

Workshop title

Smart Public Transportation Systems (SPTS)

Workshop proposer(s)

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Abstract

The world's urban population now stands at about 4 billion people, and is expected to reach almost 7 billion by 2050 according to the United Nations. It is estimated that the total number of vehicles worldwide could reach 2.5 billion by 2050. The combination of rapid urbanization and motorization has been placing an ever-increasing amount of pressure on the current transportation infrastructure throughout the world, resulting in such widespread problems as traffic congestion, traffic fatalities and injuries, traffic pollution and increased energy consumption. With limited land resources and road capacity, private cars cannot meet ever-increasing, diversified, urban mobility needs. Public transport (PT) as a shared, sustainable, and cost-effective travel mode contributes to improving urban mobility, reducing road traffic accidents, decreasing overall green gas emissions, and fostering more livable cities. PT is now looked upon as the best choice to solve these problems. Recent trends underline that transport policy decision-makers have begun to use the carrot-and-stick measures to this end; that is, on the one hand, restricting car ownership and usage and increasing toll and parking charges (stick) and, on the other hand, encouraging investment in advanced and attractive PT systems (carrot). Recently we are observing considerable changes in our PT systems especially because of the emerging developments of advanced Intelligent Transportation Systems (ITS) technologies and expected changes in travel behavior. New and innovative PT systems, such as automated PT, electric PT and on-demand PT, are naturally being emerged. This workshop aims to bring PT researchers and practitioners together to share their knowledge and experiences in developing new and innovative smart PT systems.

Keywords

- Public Transportation Management
- Personalized Public Transit
- Travel Information, Travel Guidance, and Travel Demand Management

Topics of interest

- Autonomous and connected PT systems
- Electric and alternative fuel PT systems
- Demand-responsive/on-demand PT systems
- Modular-vehicle PT systems
- Integrated and seamless multi-modal PT systems
- Sustainable PT systems
- Smart PT systems in the era of Mobility-as-a-Service



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- Emergency PT systems
- Advanced PT data collection and management systems
- Advanced PT scheduling systems
- Advanced PT traveler information systems
- Infrastructure development (e.g., charging infrastructure) for smart PT systems