Vision-Based Autonomous Unmanned Systems: Challenges and Approaches

Guest Editors:

Prof. Dr. Meng Ding

Prof. Dr. Mou Chen

Dr. Dewei Yi

Dr. Jiayu Chen

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Message from the Guest Editors

Dear Colleagues,

Currently, various types of unmanned systems are emerging. Perceptual information required by autonomous unmanned systems can be acquired by using visual sensors. Hence, developing sophisticated machine vision and image understanding techniques is necessary to obtain the useful information required by unmanned systems. This Special Issue intends to present new ideas and experimental results in the fields of visual sensing approaches and autonomous unmanned systems from design, theory, and system integration to practical applications.

Areas related to intelligent visual sensing and autonomous unmanned systems include, but are not limited to, object detection and recognition, single or multiple object tracking, multi-source information fusion for sensing, visual measurement, vision-based depth estimation, visual behavior understanding, and vision-based unmanned system applications in the fields of transportation, agriculture, and public security, etc. Vision-based navigation and path planning, vision-based sense and avoid, unmanned system modeling and simulation, and artificial intelligence and its application in unmanned systems.

Special Issue

Editor-in-Chief

Prof. Dr. Giulio Nicola Cerullo
Dipartimento di Fisica,
Politecnico di Milano, Piazza L.
da Vinci 32, 20133 Milano, Italy

Message from the Editor-in-Chief

As the world of science becomes ever more specialized, researchers may lose themselves in the deep forest of the ever increasing number of subfields being created. This open access journal Applied Sciences has been started to link these subfields, so researchers can cut through the forest and see the surrounding, or quite distant fields and subfields to help develop his/her own research even further with the aid of this multi-dimensional network.

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