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## Special Session ITSC 2018: “Vulnerable Road Users in Mixed Traffic”

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### Organisers

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### Overview

Vulnerable traffic users (VRU) represent a category of users not protected by a “car-apace”, such as pedestrians, bicycles, motorcycles or scooters. Unlike in China, where owning cars represents visible social achievements, the western world follows the opposite trend and witness a steady increase of VRU.

The increase of VRU coexisting with cars is a direct consequence first of worsening traffic congestions, which triggered recent efforts either by city councils to propose multi-modal transport solutions, or by drivers to spontaneously shift to alternative transportation means (e.g. walking, motorcycles, scooters or bicycles). Such trend would be seen as positive if the peculiar mobility behaviour of VRU was not a challenge to a smooth coexistence with other road actors. This is clear concern to road authorities and city councils, as such traffic coexistence needs to be kept safe and efficient. However, cooperative intelligent transport system (ITS) technologies tailored for VRU addressing such concerns are quasi-inexistent.

### Scope

This special session focuses on the modelling, understanding and impact evaluation of VRU in mixed traffic scenario. The objective is for experts in mathematics, traffic modelling, communication, automation, as well as other related engineering fields to gather and present technologies as facilitator for integration of VRU in other type of traffic, with the expected benefit to significantly improve the safe integration and road sharing of VRU. This special session welcomes papers addressing theory, analysis, simulation and modelling, experimentation, demonstration, case studies, field operational tests and deployments of VRU in mixed traffic scenarios.



Topics of interest (not limited to) are:

- Traffic flow modelling of VRU (pedestrian, motorcycle and bicycle) in mixed traffic scenario
- Communication technologies (DSRC, C-V2X, ...) for VRU in mixed traffic scenarios
- Localization and Positioning techniques to VRU in mixed traffic scenarios
- Navigation and Path Planning tailored for Powered two and three Wheelers (motorcycles) in mixed scenarios
- Safety applications for VRU in mixed traffic scenarios
- Impact of VRU on traffic monitoring and floating car data
- Human Factor related impact of VRU in mixed traffic
- Impact of VRU on road infrastructure and authorities
- Smart Cities policies for VRU

### **Important Information**

If you are interested in this special session, please submit a manuscript in IEEE ITSC through <http://its.papercept.net> with the Session Code: **SS\_VULN**.

Paper Submission Instructions can be found at:

<https://www.ieee-itsc2018.org/information-for-authors.html>

Submission Deadline: **April 15, 2018**

All presented papers will be published by the IEEE and included in IEEEExplore.

Please additionally email to [jerome.haerri@eurecom.fr](mailto:jerome.haerri@eurecom.fr) if you plan to submit a paper to this special session