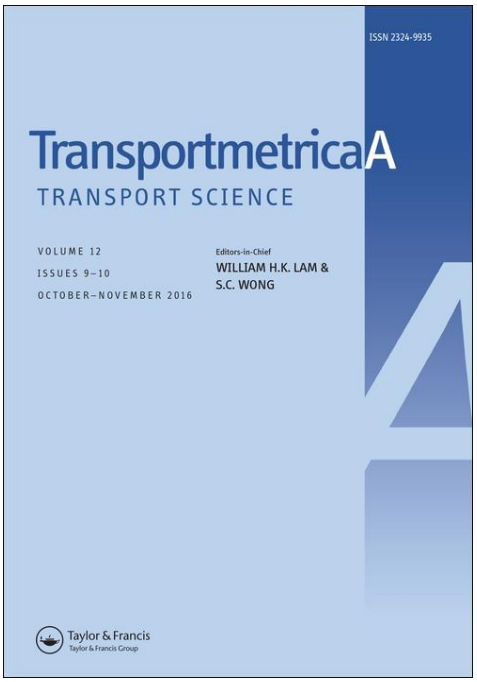
Methodological Advancements in Understanding and Managing Urban Traffic Congestion



The ever-increasing population in cities induces high demand for travel. Unfortunately, due to the limited capacity of urban transport networks, this ever-increasing demand for travel raises various problems and issues including congestion, energy, environmental impact, safety, and security. Continuing construction of new infrastructure is not a sustainable solution due to increasingly tight fiscal, physical and environmental constraints. A sustainable solution for mitigating congestion and other traffic-related problems calls for an understanding of traffic congestion characteristics and effective management of existing infrastructure through appropriate planning and control measures.

Analysis and understanding of transport issues are often constrained by the domain-dependent data source. Recent emerging technologies of connected vehicle-to-vehicle, vehicle-to-infrastructure, vehicle-to-infrastructure-to-pedestrian environments and transportation big data have made it easier and cheaper to collect, store, analyze, use, and disseminate multi-source data. Connected environments and vehicle automation technologies also make it more flexible for implementing real-time management and control measures for improving system performance.

This special issue aims to explore the methodological and technological advancements in understanding and managing urban traffic congestion.

The topics include but not restricted to

- Urban travel demand modeling and management,
- Advanced travel demand management with emerging ITS technology,
- Understanding of the formation and propagation of spatiotemporal urban traffic congestion,
- Macroscopic modeling of road traffic in an urban transportation network,
- Visualization of urban traffic congestion based on transportation big data mining,
- Large-scale urban traffic congestion prediction and visualization,
- New opportunities for congestion mitigation brought by connected and automated vehicles,
- Novel traffic signal control and route guidance strategies,
- Bus priority-oriented urban traffic control and management.

Paper addressing the above subjects are invited to this special issue.

Submission Guidelines

The length of each paper, including the abstract and references, should not exceed 10,000 words. It should be noted that each table, figure, or photograph accompanying the text counts as 250 words.

Please submit the paper to the journal's online submission system: ***here***. Or read the ***full instructions for authors*** before submitting.

The paper will go through a normal peer review process.

Important Dates

First submission deadline:	April 30, 2019
Notification of first decision:	August 15, 2019
Revision submission deadline:	December 1, 2019
Notification of final decision:	March 31, 2020
Final manuscripts deadline:	May 31, 2020
Issue of publication (expected):	Summer 2020

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