CALL FOR PAPERS

Advancing the Microscopic Traffic Simulations

Workshop for IEEE ITSC2015

Las Palmas, de Gran Canaria, Spain, 15-18 September 2015

Topic: Advancing the Microscopic Traffic Simulations Towards Realistic Modelling of Driver Behaviour and Reliable Evaluation of Safety.

Format: Half-day workshop (talks may be (i) accompanied by full paper, which will be included in the conference proceedings, if accepted after submission for review via the conference system http://itsc2015.exordo.com, or (ii) not accompanied by a paper, after submission of abstract - by email to the Workshop organizers).

Organizers:

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Content: Microscopic Traffic Simulations Towards Realistic Modelling of Driver Behaviour and Reliable Evaluation of Microscopic traffic simulations have proven to be a useful tool for evaluating different traffic systems and ITS applications and are widely used in the transportation community. However, the underlying mathematical models in these traffic simulation tools for car-following, lane-changing and gap-acceptance are still far from fully replicating human driving behaviour. Although many of the assumptions in these models make intuitively sense, many of these are not yet sufficiently supported by evidence (microscopic traffic data) under controlled conditions. The result is that most microscopic simulation models are able to reproduce observable macroscopic phenomena in traffic flows (breakdown, the capacity drop, wave propagation, lane distributions, capacity distributions), but still have limited validity in reproducing the actual individual driving behaviour, particularly related to lateral movement, gap acceptance and path-planning. The consequence of all this is that most microsimulation models on the market (and in research labs) cannot be used to predict the microscopic effects of for example different geometric designs, drivers' fallacies, or specific control measures. Since the underlying behavioural models are by design collision-free (safe a few dedicated research models), predicting safety effects under all sorts of circumstances is beyond the scope of these models yet. As such, derivation of surrogate safety measures from current microscopic simulation models might lead for inaccurate or wrong conclusions regarding the safety of an entity. These research gaps are becoming critical with the rapid advancement of the intelligent and automated vehicles which will add more complexity to the already complex system of the driver-road-vehicle system.

This workshop will be dedicated to presenting empirical insights, experimental ideas, behavioural theories, and simulation models of drivers' behaviour under those conditions in order to uncover new and innovative ideas and share knowledge and information that can benefit the transportation research community.

Specific topics include, but are not limited to:

- Driver behaviour modelling
- Microscopic simulation models
- Surrogate safety measures
- Driving simulators studies
- Naturalistic data
- Experimental methodologies
- Intelligent transportation systems
- Automated vehicles

We want to highlight that ALL THE PAPERS accepted for this workshop will be published in the IEEE XPLORE (http://ieeexplore.ieee.org/Xplore/home.jsp).

IMPORTANT DATES

http://www.itsc2015.org/important-dates

Paper submission: May 15th, 2015
Notification of acceptance: June 15th, 2015
Final paper submission: July 1st, 2015
Registration deadline for authors: July 1st, 2015
Conference: September 15th – 18th, 2015

SUBMISSION DETAILS

You may find a quick guide on how to submit your paper here: http://www.itsc2015.org/submit-your-paper

You may submit your paper by visiting the Ex Ordo submission system (you will be required to setup an account first): http://itsc2015.exordo.com/