Invited Speaker: Dr. Kang Lee National Institute of Standards and Technology (NIST, Gaithersburg, MD, USA)

Title: The current state of the art of the Standards for Smart Transducers and Sensors

Abstract: Sensors and actuators are ubiquitous. Using them in sensor networks and distributed applications will enhance overall system performance and resiliency. The proliferation of sensor networks has created many choices for users; however, it has also created heterogeneity issues and problems as well for users, who would like to use and share sensor data from different sensor networks. The smart transducer standards have been developed to resolve these issues and problems. These standards provide common interfaces for smart transducers (sensors or actuators) that enable transducer manufacturers or users to support different networks, and allow users to pick transducer devices and networks for their applications. These standards help users to solve the transducer devices to networks interchangeability and interoperability problems. Smart transducers have capabilities for self-description, location and time awareness, alert notification, and many other characteristics. They also communicate to networks or the Internet in standard-based data formats using common communication protocols. With these capabilities, smart transducers provide a foundation for supporting and realizing the emerging Internet of Things and Cyber Physical Systems technologies for society and industry. This talk will provide the latest development of the international smart transducer and sensor network standards.