

Workshop on holistic interfaces for environmental fusion models

IV'16 Conference | June 19, 2016 | Gothenburg, Sweden

Aim of scope

Connecting the virtual fusion model to the real world

Currently various automated driving prototypes are available all over the world, to explore future mobility. Yet the prototypes are all still far from series production due to several issues.

While the sensor capabilities are good and work in a stand-alone solution of a single car manufacturer or a single supplier one main challenge for the step to series production is the huge variety of interfaces to the fusion system. This diversity does not allow a quick and easy integration into other near series technologies. And the interface problem is not limited to technical interfaces, e.g. between sensors and fusion platform or between fusion platform and actuators, but is also present in e.g. V2X interface contents, HMI interfaces to the driver and communication to other traffic participants without a V2X interface.

The challenges of interfacing a virtual world, e.g. the environmental fusion model of a car, to the real world is also a well know problem in robotics, so that the robotic research may provide good solutions for the automotive world.

Within this workshop the need for holistic interfaces to an environmental fusion model shall be discussed on different levels:

- technical interfaces of sensors and actuators
- information fusion levels
- multimodal environment perception
- content of V2X communication needed for specific solutions
- HMI interfaces with the driver
- prediction of the intention of other traffic participants, e.g. of pedestrians at a cross-walk, and their interaction with an autonomous vehicle

The workshop wants to promote the discussion about all kind of interfaces related to an environmental fusion model and how standardization processes can help to reduce the time until autonomous vehicles become reality on our streets.

Topics: Environmental Fusion Models, Sensor interface standardization, ADAS Sensors, V2X communication content, Robotic vs. automotive interfaces, HMIs in automated vehicles, ...

Organizers

Dr. Michael Schilling
Program Management Advanced Engineering – Automated Driving
HELLA KGaA Hueck & Co
Germany
Michael.Schilling@HELLA.com

Prof. Cristóbal Curio
Cognitive Systems
Faculty of informatics
Reutlingen University
Germany
cristobal.curio@reutlingen-university.de

Call for Workshop Paper

All speakers and their colleagues are encouraged to hand in a paper corresponding to the workshop.

Electronic submission of the workshop papers is due: **March 15, 2016** @ <http://its.papercept.net>
Notification of workshop paper acceptance: April 8, 2016
Final Workshop paper submission: April 22, 2016

The workshop paper is limited to a total of six pages including references. A maximum of two supplementary pages is permitted at an extra charge. Due to space constraints on the proceedings of the conference, all papers are limited to 2MB and should preferably be less than 500kB. All authors will have to submit their papers corresponding to this workshop together with the workshop code: **g9wdd**