Application of Machine Learning and Optimization Methods in Engineering Mathematics

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Message from the Guest Editors

Accelerated urbanization and the construction of the accompanying infrastructure have a significant environmental and social impact worldwide. It is considered that the construction sector is responsible for the consumption of more than 50% of resources globally. Therefore, finding optimal and sustainable solutions for the use of resources is a priority task. In order to consider the problem of optimization of complex systems from all points of view, various considerations are needed, such as engineering, environmental, economic, spatial, climatic, and social. Optimization models can be applied at different levels, from modeling of the behavior of building structures and building materials to prediction of resource consumption of buildings (bridges, buildings, traffic infrastructure), predictive modeling of hydrological systems, and predictions of extreme events.

This Special Edition analyzes the application of various mathematical and optimization models in applied sciences and engineering, as well as various topics related to sustainability issues in engineering.

Special Issue