



# CALL FOR PAPERS

The increasing penetration of sensing devices in various aspects of physical infrastructures is modifying the way of how Internet services and applications are both conceived and consumed. The integration of distributed sensor networks with cloud computing systems is raising the interest of both the academic and industrial communities. Developments and progress in this area pave the way to novel scenarios for internet of things (IoT) applications. Virtualization generates pools of (virtual) sensors and actuators, and these in turn form new types of on-demand resources available over the Cloud. These sensing resources are delivered and accessible in form of sensing as a service (Sens-aaS) which can simply be integrated with other cloud services (e.g., computing, storage, and network). This can then be exploited to build new mash-up applications and services which can be deployed in a multiprovider ecosystem in which several cloud providers are interconnected to deliver a universal decentralized computing environment where everything is driven by constraints and agreements. Such an ecosystem is commonly referred to as “cloud federation” or “sky computing” and represents the next frontier for cloud computing and IoT. However, integrating sensors with the cloud is not trivial at all and many research challenges are yet to be addressed.

This special issue aims at attracting high quality and novel contributions from researchers coming from both the academic and industrial communities who work on the integration of distributed sensor networks, cloud computing, and IoT. All submissions received will be sent out for peer review and evaluated with respect to relevance to the special issue, level of innovation, depth of contributions, and quality of presentation. Papers must not be under consideration by any other journal or publication.

Potential topics include, but are not limited to:

- ▶ Integration of sensors and other IoT devices (e.g., embedded systems and smartphones) with the Cloud
- ▶ Self-configuring, self-healing, self-optimizing, and self-protecting of sensors interacting with Cloud
- ▶ Composition of sensing mash-up services
- ▶ Middleware for enabling sensors to join the Cloud
- ▶ Sensing data aggregation and processing over the Cloud
- ▶ Sensing data dependability over the Cloud
- ▶ Securing sensing data over the Cloud
- ▶ Security and privacy protection in Cloud and sensors
- ▶ Intelligent mash-up of Cloud-based sensing services for smart environments (smart cities, commercial centers, etc.)
- ▶ Quality of Service (QoS) of sensing Cloud-based services
- ▶ Sensing cloud-based applications for IoT: Sens-aaS services
- ▶ Energy harvesting
- ▶ Data fusing cloud-based technology
- ▶ Big data application in sensing technology

## Lead Guest Editor

Massimo Villari, University of Messina,  
Messina, Italy  
[mvillari@unime.it](mailto:mvillari@unime.it)

## Guest Editors

Adnan Al-Anbuky, Auckland University  
of Technology, Auckland, New Zealand  
[adnan.anbuky@aut.ac.nz](mailto:adnan.anbuky@aut.ac.nz)

Antonio Celesti, University of Messina,  
Messina, Italy  
[acelesti@unime.it](mailto:acelesti@unime.it)

Klaus Moessner, University of Surrey,  
Surrey, UK  
[k.moessner@surrey.ac.uk](mailto:k.moessner@surrey.ac.uk)

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