

Special Session title

From Data to Knowledge: sensing the city for extracting actionable knowledge

Special Session proposer(s)

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Abstract

Big Data is an emerging paradigm and has currently become a strong attractor of global interest, especially within the transportation industry. The combination of disruptive technologies and new concepts such as IoT, AI, Smart City, upgrades the transport data life cycle. In this context, Big Data is considered as a new pledge for the transportation industry to effectively manage all data this sector required for providing safer, cleaner and more efficient transport means, as well as for users to personalize their transport experience. However, Big Data comes along with its own set of technological challenges, stemming from the multiple and heterogeneous transportation/mobility application scenarios.

The concept of big data and Internet of Things (IoT) means that the quantity of traffic which should be allowed to roll out at a particular time can be regulated. Information can be collected in real time with the use of sensors, cameras, wearable gadgets and smart devices. With the rapid surge of connected vehicles, agencies and startups are using data analytics and mobile networks to help cities manage traffic more efficiently. Big data is advancing the concept of smart cities. Cities are getting smarter to fetch more helpful responses through big data analytics to ensure there is ample space for the city to be connected to a standard network. Data Mining and Data Analytics are the two cores working on Big Data Processing. Data Mining involves collecting data from various sources, while Data Analytics is all about applying logical reasoning to it.

This special session deals with methodologies and techniques to digest in real-time any kind of mobility data and to unlock its potential by extracting and making available, usable and exploitable the value and knowledge contained in it, facilitating public institutions to actively manage (drive)mobility in cities.

Keywords

- Data Mining and Data Analysis
- Off-line and Online Data Processing Techniques
- Data Management and Geographic Information Systems

Topics of interest

- Data Mining and Data Analysis
- Knowledge and mobility patterns extraction
- Internet of things
- Big Data and Artificial Intelligence
- Mobility dashboard and data/knowledge visualization