years of experience, her expertise focus on real-time tracking systems, AI-enabled safety applications, and Digital Twin development. Her research integrates ultra-wideband (UWB) tracking and advanced modeling to enhance safety, situational awareness, and operational efficiency on construction sites. Dr. Sadeghpour's transdisciplinary approach bridges across multiple domains including engineering, psychology and human factors, and population health, advancing innovative solutions for the construction industry.