IEEE Intelligent Transportation Systems Society

IEEE Open Journal of Intelligent Transportation Systems
Editor in Chief (Prof Dr Bart van Arem)
Special Issue on: "ITS for Public Transportation"

Scope

Public transportation is a vital part of the urban transportation system in order to mitigate environmental problems such as pollution, noise and climate change. There is a continuing need for research on planning and operations to make public transportation efficient, reliable and attractive. In addition, with the current situation caused by the COVID-19 pandemic, focus on strategies to improve the safety and security management is required. Intelligent Transportation Systems (ITS) focus on applying ICT in order to improve information sharing, optimize network management and influence travel behavior. The introduction of 5G Cellular Networks and the integration of IoT technologies will help in exchanging valuable information with users and vehicles based on reliable and multi-sourced data.

The goal of this Special Issue is to cover theoretical, experimental and operational aspects to provide innovative solutions dealing with public transportation problems in general, and with particular attention to COVID-19. We invite applicants to review recent advances and applications in Intelligent Public Transportation Systems and call for innovative works that explore frontiers and challenges in the field.

Contributions for consideration in the Special Issue will include a paper proposed by Noursalehi, P., Koutsopoulos, H.N. and Zhao, J. titled "Machine-learning-augmented analysis of textual data: application in transit disruption management". The paper develops a comprehensive, pragmatic framework for automated analysis of rail incident reports to support a wide range of applications and functions. The techniques utilized range from topic modeling and dependency graphs in the absence of labeled data, to deep neural networks leveraging pre-trained language models for processing large, labeled documents.

The technical areas include but are not limited to:

- Trajectory planning and cooperative maneuvering
- Connected, cooperative and automated vehicles
- V2X communications
- 5G research and testing
- Information and data sharing
- Map Fusion and Location coordination
- ITS and AI for disruption management
- Planning and scheduling
- Data management (AVL, APC, AFC)
- Safety regulations for travelling by public transport
- Operator/passenger protection systems
- Cleaning and disinfection of means of transportation
- Distancing and hygiene protocols
- Pandemic preparation, recovery, and adaptation

Time line: Submission from September 1 to November 30, 2020. Accepted papers will be published upon acceptance as early access.

Paper Submission Link: https://mc.manuscriptcentral.com/oj-its (choose manuscript type ITSPT)

Guest editors:

Abdulla Al-Kaff *is an Assistant Professor and Senior Researcher at the Intelligent Systems Laboratory (LSI), Universidad Carlos III de Madrid, with a solid theoretical and mathematical background in the fields of Artificial Vision, Artificial Intelligence, and localization algorithms for Intelligent Systems and Automotive ground and aerial vehicles. His current research interests focused on computer vision, deep/reinforcement learning, trajectories planning, intelligent systems, and autonomous vehicles.*

Erik Jenelius *is an Associate Professor and the Head of the Division of Transport Planning within the Department of Civil and Architectural Engineering, KTH Royal Institute of Technology, Sweden. His research aims to tackle the challenges of congestion, crowding, and environmental impacts in urban transport systems, including the use of emerging sensor technologies. Current research interests include data-driven traffic and mobility management, transportation network and resilience analysis, and transit systems planning and operations.*