



Journal of Transportation Technologies





Journal Editorial Board

ISSN 2160-0473 (Print) ISSN 2160-0481 (Online)

https://www.scirp.org/journal/jtts

.....

Editor-in-Chief

Prof. Tschangho John Kim University of Illinois at Urbana-Champaign, USA

Editorial Board

Prof. Khaled Abdelazim Abbas Egypt National Institute of Transport, Egypt

Dr. Theo Arentze Eindhoven University of Technology, Netherlands

Prof. Shuming ChenJilin University, China

Prof. Torbjörn Falkmer Curtin University, Australia

Dr. Ranjit GodavarthyNorth Dakota State University, USADr. Essam H. AlmasriUniversity of Gaza (IUG), Palestine

Prof. Antoine Hobeika Virginia Polytechnic Institute and State University, USA

Dr. Xinguo JiangSouthwest Jiaotong University, ChinaDr. Felipe JiménezUniversidad Politécnica de Madrid, SpainDr. Jungwook JunVirginia Department of Transportation, USA

Prof. Seungmo KangKorea University, South Korea

Prof. Jerzy Kisilowski Kazimierz Pulaski University of Technology and Humanities in Radom,

Poland

Dr. Pan Lu North Dakota State University, USA

Prof. Srinivas S. Pulugurtha The University of North Carolina at Charlotte, USA

Dr. Joaquin Rodriguez French Institute for Sciences and Technologies of Transport,

Planning and Networks, France

Dr. Adel W. Sadek University at Buffalo, the State University of New York, USA

Dr. Hualiang Teng University of Nevada, USA

Prof. Harry J. P. Timmermans Eindhoven University of Technology, Netherlands

Dr. Rafael Toledo-Moreo Technical University of Cartagena, Spain

Prof. Dario Vangi Florence University, Italy

Dr. Achmad WicaksonoUniversitas Brawijaya, IndonesiaProf. Saffet YagizNazarbayev University, KazakhstanProf. Lixing YangBeijing Jiaotong University, China

Dr. Ruifeng Yu Tsinghua University, China



Volume 12 Number 4

ISSN Online: 2160-0481 ISSN Print: 2160-0473

October 2022

Table of Contents

Real-Time Traffic State and Boundary Flux Estimation with Distributed Speed Detecting Networks
Y. C. Zhang, H. Deng533
A Comparative Study of Managing a Project Using Traditional Management Techniques and a Critical Chain Project Management Methodology in Aircraft Maintenance Field
D. K. Yadav, A. Kulkarni, H. Yao544
An Analysis of the Women Commuters' Satisfaction in the Public Bus Service in Bangladesh: A Survey on Local Buses in Major Cities
A. Umme, K. Aya, K. Hisashi559
Truck and Passenger Car Connected Vehicle Penetration on Indiana Roadways
R. S. Sakhare, M. Hunter, J. Mukai, H. Li, D. M. Bullock
A Public-Private Partnership Procurement Approach to Sustainable Transport— Zimbabwe Case
V. Ndlovu, P. Newman600
Typology and Risk Factors of Public Road Accidents in Kinshasa with Its Two Peripheral Areas (Mongata and Kasangulu) from March to May 2017
M. B. Pierre, M. K. Patrick, B. K. M. Barthélémy, P. P. Francy, V. N. Nzau, M. Arthur
Examining the Risk Factors of Rear-End Crashes at Signalized Intersections
M. Sharafeldin, A. Farid, K. Ksaibati635
A Promising Distance-Based Gasoline Tax Charging System Based on Spatio-Temporal Grid Reservation in the Era of Zero-Emission Vehicles
B. Habibullah, R. Teng, K. Sato651
Using Connected Truck Trajectory Data to Compare Speeds in States with and without Differential Truck Speeds
J. Desai, J. K. Mathew, H. Li, D. M. Bullock
Calibration and Confidence in Snowplow Fleet Operations and Fleet Telematics
J. A. Mahlberg, J. Desai, H. Li, R. S. Sakhare, T. Wells, D. M. Bullock696
Evaluation of Lean Product Development Stages of Autonomous Vehicle Technologies with AHP Method

Journal of Transportation Technologies, 2022, 12, 533-875





ISSN Print: 2160-0473

A Quantitative Approach for Timing the Pedestrian Walk Interval	
A. J. Nafakh, D. M. Bullock, J. D. Fricker	732
Autonomous Vehicle Design in Lean Product Development Processes for Value Stream Map	
F. A. Paker.	744
Selection and Impact of an Aerofoil Leading Edge on Boundary Layer Transition	
D. Bhatia, D. K. Yadav, G. J. Yang, J. Wang, H. Hesse.	778
Powertrain Fuel Consumption Modeling and Benchmark Analysis of a Parallel P4 Hybrid Electric Vehicle Using Dynamic Programming	
A. R. Mull, A. C. Nix, M. G. Perhinschi, W. S. Wayne, J. A. Diethorn, D. E. Dunnuck	804
Integrated Performance Measures for Bus Rapid Transit System and Traffic Signal Systems Using Trajectory Data	
J. K. Mathew, H. Li, E. Saldivar-Carrranza, M. Duffy, D. M. Bullock	833
Continuous Flow Intersection Performance Measures Using Connected Vehicle Data	
E. Saldivar-Carranza, H. Li, M. Taylor, D. M. Bullock	861

Journal of Transportation Technologies (JTTs) Journal Information

SUBSCRIPTIONS

The *Journal of Transportation Technologies* (Online at Scientific Research Publishing, https://www.scirp.org/) is published quarterly by Scientific Research Publishing, Inc., USA.

