Special Issue

Scene Understanding for Autonomous Driving

Message from the Guest Editors

One of the basic requirements of autonomous driving is for the vehicle to fully understand its surroundings. The complex task of outdoor scene understanding involves several sub-tasks. Each of these tasks describes a particular aspect of a scene. It is beneficial to model some of these aspects jointly to exploit the relations between different elements of the scene and obtain a holistic understanding. A successful scene understanding model obtains rich and compact representation of the scene. Thanks to the recent advancement in deep learning, the development of scene understanding has been brought to a new era. Apart from the traditional visual perception, other sensor devices are also utilized to enhance the environmental awareness. Another aspect for scene understanding is 3D reconstruction; 3D reasoning plays a significant role in solving geometric problems and results in a more informative representation of the scene in the form of 3D object models, layout elements, and occlusion relationships. This Special Issue consists of the following scopes:

- Semantic/instance/panoptic segmentation
- Object classification, detection, and tracking
- Depth estimation
- 3D reconstruction

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Sensors is a leading journal devoted to fast publication of the latest achievements of technological developments and scientific research in the huge area of physical, chemical and biochemical sensors, including remote sensing and sensor networks. Both experimental and theoretical papers are published, including all aspects of sensor design, technology, proof of concept and application. Sensors organizes Special Issues devoted to specific sensing areas and applications each year.

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