

IEEE Transactions on Intelligent Transportation Systems

Call for Papers

Special Issue on “Applications and Developments of Novel Technologies in Intelligent Transportation Infrastructure Systems”

MOTIVATION AND SCOPE

The Intelligent Transportation Infrastructure System (ITIS) is a new generation of smart civil infrastructure that integrates IoT, big data, artificial intelligence, advanced sensing technologies, automated piloting (e.g., drone), green energy, sustainable and resilient materials/structures together to achieve high quality road service and efficient operation. As the future trend, it will significantly change the form of traditional transportation infrastructures. In addition, considering challenges to evaluate, analyze and predict the service quality and service life of modern transportation infrastructure system using the traditional approaches due to the complexity associated with both traffic and climatic conditions, one can use the novel intelligent technologies as powerful tools to greatly advance the service convenience of public transportation, prolong the service life of transportation infrastructures, and improve the efficiency and safety of transportation systems.

This special issue aims to collect latest research discoveries and achievements, and discuss progresses in current applications and future developments of novel technologies in transportation infrastructure systems including but not limited to 1) integration of smart functions; 2) advanced sensing, monitoring and analysis; 3) smart management and maintenance; 4) green energy for transportation infrastructures; 5) multi-purpose road services; and 6) resilient infrastructures.

LIST OF TOPICS

The topics of interests to this special issue include, but are not limited to:

- Advanced sensors and 5G-based sensing technologies for traffic, structure and system monitoring
- Artificial intelligence (AI) methods for transportation infrastructure and system evaluation
- Intelligent computer-based algorithm for properties characterization and evaluation of transportation infrastructure and materials
- Automated pilot technologies for transportation infrastructure distress detection and condition assessment

-Advanced AI-based image-processing techniques for pavement condition, texture, damage recognition and evaluation

-Green and renewable energy technologies for transportation infrastructure and system

-Smart materials and structures for multifunctional infrastructures

-Novel techniques for gas emission reduction, energy conservation in transportation infrastructure construction and maintenance

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: November 2021

Notification of first decision: February 2022

First revision submission deadline: April 2022

Notification of final decision: August 2022

Final manuscript (camera ready) submission deadline: September 2022

Issue of Publication: November 2022

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.

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