

Workshop title

Application of Multi-Sensor Fusion Technology for Autonomous Driving

Workshop proposer(s)

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Abstract

Application of multi-sensor fusion technology has drawn a lot of industrial and academic interest in recent years. The multi-sensor fusion methods are widely used in many applications such as autonomous vehicles, remote sensing, video surveillance and military. These methods can obtain the complementary properties of targets by considering multiple sensors. On the other hand, they can achieve a detailed environment description and accurate detection of interest targets based on the combined information from different sensors. Sensor fusion provides also possibilities to overcome problems related to outdoor systems operating under changing daytime, weather, and seasonal conditions.

This full-day workshop aims to explore the latest developments in the field of multi-sensor, multi-source and multi-process information fusion for autonomous driving. The main goal of this workshop is to give the opportunity to explore the specific challenges in the multi-sensor fusion approaches for this domain. Papers are expected to emphasize one or more of the three facets: architectures, algorithms, and applications. Papers dealing with fundamental theoretical analyses as well as those demonstrating their application to real-world problems will be welcome.

Keywords

- Multi-autonomous Vehicle Studies, Models, Techniques and Simulations
- Sensing and Intervening, Detectors and Actuators
- Sensing, Vision, and Perception

Topics of interest

- Multi-sensor, multi-source fusion system architectures for target detection and tracking
- Higher level fusion topics including situation awareness and management
- Multi-sensor management and real-time applications
- Adaptive and self-improving fusion system architectures for computer vision
- Applications such as robotics, space and transportation
- Fusion learning in imperfect, imprecise And incomplete environment
- Intelligent techniques for fusion processing
- Fusion system design and algorithmic issues
- Auto calibration of sensor fusion systems.