Special Issue

Positioning and Localization in Mobile Robots and Intelligent Transportation Systems

Message from the Guest Editors

The key to the success of a mobile robot or an intelligent transportation system its correct localization in the environment as the first step, and all the decision making during navigation and planning stacks are based on navigation. Any error in the localization system can lead to complete system failure, or to the stack being in a nonrecoverable situation. Localization is also used in automatic mapping, aerial image reconstruction, and many other projects. Every project is different, with a specific design in terms of the structure, locomotion system, available sensors, or the environment where it moves, so the localization system must be specifically adapted and is highly dependent on the application. In some cases, standard techniques are not useful due to the characteristics of the prototype. This Special Issue is centered on all the topics related with automatic localization both outdoor and indoors, including localization sensors, sensor fusion, localization algorithms, new sensor techniques, and all aspects related to localization in any system.

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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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