

# 3<sup>rd</sup> Workshop on machine vision and interfaces in data fusion platforms for automated driving

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ITSC'18 Conference | November 04, 2018 | Maui, Hawaii, USA | [ieee-itsc2018.org](http://ieee-itsc2018.org)

## Aim of scope

While the path to series production of automated driving cars still faces many challenges, we will focus in this workshop on two topics.

One main challenge in building automated driving cars today is the wide variety of interfaces to an environmental fusion system. The current diversity in technologies (e.g. lidar / radar / camera sensors, V2X, maps) and suppliers, spawn a myriad of interfaces which does not allow a quick or easy integration into the data fusion platforms. Furthermore, the deployed interfaces of the environmental fusion systems for a specific driving function (e.g. from intersection assist to valet parking to highway pilot) are not standardized today. For distributed data fusion systems, even more complex sensor interfaces are needed to have full redundant systems. Therefore, the interface challenges will become even more complex.

The second main topic of the workshop will be the challenges and possible solutions in image processing for high resolution 360° vision systems. Human drivers base most of their decision solely on their visual (eye) system and the current infrastructure offers rich visual cues to guarantee safe and flexible driving. Today's semantic vision algorithms in combination with high resolution cameras can interpret the richness of the environment very much like the human visual system does and thus will have a crucial role in future automated driving vehicles. Yet today's systems still face challenges, ranging from adverse weather conditions over pedestrian movement prediction to implementing high data stream interfaces to a central fusion platform. Additionally, high resolution image data also offers the opportunity to produce highly sophisticated simulations, useful e.g. for function algorithm optimization and HAD testing purposes.

Topics: data interfaces of input sensors, functional interface to environmental fusion platform, abstracting and standardizing sensor interfaces, environment perception with high resolution cameras, functional safety aspects in an open fusion platform

*sensing, detectors and actuators | intelligent vehicles | shared mobility | deep learning*

## Workshop Coordinators

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## Call for Workshop Paper

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

Electronic reception of the workshop papers opens: **1<sup>st</sup> April 2018**@ [its.papercept.net](http://its.papercept.net)

Electronic submission of the workshop papers is due: **15<sup>th</sup> April 2018**

Notification of workshop paper acceptance: tbd

Final Workshop paper submission: tbd