Special Issue

Optimization of Motion Planning and Control for Automatic Machines, Robots and Multibody Systems

Message from the Guest Editors

The optimization of motion and trajectory planning is an effective and usually costless approach to improve the performance of dynamic systems such as robots, mechatronic systems, automatic machines and multibody systems. Indeed, wise planning allows increasing precision and machine productivity while reducing vibrations, motion time, actuation effort and energy consumption. On the other hand, the availability of optimized methods for motion planning allows for cheaper and lighter construction of the system. I would like to invite you to contribute a paper to this Special Issue, which aims at collecting the most recent and cutting-edge developments on these relevant issues. Papers providing original results on theoretical studies as well as numerical or experimental applications on these topics, and to closely-related topics, are welcomed.

- Motion and trajectory planning
- Energy efficient motion planning
- Model-based planning
- Vibration suppression
- Smooth trajectories
- Input shaping
- Inverse dynamics
- Motion and trajectory control
- Feedback/Feedforward control

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Deadline for manuscript submissions

closed (31 March 2020)

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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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