

IEEE Transactions on Intelligent Transportation Systems

Call For Papers

Special Issue on *Modeling Dynamic Transportation Networks in the Age of Connectivity, Autonomy and Data*

MOTIVATION AND SCOPE

The recent emergence of new technologies and systems such as connected and automated vehicles (CAVs), novel incentive and routing platforms, and shared mobility services is making a significant impact on traffic flow in road networks. The rapid development of these innovations, powered by new capabilities in data collection, communication, and vehicle automation brings both great opportunities and new challenges for managing and controlling the transportation network efficiently. It is thus imperative to integrate the emerging systems into a dynamic transportation network analysis, and to develop new methodologies to coherently integrate Dynamic Traffic Assignment (DTA) models with increasingly available data and methods for large-scale computation. Consequently, they call for new theories, models, computational methods, and application scenarios to study multi-modal dynamic transportation networks with the emerging technologies as essential components.

It is this need for extending the scope of DTA (i.e., dynamic transportation network modeling) to emerging mobility trends that this Special Issue of the IEEE Transactions on Intelligent Transportation Systems is focused on.

LIST OF TOPICS: Topics of interest to this special issue include, but are not limited to:

1. *Extending the DTA framework for designing real-time control e.g., routing, incentives, traffic control, etc., with emphasis on algorithm design, computational issues and emerging control modes*
2. *Mathematical formulations of network flow systems with routing / assignment problems (ODEs, PDEs, MDPs, CNN, etc.)*
3. *Novel notions of equilibria and similar concepts/principles motivated by emerging information and incentive platforms, and their implication on solution methodologies of resulting DTA formulations*
4. *Data-driven techniques, including those, which focus on emerging sensing modalities, emphasize analytical guarantees, and which focus on the entire pipeline from data to decision and control*
5. *Multimodal transportation systems, with emphasis on ride hailing services*
6. *Real world DTA case studies, particularly those that motivate novel directions for methodological research.*

PAPER SUBMISSION GUIDELINES

Paper submission should conform to the information for authors available at <https://mc.manuscriptcentral.com/t-its>.

IMPORTANT DATES

First submission deadline: August 01, 2020
Notification of first decision: November 01, 2020
First revision submission deadline: January 01, 2021
Notification of final decision: May 01, 2021
Final manuscript (camera ready) submission deadline: June 01, 2021
Issue of Publication: August 01, 2021

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SUBMISSION AND REVIEW OF PAPERS

Submitted papers should be original and not be under consideration elsewhere for publication. The authors should follow the journal guidelines, regarding the manuscript content and its format when preparing their manuscripts. All papers will be reviewed by at least three independent reviewers for their suitability in terms of technical novelty, scientific rigor, scope, and relevance to this special issue