

IEEE INTERNET OF THINGS JOURNAL

Special Issue on

Smart Cities and Systems: Theories, Tools, Trends, Applications, Challenges, and Opportunities

With global climate change and rapid technological development, the basic requirements jump from intelligent living conditions to smart environmental balance as the core of a healthy ecosystem. In recent years, the responsive adaption of efficient and sustainable development of technological vulnerabilities has been analyzed in smart solutions. These comprise various urbanization and environmental vulnerabilities within the peripherals of smart cities. The transformation leads to unilateral interventions for long-term strategies involving holistic solutions toward smart city subsets, mitigation strategies, and responsive adaption. The smart city projects deployed and ongoing worldwide collect the information to be processed with the spatiotemporal resolution with all possible smart solutions and systems deployed. Some of these are cloud-based Internet of Things, cellular-based, and other possible physical or digital devices that process and analyze various healthcare systems, water resource management, transportation, crime detections, financial solutions, and other services. As technology advances, the gap between social acceptance and massive urbanization increases. From a smart economy perspective, the services provided by smart city projects are expected to vertical balance growth with optimized and efficient resource management.

The rapid growth of Artificial Intelligence (AI) has already modernized the assets taking care of device level and computation level performance for the smart city models. The smart city and its association with the circular economy have evolved lately as one of the critical core sustainable solutions in technology with recyclable and remanufacturing advantages. As the Industrial IoT 4.0, Healthcare 2.0, beyond 5G, 6G, and beyond have started making the next-generation cyber-physical systems, the scopes of smart city subdomains started servicing more the service providers and citizens to the full extent. The challenges are constantly increasing in social, economic, and technological representatives. The multi-disciplinary directions will provide sustainable solutions to these paradigms.

Therefore, the special issue will address the range of potential discussions and solutions for building smart cities and systems. The issue will provide a broader range of theories, technological advancements, trends, challenges, and future opportunities toward the goal. Further, the special issue will attract multi-domain experts to share their state-of-art experiences related to smart cities and systems. The topics of interest for this issue cover (but are not limited to):

- Smart energy management in Smart cities
 - Smart agriculture models and deployment issues
 - Advances in smart healthcare systems
 - Tools and platforms for smart transportation
 - Critical cellular communication models for smart cities
 - AI-driven next-generation cyber-physical systems
 - Smart ecosystem in massive urbanization
 - AI-based tools and prototypes for smart economy
 - Smart energy, waste and, water management
 - Smart solutions for environmental practices and mobility models
- Trends and Challenges:
- Smart and sustainable curb management
 - Congestion and pollution management in smart cities
 - Smart solutions for climate change and decarbonising
 - Low-carbon circular and modular solutions for EV productions
 - Smart solutions for cyber security defences
 - Smart EV charging infrastructure and small-grid solutions
 - Non-terrestrial network-based systems for smart cities
 - Circular economy solutions for plastic-free smart cities
 - Kitchen farming theory and models for smart cities

Schedule:

Submission Deadline:	October 1, 2022	Sec. Reviews Due/Notification:	January 30, 2023
First Review Due:	November 15, 2022	Final Manuscript Due:	February 15, 2023
Revision Due:	December 31, 2022	Publication Date:	2023

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