Subscription rates:

Print: \$79 per issue.

To subscribe, please contact Journals Subscriptions Department, E-mail: sub@scirp.org

SERVICES

Advertisements

Advertisement Sales Department, E-mail: service@scirp.org

Reprints (minimum quantity 100 copies)

Reprints Co-ordinator, Scientific Research Publishing, Inc., USA.

E-mail: sub@scirp.org

COPYRIGHT

Copyright and reuse rights for the front matter of the journal:

Copyright © 2022 by Scientific Research Publishing Inc.

This work is licensed under the Creative Commons Attribution International License (CC BY).

http://creativecommons.org/licenses/by/4.0/

Copyright for individual papers of the journal:

Copyright © 2022 by author(s) and Scientific Research Publishing Inc.

Reuse rights for individual papers:

Note: At SCIRP authors can choose between CC BY and CC BY-NC. Please consult each paper for its reuse rights.

Disclaimer of liability

Statements and opinions expressed in the articles and communications are those of the individual contributors and not the statements and opinion of Scientific Research Publishing, Inc. We assume no responsibility or liability for any damage or injury to persons or property arising out of the use of any materials, instructions, methods or ideas contained herein. We expressly disclaim any implied warranties of merchantability or fitness for a particular purpose. If expert assistance is required, the services of a competent professional person should be sought.

PRODUCTION INFORMATION

For manuscripts that have been accepted for publication, please contact:

E-mail: jtts@scirp.org



Call for Papers

Journal of Transportation Technologies (JTTs)

ISSN 2160-0473 (Print) ISSN 2160-0481 (Online) https://www.scirp.org/journal/jtts

Journal of Transportation Technologies (JTTs) is an international refereed journal dedicated to the latest advancement of transportation technologies. The goal of this journal is to provide a forum for scientists and academicians worldwide to promote, share, and discuss various new issues and perspectives in diverse areas of transportation technologies, and to keep a record of the state-of-the-art research in the areas.

Subject Coverage

All manuscripts must be prepared in English, and are subject to a rigorous and fair peer-review process. Accepted papers will immediately appear online followed by printed hard copy. The journal publishes original papers including but not limited to the following topics:

Advanced Driver Assistance Systems

Advanced Emergency Management Systems (AEMS)

Advanced Materials for Transportation Vehicles

Advanced Traffic Management Systems (ATMS)

Automated Baggage Handling and Screening Systems

Automated People Movers

Automatic Vehicle Location and Tracking

Automotive Software Architecture

Bus Transit Systems

Collision Avoidance Systems

Command Control Centres

 $Communication, \ Navigation, \ Surveillance \ Systems$

Computer-Aided Dispatch

Devices to Enhance Pedestrian and Bicyclist Safety

Dynamic Traffic Signal Control Electronic Fare Collection

Flight Information Display Systems

Health and Wellness in Transportation Industry

Incident Reporting Packages Intelligent Security Systems

Intelligent Transportation Systems and Traffic Control

Intelligent Vehicles ITS Architecture

ITS as Decision Support System

Location-Based Services

Marine Communication and Navigation Engineering

Maritime Transport Management

Metro-Rail Transportation

Mobile Terminal Displays

Navigation Technology

On-Board Diagnosis

Operational Control Cetres

Pedestrian and Vehicle Detection Technologies

Planning and Scheduling Software Packages

Powertrain Management

Railway Tunnels and Tunneling

Railways Management

Smart Card Reader

Socio-Economical Effect of Environmental Friendly Mobility

Sustainable Transport Safety Management

Testing Methodology

Traffic Control Devices

Traffic Psychology

Traffic Signal Priority System

Transport Management

Transport Safety

Travelers' In-Vehicle and Out-of-Vehicle Information Systems

V2I/V2V Communication

Variable Message Signing

Vehicle Navigation System

Vehicle-to-Roadside Communication (VRC)

Weigh-in-Motion (WIM)

We are also interested in short papers (letters) that clearly address a specific problem, and short survey or position papers that sketch the results or problems on a specific topic.

Notes for Intending Authors

Submitted papers should not have been previously published nor be currently under consideration for publication elsewhere. Paper submission will be handled electronically through the website. All papers are refereed through a peer review process. For more details about the submissions, please access the website.

Website and E-Mail

https://www.scirp.org/journal/jtts E-mail: jtts@scirp.org