Special Issue

Data-Based Learning Methods and Their Applications

Message from the Guest Editors

Data-based learning methods are an important and hot research direction in modern control theory and pattern recognition, among other fields. In contrast to traditional control techniques, data-based learning control methods require less information about system dynamics and use collected and stored data to construct the controllers or the control inputs and to discover underlying patterns; these methods have demonstrated superior performance. Despite the success of data-based learning methods for repetitive or non-strict repetitive control systems, pattern recognition, reinforcement learning, etc., data-based learning paradigms and their applications are still lacking. This Special Issue aims to collect works on novel data-driven methods and their applications for repetitive or non-strict repetitive control systems. Works that include topics such as the design and analysis of iterative learning control systems, data-driven learning control techniques, non-standard iterative learning control, reinforcement learning, pattern recognition, and other learning control topics based on data are of particular interest.

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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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