



# Journal of Transportation Technologies





# **Journal Editorial Board**

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

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

#### Editor-in-Chief

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

.....

#### **Editorial Board**

Prof. Khaled Abdelazim AbbasEgypt National Institute of Transport, EgyptProf. Francisco AparicioTechnical University of Madrid, Spain

Dr. Theo ArentzeEindhoven University of Technology, The NetherlandsDr. Felix CaicedoPontificia Universidad Catolica de Valparaiso, Chile

Dr. Andres L. Carrano

Rochester Institute of Technology, USA

Dr. Mohammed Chadli

University of Picardie Jules Verne, France

**Prof. Shuming Chen**Jilin 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 KoreaDr. Weigang LiUniversity of Brasilia, Brazil

**Prof. Chun-Liang Lin**National Chung Hsing University, Chinese Taipei

Dr. Pan Lu
North Dakota State University, USA
Dr. Rui Cunha Marques
Technical University of Lisbon, Portugal

Dr. Babak Mehran University of Regina, Canada

**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, The Netherlands

Dr. Tomer ToledoIsrael Institute of Technology, IsraelDr. Rafael Toledo-MoreoTechnical University of Cartagena, SpainProf. Marianne VanderschurenUniversity of Cape Town, South Africa

Prof. Dario Vangi Florence University, Italy

Dr. Cheng-Lung WuUniversity of New South Wales, AustraliaProf. Saffet YagizNazarbayev University, KazakhstanProf. Xuedong YanBeijing Jiaotong University, ChinaProf. Lixing YangBeijing Jiaotong University, China

**Dr. Ruifeng Yu** Tsinghua University, China



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

# **Table of Contents**

Volume 9	Number 2	April 2019
Benefits and C	osts of Autonomous Trucks and Cars	
P. Andersson,	P. Ivehammar	121
The Selection of Dosso-Niger	of Dry Port Location by Analytic Network Pr	ocess Model: A Case Study
H. T. Abdoulk	arim, S. H. Fatouma, B. Kalgora	146
Dynamic Nexu Literature Revi	s between Air-Transportation and Economic	Growth: A Systematic
R. Higgoda, M	. W. Madurapperuma	
Analyzing Ped	estrian Fatality Risk in Accidents at Mid-Bloo	cks
Y. Y. Chen, J. J	. Ma, N. Chen	171
Assessment of	Dry Port Efficiency in Africa Using Data Env	velopment Analysis
H. T. Abdoulk	arim, S. H. Fatouma, H. T. Hassane	193
Study on the In Liner Routes	npact of the Panama Canal Expansion on the	Distribution of Container
H. X. Fan, W.	H. Gu	
	rminal Localisation Using a Linear Programn t African Landlocked Countries	ning Approach: The Case Study of
B. Kalgora		215
Study on Grou	nd-Penetrating Radar (GPR) Application in	Pavement Deep Distress Detection
S. T. Li, C. C. 0	Guo	232

### Journal of Transportation Technologies (JTTs) Journal Information

#### **SUBSCRIPTIONS**

The *Journal of Transportation Technologies* (Online at Scientific Research Publishing, <a href="www.SciRP.org">www.SciRP.org</a>) is published quarterly by Scientific Research Publishing, Inc., USA.

#### Subscription rates:

Print: \$79 per issue.

To subscribe, please contact Journals Subscriptions Department, E-mail: <a href="mailto:sub@scirp.org">sub@scirp.org</a>

#### **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 © 2019 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 © 2019 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) http://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

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

#### What is SCIRP?

Scientific Research Publishing (SCIRP) is one of the largest Open Access journal publishers. It is currently publishing more than 200 open access, online, peer-reviewed journals covering a wide range of academic disciplines. SCIRP serves the worldwide academic communities and contributes to the progress and application of science with its publication.

#### What is Open Access?

All original research papers published by SCIRP are made freely and permanently accessible online immediately upon publication. To be able to provide open access journals, SCIRP defrays operation costs from authors and subscription charges only for its printed version. Open access publishing allows an immediate, worldwide, barrier-free, open access to the full text of research papers, which is in the best interests of the scientific community.

- High visibility for maximum global exposure with open access publishing model
- Rigorous peer review of research papers
- Prompt faster publication with less cost
- Guaranteed targeted, multidisciplinary audience





Website: http://www.scirp.org Subscription: sub@scirp.org Advertisement: service@scirp.org