# International Journal of Interdisciplinary Telecommunications and Networking

January-March 2014, Vol. 6, No. 1

# **Table of Contents**

Special Issue on New Applications and Advanced Methodologies for Road Safety and Simulation

# GUEST EDITORIAL PREFACE

iv F. Benedetto, Signal Processing for Telecommunications and Economics Laboratory, Department of Economics, University of Roma Tre, Rome, Italy A. Tedeschi, Engineering Department, University of Roma Tre, Rome, Italy

# RESEARCH ARTICLES

# FDTD Simulation of the GPR Signal for Preventing the Risk of Accidents due to Pavement Damages

Fabio Tosti, Department of Engineering, Roma Tre University, Rome, Italy Andrea Umiliaco, Department of Engineering, Roma Tre University, Rome, Italy

### 10 Impact of Immersion and Realism in Driving Simulator Studies

Despina Michael, GET Lab, Department of Multimedia and Graphic Arts, Cyprus University of Technology, Cyprus Marios Kleanthous, GET Lab, Department of Multimedia and Graphic Arts, Cyprus University of Technology, Cyprus Marinos Savva, GET Lab, Department of Multimedia and Graphic Arts, Cyprus University of Technology, Cyprus Smaragda Christodoulou, GET Lab, Department of Multimedia and Graphic Arts, Cyprus University of Technology, Cyprus Maria Pampaka, The University of Manchester, Manchester, UK Andreas Gregoriades, European University Cyprus, Cyprus

# 26 Allocation Criteria for Increasing Electronic Toll Collection Gates on Freeways Determined Using Simulation Analysis

Pin-Yi Tseng, Central Police University, Taoyuan County, Taiwan Chiung-Wen Chang, Institute of Transportation, MOTC, Taipei City, Taiwan Chi-Hung Wu, National Taiwan Ocean University, Keeling City, Taiwan Wan-Hui Chen, Tamkang University, New Taipei City, Taiwan Sheng-Hsiung Chang, Tamkang University, New Taipei City, Taiwan

# 39 Broadband and e-Government Services in South East Europe: Comparative Analysis, Impact and Policy Recommendations

Konstantinos Antonis, Technological Institute of Central Greece, Greece

Christos Bouras, Computer Technology Institute & Press "Diophantus", Patras, Greece & Computer Engineering and Informatics Department, University of Patras, Patras, Greece

Fabrizio D'Elia, Molise Region, Italy

Annalisa Di Vincenzo, Molise Region, Italy

Georgios Diles, Computer Technology Institute & Press "Diophantus", Patras, Greece & Computer Engineering and Informatics Department, University of Patras, Patras, Greece

Vasileios Kokkinos, Computer Engineering and Informatics Department, University of Patras, Patras, Greece Andreas Koskeris, Computer Technology Institute & Press "Diophantus", Patras, Greece

# 57 Simulation of Pedestrians and Motorised Traffic: Existing Research and Future Challenges

E. Papadimitriou, National Technical University of Athens, Athens, Greece

J.M. Auberlet, IFSTTAR - Institut français des sciences et technologies des transports, de l'aménagement et des réseaux, France

G. Yannis, National Technical University of Athens, Athens, Greece

S. Lassarre, IFSTTAR - Institut français des sciences et technologies des transports, de l'aménagement et des réseaux, France

# 74 Protocol for Transferability of Driver Simulator Results to Real Traffic Conditions

Maria Gemou, Centre for Research and Technology Hellas-Hellenic Institute of Transport, Athens, Greece Evangelos Bekiaris, Centre for Research and Technology Hellas-Hellenic Institute of Transport, Athens, Greece

# Copyright

The International Journal of Interdisciplinary Telecommunications and Networking (IJITN) (ISSN 1941-8663; eISSN 1941-8671), Copyright © 2014 IGI Global. All rights, including translation into other languages reserved by the publisher. No part of this journal may be reproduced or used in any form or by any means without written permission from the publisher, except for noncommercial, educational use including classroom teaching purposes. Product or company names used in this journal are for identification purposes only. Inclusion of the names of the products or companies does not indicate a claim of ownership by IGI Global of the trademark or registered trademark. The views expressed in this journal are those of the authors but not necessarily of IGI Global.

The International Journal of Interdisciplinary Telecommunications and Networking is indexed or listed in the following: ACM Digital Library; Bacon's Media Directory; Cabell's Directories; Compendex (Elsevier Engineering Index); DBLP; GetCited; Google Scholar; INSPEC; JournalTOCs; MediaFinder; SCOPUS; The Standard Periodical Directory; Ulrich's Periodicals Directory