

Special Issue on  
**IoT-Enabled Smart Connected Cities and Survivability Challenges**

# CALL FOR PAPERS

The rapid growth in computation, smart wireless networking, IoT-enabled devices, and hardware miniaturization technologies has led to a major revolution in the smart connected city landscape in recent times. Enabled with IoT, smart connected cities can solve the problem of sharing of information, available resources, scalability, reliability, portability, and platform independence and can facilitate the large number of application areas, for example, autonomous cars and smart transportations systems, e-governance, smart grid, healthcare systems, and entertainment. The abovementioned vision requires research from multidisciplinary fields including understanding physical systems operation, how they can be networked in a cognitive and wireless manner, and how these systems can learn and cooperate with one another. The integration of IoT into smart cities is also expected to facilitate many new opportunities to make use of the Big Data and the insights derived from the collection of data by the connected devices.

Additionally, the philosophy of “everything being connected” also makes smart cities susceptible to attacks by smart malicious adversaries that could even render the cities disconnected. In order to defend against these kinds of attacks, it is important to understand how various attacks/attackers work in the first place and thereafter investigate defense mechanisms. The broad diversity of skills required makes this both a challenging and an exciting field of study.

Keeping the above related challenging issues in emphasis, this special issue will focus on identifying novel and state-of-the-art solutions to problems related to IoT-enabled smart connected cities and their survivability. The goal of this special issue is to bring together researchers and practitioners from academia, industry, and government agencies to focus on understanding modern “IoT and connected city” challenges, security threats, and countermeasures and establishing original contributions and new collaborations in these areas. We also hope to attract high quality review articles which describe the current state of the art.

Potential topics include but are not limited to the following:

- ▶ IoT devices and protocols in smart cities and crowd-sourcing
- ▶ Resource management for IoT applications, networking technologies for IoT, NB-IoT in 4G/5G Wireless and its applications in smart cities, WiFi, and small cells for intracity and intercity smart connectivity
- ▶ Back-end (cloud/edge based) infrastructure based IoT
- ▶ Green computing for IoT in smart cities, energy efficiency and conservation, energy harvesting, and management
- ▶ Middleware and system architectures for heterogeneous IoT devices and networks and integration of different IoT platforms (such as autonomous cars and smart transportations systems, e-governance, smart grid, health care systems, and entertainment into smart cities)
- ▶ Resilient deployment strategies and self-configuration mechanisms for IoTs in smart cities, smart city prototypes, design, modeling, and evaluation
- ▶ IoT and autonomous cars
- ▶ Innovative techniques for security, privacy, access control, and trust frameworks for IoT-enabled smart cities, cyber-attack detection, and prevention for smart cities
- ▶ Low-energy wireless infrastructure for IoT environment and its challenges for coexistence with other wireless technologies
- ▶ Big data and analytics in smart city, big data, and machine learning applications in enabling robust decision support system for the smart city environments

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Papers are published upon acceptance, regardless of the Special Issue publication date.

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