

Special Issue on Cyber Physical Systems Using Sensor Technologies

Call for Papers

Cyber Physical Systems (CPSs) are the integrations of abstract computations and physical processes, in which sensors, actuators, and embedded devices are networked to sense, monitor, and control the physical world. Different from traditional embedded systems, the CPS is typically designed as a network of interacting elements with physical input and output instead of as standalone devices. A typical example of CPSs is connecting objects embedded with sensors or actuators (which collect information from the physical world as the source of CPS inputs) to the real-time decision-making system (which represents the digital world). Then the CPS reflects the decision to the physical world by a sequence of control processes. Although there are many applications that have been developed to integrate wireless sensor networks (WSNs) from different domains, the CPS is still hard to build because the physical world cannot be predicted and the theoretical assumptions on WSNs cannot be efficiently achieved in the real world applications. Consequently, designing a reliable and real-time CPS using sensor technologies becomes a big challenge. This special issue aims to bring together a variety of advanced technologies, theory, and applications in the area of CPSs using sensor technologies. Prospective contributions to this special issue should not have been previously published nor be currently under review for publication elsewhere. Potential topics include, but are not limited to:

- WSN architecture and infrastructure for CPSs
- WSN theoretical foundations for CPSs
- WSN communication and control protocols for CPSs
- WSN applications and experiences for CPSs
- Case study, implementations, and real deployments of WSNs for CPSs
- Smart life, healthcare, environmental monitoring, and military systems using sensor technologies
- System modeling and control in CPSs using sensor technologies
- Practical systems of Internet of Things (IOTs) using sensor technologies

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Manuscript Due	Friday, 17 February 2011
First Round of Reviews	Friday, 11 May 2012
Publication Date	Friday, 6 July 2012

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