



2018 IEEE Intelligent Vehicles Symposium (IV'18)
Changshu, Jiangsu, China, June 26-June 30, 2018

Call for Papers

“Scene Understanding for Automated Driving Systems” Workshop
(code:e434d)

I. BRIEF INTRODUCTION

Automated driving systems has become one of the most exciting and important innovations in transportation history. Scene understanding, at the core of an automated driving system, performs comprehensive sensing, reasoning, and predicting evolution of the surrounding traffic scene of the ego-vehicle. Specifically, scene understanding should know the geometry/topology of traffic scene, participants’ motion (pedestrian, vehicle, cyclist, road, etc.), as well as their motion intention, implicitly contained in the sensing data. With the scene understanding, the autonomous vehicle can facilitate both the geometrical and reasoning over the environments.

Most recently, benefiting from rapid improvement of sensing technologies, scene understanding of autonomous driving could integrate information of a diversity of sensors, including vision, lidar, radar, GPS/IMU, and so forth, together to achieve a better and deeper understanding. Additionally, in cognitive science, understanding the surrounding scene involves knowledge memory, and attention. How to facilitate autonomous vehicle capable of comprehending the traffic environments like human beings is still challenging and frontier problem in this field. To help make further progress in this field, we propose to invite experts in this domain to participate in discussions, and showcase their latest innovations/ideas.

II. TOPICS OF INTEREST

The topics of interest include but are not limited to the following:

- Pedestrian/vehicle detection, tracking, recognition
- Motion intention prediction of traffic participants
- Motion representation, inference and classification of traffic participants
- Road scene geometry/topology representation and reasoning
- Traffic event representation, detection, classification
- Multi-sensor fusion for autonomous driving
- Brain-inspired traffic situation understanding
- Deep learning for understanding the traffic scene

III. ORGANIZERS

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IV. PAPER SUBMISSION

If you wish to publish full-length papers in the conference proceedings, please submit the manuscript via the conference website by the paper submission deadline. The submitted manuscripts will go through full review. Only accepted papers will be included in the proceedings. Electronic submission of the workshop papers is due by **Feb 13, 2018** at <http://its.papercept.net>. Note that the workshop authors need to use the code provided by the IEEE ITS conference management system to direct the paper to “**Scene Understanding for Automated Driving Systems**”. The workshop code is “**e434d**”. Also, please choose in the conference management systems the 2018 IEEE Intelligent Vehicles Symposium.

Also, note that workshop paper is limited to a total of **six (6) pages** including references. A maximum of **two (2) supplementary pages** is permitted at an extra charge. Further, due to space constraints on the proceedings of the conference, all papers are limited to **2 MB** in size and should preferably be **less than 500 kB**. Please do not hesitate to contact us if you have any further questions.