

# IEEE Communications Magazine to feature Smart Cities



Green technologies, machine-to-machine, city data storage, new models of business, service, billing, privacy issues. The area of smart city technologies and architectures take us to a whole new level. The future is right here.

Urban living is commencing to take a central role in the direction humanity evolves. Today, more than 1 in 2 is living in urban environments with related efforts to facilitated viable living conditions becoming tremendous. Urged by these observations, city halls and political decision makers have become very alert, calling for urgent solutions to the growing problems. Quickly advancing ICT technologies may just be the answer, which has triggered global ICT players to have launched various smart city initiatives. This corroborates that suitable technologies are a cornerstone to a sustainable development of a city. This is facilitated by means of smart services that use networked sensors and actuators deployed in the city, allowing the authorities to monitor the environment in real-time, to react immediately and just in time if needed and to establish automated control processes with less or even without human intervention. These services, on the other hand, rely heavily on appropriate technologies, be they in the field or in the cloud.

The special issue in the **IEEE Communications Magazine**, the first of its kind, thus focuses on ICT technologies, allowing for Smart City rollouts, deployments and growth. Part of the gamut of technologies have been researched and developed for years already, others are new. However, their composition and application in the area of smart cities is unprecedented and accounts for the tremendous upsurge in work in this area, which is mainly attributed to the unique timing between the undeniable need for making cities more efficient, and an enormous set of ICT technologies having become available and affordable. As of today, however, some major issues remain to be tackled, which pertain to technologies, their integration and interaction, architectures, applications, services, privacy, to name a few.

In the light of the above, the main purpose of this special issue is threefold:

- to obtain a coherent and concise synthesis from the abundance of recently emerged material in the area of smart city technologies and architectures,
- to promote unprecedented approaches in analyzing, designing and optimizing smart city technologies and architectures, and
- to identify open issues which remain as a challenge towards using ICT technologies in smart city markets.

The technical topics of interest in the area of ICT for Smart Cities include, but are not limited to:

- green technologies (energy scavenging, low silicon footprint, low EM exposure, etc.)
- license-exempt technologies (reliable, robust, secure, delay-constraint, miniaturized, etc.)
- machine-to-machine technologies (low-power, impact onto macro cells, etc.)
- architecture designs (heterogeneous technologies, enormous data streams, etc.)
- smart city control platforms (use of diverse data streams, sensing/control/notification, etc.)
- city data storage, ownership and access methods (crowdsourcing, cloud approaches, etc.)
- business, service and billing approaches (business models, exploitation approaches, etc.)
- privacy issues (escrow-type approaches, ensuring citizens, etc.)
- innovative applications (unprecedented use of smart city streams, new applications, etc.)

#### **Guest Editors:?**

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