

## Advanced Complex Data Analytics for Smart City Industrial Environment

**Theme:** With the continuous size of populations living in cities, those residents face increasing environmental pressures and infrastructure needs. To deliver a better quality of life for these residents to address these demands at a sustainable cost, smart technologies can help cities meet these challenges, and have been become the next wave of public investment. It all starts with data to be generated by the residents living in the cities. This special section will focus on the ever-increasing challenges of big complex data like social network data, traffic network data, and IoT network data in smart city. Finding the insights in all that data helps municipal governments respond to fluid situations, allocate resources wisely, and plan for the future. Furthermore, putting real-time information into the hands of individuals and companies empowers them to make better decisions and play a more active role in shaping the city's overall performance. As cities get smarter, they become more livable and more responsive.

The smart city data processing technology is experiencing revolutionary changes in each stage including data collecting, cleaning, organizing, interpreting, analytics, utilizing and visualization. Those changes lead to a globally noticeable development trend of the convergence with big data frameworks, network analytical modelling, link or route prediction, recommendation systems, IoT, edge computing. This special section aims at providing a forum to present recent advancements in the convergent research about big, complex, and domain-cross information network data within the smart city environment. Challenges include real-time IoT data fusion in a city, social event discovery in a city, location/suburb profiling recognition, traffic congestion causality identification, explanation-driven route planning and recommendation, commercial store location selection, user influence diffusion inter/intra networks, network evolution and simulation, dynamic data visualization, cloud/edge computing, and the unified systems of processing multi-dimensional complex network data.

### This special section will focus on (but not limited to) the following topics:

1. IoT generated multiple source data fusion in the domain of smart city
2. Social event mining and discovery in smart city
3. Accident or causality identification in traffic congestion
4. Example-based route plan query processing
5. Explanation-based route planning and recommendation
6. Business store location strategy computation using spatial-social data in a city
7. Information flow/diffusion inter/intra multiple types of networks
8. Natural language processing for spatio behavior text understanding in smart city
9. Learning methods for user interaction prediction and re-visit prediction in traffic network

### Manuscript Preparation and Submission

Follow the guidelines in "Information for Authors" in the IEEE Transaction on Industrial Informatics <http://www.ieee-ies.org/pubs/transactions-on-industrial-informatics>. Please submit your manuscript in electronic form through Manuscript Central web site: <https://mc.manuscriptcentral.com/tii>. On the submitting page #1 in popup menu of manuscript type, select: SS on **Advanced Complex Data Analytics for Smart City Industrial Environment**

Submissions to this Special Section must represent original material that has been neither submitted to, nor published in, any other journal. Regular manuscript length is 8 pages.

**Note:** The recommended papers for the section are subject to final approval by the Editor-in-Chief. Some papers may be published outside the special section, at the EIC discretion.

<b>Timetable:</b>	<b>Deadline for manuscript submissions</b>	<b>April 10, 2020</b>
	Expected publication date (tentative)	October 2020

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