

CALL FOR PAPERS

ACM Transactions on Intelligent Systems and Technology

Special Issue on Intelligent Trajectory Data Analytics

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Rapid advances in location acquisition technologies and mobile computing have generated massive trajectory data, which describes the mobility of a diversity of moving objects. Over the past decades, a broad range of techniques have been proposed for processing, managing and mining trajectory data. It enabled and helped government agencies and businesses to better understand the mobility behaviour of their citizens and customers, which is crucial for a variety of applications such as smart city and transportation, public health and safety, environmental management, and location-based services.

The continuing innovation and development of computing and communication technologies, e.g., deep learning, 5G, in-memory computing and edge computing, and have created opportunities and capabilities to analyze trajectory data at unprecedented scale, but also pose new challenges and threats to existing trajectory analytics methodologies in terms of efficiency, accuracy and privacy. Thus, it is necessary to propose novel or re-visit existing trajectory computing techniques by leveraging modern computing paradigms to support emerging applications.

This special issue aims to provide a forum for researchers and practitioners in academia and industry to present their latest research findings and engineering experiences in developing cutting-edge techniques for intelligent trajectory data analytics.

Topics

Papers are invited in theory, modeling, algorithms, and applications of intelligent trajectory data analytics to establish the latest efforts of the research in this area. Topics of interest include, but not limited to:

- Trajectory calibration and noise filtering
- Trajectory compression algorithms
- Uncertainty management for trajectories
- Distributed indexing and query processing for trajectories
- In-memory computing for trajectories
- Edge computing for trajectories
- Trajectory anomaly detection
- Trajectory pattern mining
- Trajectory classification
- Trajectory clustering
- Synthetic generation of realistic trajectories
- Trajectory representation learning
- Trajectory analytics with deep learning
- Trajectory analytics with federated learning
- Trajectory analytics with multimedia data
- Privacy-preserving trajectory analytics
- Reasoning and causality analysis for trajectories
- Trajectory analytics for emerging applications

Important Dates

- Submissions deadline: December 20, 2020
- First-round review decisions: February 28, 2021
- Deadline for revision submissions: April 30, 2021
- Notification of final decisions: June 30, 2021
- Tentative publication: Late 2021

Submission Information

Manuscript preparation details are available at <http://tist.acm.org>. Each paper will be peer-reviewed by at least three reviewers. Submit your paper to <http://mc.manuscriptcentral.com/tist>, selecting the paper type "Special Issue Intelligent Trajectory Data Analytics".

For questions and further information, please contact **Kai Zheng** at zhengkai@uestc.edu.cn.



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