

CALL FOR PAPERS

Urban and regional transport system is a highly complex system that involves and influences the daily activities of each stakeholder. Targeting at improving the efficiency, equity, safety, reliability, and sustainability of transport systems, it is crucial to investigate the mechanism and dynamics of transport system flows. The recent advances of transport flow analysis focus on modeling and management of (multimodal) transport systems, addressing both theoretical and empirical aspects. Microscopic models, for example, agent-based simulation, which track individual users (including private vehicles, pedestrians, public transport, and users of emerging sharing mobilities) and investigate their interactions, have been applied to analyze the performance of complex multimodal transport systems and develop detailed signal control strategies at intersections. On the other hand, macroscopic models such as Macroscopic Fundamental Diagram aim at capturing the characteristics of traffic congestion propagation, modeling the collective traffic flow dynamics, and further managing traffic at a network and regional level. A big stream of macroscopic models also focuses on the network modelling of aggregated flows. The analysis and modeling of transport system flows at both microscopic and macroscopic levels offer great opportunities to cope with efficient flow control in congested circumstances. Studies on the behavior rules of travelers in the transport system also facilitate the investigations of transport system flows. To this end, this special issue aims to address the cutting-edge ideas, knowledge, methodologies, techniques, and practices in the broad areas of transport system flow analysis.

Flow analysis is the core of many well-recognized technologies for the evaluation and improvement of transport systems, including the analytical and simulation software packages for transport system planning and design, traffic control, and demand management. This special issue solicits original contributions in transport system flow analysis, including theoretical and applied research.

Potential topics include but are not limited to the following:

- ▶ Microscopic analysis of traffic flows
- ▶ Studies of Macroscopic Fundamental Diagram and its applications
- ▶ Multimodal transport network flow evaluation and management
- ▶ Analysis of transport system flows in large-scale transport networks and simulations
- ▶ Passenger demand/flow analysis for public transport and emerging sharing mobilities
- ▶ Data-driven approaches for improved transport system planning and operation
- ▶ Analysis of disruptions to transport system flows
- ▶ Application of ITS technologies for analyzing and controlling traffic flows
- ▶ Analysis of traffic dynamics using GNSS (Global Navigation Satellite System) positioning and navigation technology

Authors can submit their manuscripts through the Manuscript Tracking System at <https://mts.hindawi.com/submit/journals/jat/fts/>.

Papers are published upon acceptance, regardless of the Special Issue publication date.

Lead Guest Editor

Zhiyuan Liu, Southeast University,
Nanjing, China
zhiyuanl@seu.edu.cn

Guest Editors

Lele Zhang, The University of
Melbourne, Melbourne, Australia
lele.zhang@unimelb.edu.au

David Z. W. Wang, Nanyang
Technological University, Singapore
wangzhiwei@ntu.edu.sg

Submission Deadline

Friday, 20 July 2018

Publication Date

December 2018