Editorial

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Biographical notes: Rafael Toledo-Moreo currently works as an Assistant Professor with the Department of Electronics and Computer Technology at the Technical University of Cartagena, Spain, and as a researcher in a number of projects related to Intelligent Transportation Systems (ITS) with the group of Intelligent Systems at the University of Murcia, Spain. His main scientific interests are Intelligent Vehicles and Road Applications, and Information and Communication Technologies applied to road transportation. He is member of program committees in ITS Conferences, the IFAC Technical Committee for Transportation Systems, and consultant in the field of ITS. He collaborates with four international journals and eight conferences. He has over 30 peer-reviewed publications, including conferences and journal articles. He has been chair and co-chair for several conferences.

It is my pleasure to present this special issue of the *International Journal of Intelligent Information and Database Systems* (IJIIDS), published by Inderscience Publishers. This issue consists of eight original research papers related to *Information Processing in Intelligent Vehicles and Road Applications*, presenting innovative solutions to current problems in the Intelligent Transportation Systems (ITS) field.

Eleven papers coming from eight different countries were submitted to this special issue of the IJIIDS. All the papers were revised by a minimum of two competent reviewers. As a result of this process, three papers were accepted, four papers accepted subject to minor changes, two papers accepted subject to significant changes and two papers rejected. Among the papers subject to changes, six were finally accepted.

The issue starts with two papers dedicated to navigation systems and Global Navigation Satellite Systems (GNSS) support. First, Zamora et al. analyse benefits and disadvantages of different hybrid proposals for data filtering oriented to ITS in-vehicle applications. Next, Fouqué and Bonnifait propose a method to combine the cartographic data in the GNSS computation. In the third paper, Kessels and van den Bosch employ road information from the navigation system to optimise the energy efficiency of the vehicle. In the next paper, Khayati and Akaichi present a new approach for the enhancement of spatial database applications and Location Based Systems (LBS) to establish the Continuous k-Nearest Neighbours (CkNNs), taking into account dynamic changes in locations from which the queries are issued.

Next four papers are focused on information processing for road safety. Senart et al. propose a novel emergency vehicle early-warning system that relies on wireless technology to inform other vehicles of the arrival of emergency vehicles, and returns feedback in real-time when communication degrades. On the other hand, Santa et al. present an original paradigm based on peer-to-peer technologies and cellular networks for

vehicle to vehicle (V2V) and vehicle to infrastructure (V2I) communications in safety applications. Bachmann and Dang also focus on safety, particularly in automotive driver assistance systems. In this contribution, an original object detection method that is based on low-level features but guided and supported by higher-level object knowledge is used to inform the driver of possible collisions with other vehicles. In the last paper, Ceausu presents a semantic case-based reasoning system to improve road safety. This work provides an automatic solution to assign traffic accidents to accident scenarios, allowing the establishment of road dysfunctions leading to accidents.

I would like to thank the Editor in Chief, Professor Ngoc-Thanh Nguyen, and all Editorial Office for their support in this special issue. My special thanks also to the reviewers for their valuable effort in maintaining the high quality of this publication. Finally, I would like to thank the authors for their contributions to the field of Information Processing in Intelligent Vehicles and Road Applications.