Applied Sciences

an Open Access Journal by MDPI

CiteScore: 6.1
Impact Factor: 2.9

Special Issue Reprint

Advances in Intelligent Transportation Systems

Edited by: Seoungbum Kim and Joyoung Lee

This Reprint compiles research advancing intelligent transportation systems (ITS) through data-driven approaches to modern mobility challenges. Driven by evolving communication technologies and enhanced computing power, vehicle and roadside sensors now generate rich, precise data that enable researchers to examine transportation problems with unprecedented detail. The contributions in this volume address traffic efficiency, safety, sustainability, and management. By leveraging high-resolution ITS data, the studies offer new approaches to understanding traffic dynamics, predicting risks, supporting automated mobility, and improving overall system quality.

Derived from a Special Issue on big data in transportation research, this collection covers theoretical developments and practical implementations. Key themes include cooperative ITS, vehicle sensor analytics, emerging technologies for traffic operations and maintenance, automated highway systems, and AI/machine learning applications. Several papers focus on real-time data processing to foster safer, more efficient travel. Together, these works highlight how modern sensing and computational tools enable accurate, adaptable, and sustainable solutions. As a record of scientific progress and a catalyst for future ITS innovation, this volume underscores the vital role of interdisciplinary collaboration among engineers, data scientists, and policymakers. We sincerely thank all authors for their valuable contributions to this Reprint.

https://www.mdpi.com/books/reprint/13323