Special Issue on
Enabling Technologies for Next-Generation Sensor Networks: Prospects, Issues, Solutions, and Emerging Trends

CALL FOR PAPERS

Despite significant advancements in all aspects, canonical wireless sensor networks (WSNs) are yet unable to surmount many operational challenges which strangle their widespread deployment. This is primarily due to inherent resource-constrained (e.g., limited energy, bandwidth, and storage) nature of these networks at all levels. Recently, researchers have envisaged the potentials of integrating WSNs with other prominent technologies such as multirobot networked systems, cloud, and RFID. These integrated next-generation sensor networks (NSNs) are expected to introduce wide range of novel applications besides coping with such challenges. For example, robot-assisted WSNs not only cater to energy issues but also enable autonomous and intelligent interaction with the environment. Similarly, integration of sensor-cloud can provide powerful, scalable storage, and processing infrastructure for large-scale applications. However, integration/federation of these technologies introduces new issues and challenges such as multi-robot task distribution, collaboration, and coordination.

The aim of this special issue is to foster high quality research papers that articulate recent advancements on the subject, highlight open research issues and challenges, and indicate future directions. This special issue is expected to captivate and spark novel research on the NSN design, architecture, algorithms, and protocols for existing and prospective applications. Visionary, work-in-progress, and unpublished original research and survey/tutorial articles are solicited in all aspects of NSN.

Potential topics include, but are not limited to:

- ▶ Enabling technologies for NSNs
- ▶ Novel applications, services, and prototypes of NSNs
- ▶ Integration of RFID for novel applications of NSNs
- ▶ Cloud-assisted NSNs
- ▶ Robot-assisted NSNs
- ▶ Pervasive healthcare applications of NSNs
- ▶ Role of NSNs in M2M/IoT
- ▶ Traffic modelling in NSNs
- ▶ Rechargeable NSNs
- ▶ Formal specification, modelling, and experimentation of NSNs
- ▶ Safety, privacy, and security issues in NSNs

Authors can submit their manuscripts via the Manuscript Tracking System at http://mts.hindawi.com/submit/journals/ijdsn/ngsn/.

Lead Guest Editor
Muhammad Imran, King Saud University, Riyadh, Saudi Arabia
dr.m.imran@ieee.org

Guest Editors
Athanasios Vasilakos, University of Western Macedonia, Kozani, Greece
vasilako@ath.forthnet.gr

Sajid Hussain, Fisk University, Tennessee, USA
shussain@fisk.edu

Sana Ullah, Polytechnic Institute of Porto, Porto, Portugal
sauah@isep.ipp.pt

Ansar-Ul-Haque Yasar, Hasselt University, Diepenbeek, Belgium
ansar.yasar@uhasselt.be

Manuscript Due
Friday, 24 April 2015

First Round of Reviews
Friday, 17 July 2015

Publication Date
Friday, 11 September 2015