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GUEST EDITORIAL

Special Section on Modeling & Simulation of Application Scenarios for Autonomous Vehicles

This special section is based on papers selected from the 9th International Conference on Ambient Systems, Networks and Technologies (ANT-2018), which was held in Porto, Portugal, on 8–11 May 2018. The conference attracted a large number of scientific papers that contributed to the state-of-the-art in the ambient systems, networks and technologies. All the papers selected for this special section have been extended from their original versions and underwent rounds of rigorous peer-review process. Based on the reviewers' feedback, four papers were selected for this special section. The accepted papers cover forthcoming development and emerging research along with intelligent online learning for autonomous vehicles, situation awareness adaptive systems, virtual universe modelling in railway systems, and taxi supply-demand mismatch.

The first paper by Arzamendia et al. is titled "*Intelligent Online Learning Strategy for an Autonomous Surface Vehicle in Lake Environments using Evolutionary Computation.*" The authors of this paper proposed an artificial intelligence strategy for the localization and monitoring of pollution-caused events caused by contamination in a lake, of a system consisting of an Autonomous Surface Vehicle (ASV) and a network of wireless beacons. In this paper, the path planning of the ASV is calculated at different phases with the help of an evolutionary algorithm. This makes the authors main contribution of this work which is the novelty of the proposed strategy that follows an intelligent online learning approach. The proposed strategy is validated by simulation. The simulation results showed the level of coverage achieved are at least 85% for a situation where up to two dynamic algae blooms occurred at different locations in the lake.

The second paper by D'Aniello et al. is titled "*An Adaptive System based on Situation Awareness for Goal-driven Management in Container Terminals.*" This paper proposed an adaptive goal selection approach capable of suggesting the goal on which human operators should focus their attention to maintain an adequate level of situation awareness. The authors implemented their proposed approach in a Decision Support System for the management of operations in a port container terminal. An evaluation of the system is applied to the container terminal of Salerno city in Italy using the situation awareness global assessment technique for evaluating situation awareness in operational contexts. The effects of the improvements of the situation awareness on the decision-making processes is evaluated by means of a numerical simulation.

The third paper by Lamotte et al. is titled "*Modeling Process of a Third Dimension Universe for Transportation Simulation: Application to Railway System.*" This paper presented a methodology and a process for creating a virtual universe model and applied to train simulation. This model is based on automatic model generation in order to allow the creation of large-scale universes while guaranteeing a level of details appropriate to the desired requirements. The authors argument is that the process decreasing the modeling cost (in terms of time and staff costs) of virtual universes that are dedicated to simulation application. The proposed process applied to the Alstom Company's ASTRES project, which has the goal to immerse certain elements of the command control system of a train within a virtual universe for: (i) soliciting the train equipment by simulation before a real

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-ieee.org/) and let the chair know your availability to join in.

New Technical Committee/Special Interest Group Creation Procedure

The creation (and removal) procedure is described as follows. When there is an uncovered topic within the scope of the ITS society, if a volunteer (ITSS member) proposes organizing a Technical Committee, he or she is requested to submit a proposal, including the scope and the activity plan. If the proposal is approved, then, a Special Interest Group (SIG) is created about it and the proponent designated SIG Chair.

Every year Technical Committees (TCs) are requested to develop at least a minimum of two technical activities yearly, that typically are Workshops, Special Sessions, Competitions, Hackathons, etc. They have to submit a yearly report indicating what is organizing each TC. It is mandatory for TCs and recommended for SIGs. If a SIG proves consistently they can withstand a high level of activity for a period of time, they can be upgraded to TC.

Each Technical Committee has also to participate every year in the ITSS Technical Committee Board meeting, normally organized during every year's IEEE ITSC conference.

When there is a high interest strategic topic but no associated proposal, a chair election is run, open to all ITSS members.

Whenever a TC cannot withstand with a minimum activity level, it is downgraded to SIG, or eliminated, depending on the interest of its volunteers and the relevance or obsolescence of the topic.

If you work in Intelligent Transportation Systems and you see there is a technical gap we have in the space covered by our technical committees structure, and you are an ITSS member and you would like to lead that new Technical Committee, you are kindly invited to submit your proposal for the creation of that new TC.

Call for New TC Proposals

Another call we need to launch is about the creation of new Technical Committees. If you work in Intelligent Transportation Systems and you see there is a technical gap we have in the space covered by our technical committees structure, and you are an ITSS member and you would like to lead that new Technical Committee, you are kindly invited to submit your proposal for the creation of that new TC. Each proposal should include:

1) Title of the Technical Committee.
2) Description of the scope and topics that are pretended to be covered with this new TC.
3) Work plan for, at least, a year ahead, with a minimum of two activities per year.
4) A list of at least 8 potential committee members.
5) Your commitment to attending our yearly ITSS Technical Activities Board (TAB) meeting, which are typically organized around the ITSS ITSC conference series. You could send a representative from your committee list.
6) A brief Bio highlighting your accomplishments regarding the Technical Committee topics.

Please, send all of that in a single document to: javier.sanchez.medina@ieee.org.

You could also suggest a new technical committee to be created without running to chair it. All constructive suggestions are welcome! Thank you!

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validation, and (ii) training the train drivers in realistic conditions.

The fourth paper by Haddad et al. is titled "*Transportation Service Redundancy from a Spatio-temporal Perspective*." This paper attempted to provide a new approach for taxi supply-demand mismatch modeling using the concept of service redundancy. In this paper, the citywide taxi service redundancy is modelled as an explicit spatio-temporal phenomenon. The authors also proposed a collaborative scheme for spatio-temporal taxi service redundancy calculation, collection, and control at three different levels: micro level (service redundancy at the immediate surroundings of individual taxis), meso level (redundancy at taxi operators' level), and macro level (service redundancy at a city level). The performance of the proposed model is explored through fictive simulation experiments.

The guest editors would like to take this opportunity to thank all the authors for the efforts they put in the preparation of their manuscripts and for their valuable contributions. We wish to express our deepest gratitude to the referees, who provided very useful and constructive feedback to the authors. Our sincere thanks go to the Editor-in-Chief for his kind help and support.

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