CALL FOR PAPERS

Special Issue on Big Data in Transportation

Expert Systems (Wiley Online Library)

Overview

Optimization and analysis of transportation systems have considerably become more autonomous and smarter with the utilization of connectivity and automation in terms of overcoming urbanization problems, such as ever-growing population, increasing personal travel activities, limited budgets for infrastructure deployments, etc. With this in mind, there is an increasing need for high cooperation for innovative, strategic, and operational management strategies among different types of transportation modes, with different objectives and policies. Intelligent transportation systems (ITS), even more today than before, will have significant duties in providing efficient integration and cooperation among different technologies and services.

With the utilization of such technologies and services, complex and diverse multi-source ITS data have increased massively. Those valuable vast amounts of data can be handled by big data analytics in terms of providing efficient, safe, and convenient ITS operations. Through the big data oriented emerging technologies, traffic becomes more intelligent, more manageable, and safer.

Topics

We invite contributions from researchers on data science, data systems, and transportation science and their applications to deliver effective and efficient solutions to current challenges of handling big data in real-world ITS applications.

We welcome original contributions (reviews and surveys, technical and research papers) on methodologies, formalisms, algorithms, and solutions on Big Data for the following topics and related areas:

- Traffic Optimization
- Road Network, Rail Traffic, and Air Traffic Analysis and Management
- Traffic Safety
- Connected and Autonomous Vehicles
- Machine Learning, Deep Learning and Optimization Techniques for ITS
- Mobility and Accessibility
- Data Collection, Sensing and Detectors
- Special Events and Emergency Management
- Environment and Air Quality
- Logistics
- Big Data in Vision, and Environment Perception

Submission Instructions

Manuscripts must be submitted through the Expert Systems electronic submission system at https://submission.wiley.com/journal/exsy (select “Special Issues on Big Data in Transportation” as the manuscript type). Submissions shall adhere to the Wiley’s instructions and guidelines for authors available at the journal web site: https://onlinelibrary.wiley.com/journal/14680394. Papers will be evaluated for their originality, contribution, significance, soundness, clarity, and overall quality. The interest of contributions will be assessed in terms of technical and scientific findings, contribution to the knowledge and understanding of the problem, methodological advancements, and/or applicative value.

Important Dates

Submission due: March 31, 2021
Initial review: April 30, 2021
Revision due: June 31, 2021
Final decision: July 31, 2021
Publication: After July 2021 (at the discretion of the Editor in Chief)

Guest Editors

Baloka Belezamo, Arizona State University, Tempe, Arizona, USA (baloka.belezamo@asu.edu)
Süleyman Eken, Information Systems Engineering, Kocaeli University, Turkey (suleyman.eken@kocaeli.edu.tr)
Cafer Avcı, Transportation Engineering, Aalto University, Finland (cafer.avci@aalto.fi) (Lead Guest Editor)

Short Biography of Special Issue Editors

Baloka Belezamo is a Senior Transportation Planning Engineer with several years of experience in travel modeling, forecasting, and analysis at state, regional, and consulting level. Before joining Arizona Department of Transportation (ADOT), Dr. Belezamo worked as a System Modeling Engineer for Maricopa Association of Governments (MAG) in Phoenix, Arizona. Prior to joining MAG, Dr. Belezamo worked in Montreal, Canada, as an Analyst for INRO Consultants, the developer of the transportation planning software Emme, where he provided technical assistance to government agencies, universities, and consultants worldwide. Dr. Belezamo is a registered Professional Engineer (P.E.) in the State of Arizona. He is also a member of the engineering honor society, Tau Beta Pi, and a member of Order Of Engineers. Dr. Belezamo received his Doctoral degree from Arizona State University (ASU). In addition to English, Dr. Belezamo is fluent in many languages including French, Turkish, and Spanish (learning). Dr. Belezamo currently serves as a senior Modeling and Forecasting Manager in the Multimodal Planning Division of the Arizona Department of Transportation. He is a member of the Transportation Network Modeling Standing Committee (AEP40) of the Transportation Research Board (TRB).

Süleyman Eken received his MS degree and PhD degree in Computer Engineering at the Kocaeli University. He was a Research Assistant at Kocaeli University, Turkey, from 2010 to 2019. Currently, he works as a Assistant Professor of Information Systems Engineering, Kocaeli University, Izmit, Turkey. His main research work focuses on distributed systems and big data analysis. Dr. Eken served as a reviewer for more than 20 journals such as the IEEE Transactions on Industrial Informatics, IEEE Access, Concurrency and Computation: Practice and Experience, Journal of Network and Computer Applications, Journal of Ambient Intelligence and Humanized Computing, Peer-to-Peer Networking and Applications, International Journal of Distributed Systems and Technologies, International Journal of High Performance Computing and Networking, International Journal of Grid and High Performance Computing.

Cafer Avcı is a Postdoctoral Researcher at the Spatial Planning and Transportation Engineering Group, Department of Built Environment, Aalto University, Finland. Cafer obtained his PhD degree from Computer Engineering at Yildiz Technical University, Turkey. In addition, he has held a visiting research position at the School of Sustainable Engineering and the Built Environment, Arizona State University, USA. His current research interests include intelligent transportation systems, multi-vehicle collaborative driving, connected autonomous vehicles, traffic simulation and traffic flow theory. One major contribution to literature of Cafer's research is on increasing the system level efficiency of connected autonomous vehicles by dynamically optimizing the reaction times at the critical bottlenecks. Cafer served as a reviewer for many journals and top conferences including Transportation Research Part C, Transportmetrica B, Computers & Operations Research, Reliability Engineering & System Safety, Expert Systems with Applications, IEEE ITSC, IEEE IV, and TRB Annual Meetings.