

Call for Abstracts for a New Edited Book

Pushing the Frontier: Data Driven Transportation Networks in an Era of Rapid Change

The advent of transportation network companies (e.g. Uber, Didi) and autonomous transportation has altered the transportation mobility industry in the last few years. Globally many cities are investing in this innovation under the umbrella of 'Smart Cities', 'Digital Cities' etc. With the broad penetration of these digital technologies in everyday life, growing use of real-time data streams presents a unique and significant opportunity to provide new mobility solutions to citizens, government agencies and industry, and to connect these different stakeholders. By using data from pervasive, interconnected, and "smart" technologies, it has become more possible than ever before to unravel the complexity of travel patterns, make smart parking decisions, improve safety, monitor infrastructure conditions, predict the value of new transit services, and provide real-time information about asset conditions in a faster and inexpensive manner.

While these technologies create tremendous opportunities for new mobility solutions in planning, real time operations and sustainability contexts, many things are unknown. For instance, we clearly do not know if these services will increase the congestion in the near future and the overall benefit they promise. We also do not know the equity and fairness (both spatially and temporally) of these new services. Considerable knowledge gaps exist in our understanding of problems motivated by these data streams both from an empirical perspective and a methodological perspective.

This book promises to address some of these gaps by bringing together contributions from researchers, industry experts, practitioners and policy makers to address salient research issues and develop methodologies based on emerging technologies. It is expected that the book will be a compendium of the state of the art in the area of the data driven transportation networks and will accelerate the convergence of methods in this area. The objective is to provide researchers, industry experts, planners, policy makers and city agencies an understanding of the latest methods, insights, advantages and limitations of the data, the boundaries of these approaches and the promise that they hold for the future.

*The book will be a first volume of a new Elsevier Series on **Smart Mobility Networks**. The Series Editor is Prof. Satish Ukkusuri*

Scope of the Volume

The book will focus on data driven methods and policies on transportation networks for planning, operations and safety across multiple modes. Examples of some past research from the editor are included in brackets. Topics will include but are not limited to:

- Ridesharing Algorithms [10,11]
- Modeling of Emerging Taxi Markets [13]
- Pricing in app-based Taxi systems [9]

- Social Media Data Analytics (for planning, operations, emergencies) [3,5]
- Land use planning [12]
- Non-traditional demand models [6]
- Activity modeling from cell phone and/or social media data [4]
- Mobility pattern analysis [1]
- Travel time estimation [2]
- O-D Demand estimation
- Equity issues of emerging transportation services
- Mobility as a Service
- Matching algorithms [7]
- Data Driven Freight Planning and Analysis
- Traffic Operations [8]
- Developing new frameworks for measuring impacts
- Data privacy issues
- Mode choice analysis

Volume Editor

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Submission Procedure

Authors who wish to contribute to this book should send an abstract of up to 1000 words to the editor by May 15, 2018.

Authors of selected abstracts would be invited to submit a full paper by June 1 2018. All full papers will go through a peer review process.

Submitted papers should not have been previously published nor be currently under consideration for publication elsewhere. Conference papers may be considered only if they have not been archived and if the authors retain the copyright. Authors can submit extensions of their previous work as long as it is sufficiently novel and distinct from their prior work. Papers are expected to make significant contributions to the topics identified above.

Timeline

- Deadline for abstract (up to 1000 words): May 1, 2018
- Notification of acceptance/invitation for full papers: beginning of May 20, 2018
- Full paper submission: August 15, 2018
- Full paper acceptance notifications: September 30, 2018
- Revised papers: November 15, 2018
- Expected publication: Spring 2019

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