

KEYNOTE TITLE:

Smart Energy, Smarter Buildings: How Data, Sensors, and AI Are Revolutionizing Sustainability

As energy demand continues to rise and sustainability becomes a global priority, the way buildings are managed is being redefined. Advancements in technology have enabled smarter, more efficient energy systems, allowing buildings to respond intelligently to environmental conditions and occupant needs. From weather-driven energy usage in academic institutions to real-time sensor-based monitoring in smart offices and AI-powered predictive models for HVAC efficiency, this discussion will uncover how data-driven insights can transform energy management. The outcomes will provide actionable strategies for facility managers, policymakers, and researchers to leverage AI, automation, and climate-responsive design to reduce energy waste while enhancing indoor comfort. By shifting towards intelligent and self-learning infrastructures, greater energy efficiency and indoor comfort can be achieved.