

IEEE Transactions on Industrial Informatics

CALL FOR PAPERS

for Special Section on



Advances in Artificial Intelligence for Smart Cities

Theme: Smart cities of the future must aspire to accommodate increasing urban populations and their expectations of, modern living, integrated societies, knowledge-based workforce, factory automation, gig economies, virtual-real social behaviors, among many others. This complex concoction of challenges requires new thinking of the synergistic utilization of artificial intelligence and data-driven decision-making with automation infrastructure, autonomous transportation, connected buildings, smart homes and embedded communities. Industrial informatics lies at this strategic intersection of multiple disciplines that can comprehensively realize an artificial intelligence vision of smart cities. This special section aims to advance this strategic position by consolidating recent research developments in artificial intelligence for industrial aspects of smart cities scenarios and applications.

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

- Design, Development and Application of New Machine Learning Algorithms for Smart Cities
- Design, Development and Application of Associative Memory Models and Approaches for Smart Cities
- Theoretical Development of New Deep Learning Algorithms for Smart Cities
- Semantic Reasoning and Digital Twins for Smart Cities scenarios
- New Theories and Applications of Cognitive Computing and Data Analytics Techniques for Smart Cities
- Machine learning on Embedded Devices on the Edge
- Semantic Models for Industrial Applications in Smart Cities
- New Theories and Applications of Evolutionary Computation for Smart Cities
- New Theories and Applications of AI for Distributed Systems Control and Measurement
- Scalability and Performance of AI Techniques to Handle Large Smart Cities Datasets
- Data Generation, Curation and Management in Smart Cities Applications
- AI for Human, Computer and Machine Interface in Smart Cities Applications
- Design and Development of Autonomous Systems for Industrial Informatics Applications
- Computing Architecture and Infrastructure Supporting AI in Industrial Informatics Applications
- AI Integration with MES and ERP Systems used in Smart Cities settings
- AI Applications in Industrial Internet of Things (IIoT) and Cyber-Physical Systems (CPS)
- AI for Unstructured Data (text, images, audio, video) generated by Smart Cities Applications
- AI for Dynamically Reconfigurable, Adaptive, and Emergent Automation Systems
- AI-based Testbed, Performance Evaluation for Smart Cities Applications
- Interoperability Solutions for AI Applications in Smart Cities

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 **Advances in Artificial Intelligence for Smart Cities**

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.

Timetable:	Deadline for manuscript submissions	May 30, 2019
	Expected publication date (tentative)	October 2019

Guest Editors:

- Dr Daswin de Silva, Research Centre for Data Analytics and Cognition, La Trobe University, Australia.
- Prof Daminda Akahakoon, Research Centre for Data Analytics and Cognition, La Trobe University, Australia.
- Prof Evgeny Osipov, Luleå University of Technology, Sweden.
- Prof Valeriy Vyatkin, Luleå University of Technology, Sweden and Aalto University, Finland.