

Special Session

Code: cfecr

Title

Collaborative Wireless Sensor Networks and Internet of Things

Proposer / Main Organizer

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IEEE Member or SMC Society Member

Main Organizer is IEEE SMCS Member

Category

Please select one of the following categories:

- *Human-Machine Systems*

Number of Expected Paper Submissions:

6

Keywords

- *Design Methods*
- *Information Systems for Design*
- *Interactive Design Science and Engineering*
- *Multimedia Systems*

- *Systems Safety and Security*

Brief Description and Justification (200-250 words):

Add a short description (200 to 250 words).

A Wireless Sensor Network (WSN) is a collection of tiny devices capable of sensing, computation and wireless communication operating in a certain environment to monitor and control events of interest in a distributed manner and collectively react to critical situations. WSN applications span various domains such as environmental and building monitoring and surveillance, pollution monitoring, agriculture, health care, home-automation, energy management, earthquake and eruption monitoring. Notably, through collaboration WSNs can organize efficiently, prolong system lifetime, handle dynamics, detect and correct errors, all with the final goal of eventually executing reliably the user application.

Moreover, collaborative WSNs are integrated as basic elements of collaborative IoT technologies to create novel pervasive smart environments. This special session focuses on exploring collaborative techniques to make WSNs more reliable, intelligent, effective and easy-to-use in academic- and industry-related scenarios and to integrate them with IoT technology. Prospective authors are invited to submit original papers to the Special Session in the areas described below.

- WSN/IoT architectures, protocols, and algorithms
- Collaborative design of sensor nodes, WSN and IoT devices
- Localization in WSN/IoT
- Data management in WSN/IoT, including distributed storage, distributed processing, query, manipulation, data fusion, and data mining
- WSN/IoT reliability and security
- Cooperative signal and information processing in WSN/IoT
- Integration between WSN and IoT
- Collaborative Body Sensor Networks
- Integration of WSN and Cloud computing
- WSN applications in Health Care, Automotive, Logistics, Energy Management, Manufacturing, etc.
- Collaborative IoT Applications and Systems

This special session is organized by the IEEE SMC TC on Computer Supported Cooperative Work in Design (CSCWD) and later by the TC on Interactive and Wearable Computing and Devices. This special session was launched in IEEE SMC 2009. *CSCWD TC has over 150 active members and this special session receives 5~20 submissions every year. We will send out a Call for Papers to related researchers when this proposal is accepted.*