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Mathematical Optimization and Control: Methods and Applications

Guest Editors:

Message from the Guest Editors

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Deadline for manuscript submissions: **31 December 2024**

Mathematical optimization is the discipline of adjusting a mathematical process so as to optimize (make the best use of) a specified set of parameters without violating certain constraints. Mathematical optimization uses optimization algorithms as the random research for the maximization or minimization of functions without violating certain constraints. Examples of these optimization algorithms are the genetic, bat, butterfly, grey wolf, particle swarm, ant colony, bee colony, and Bayesian algorithm. Additionally, the convergence of the mentioned optimization algorithms could be analyzed.

Mathematical control compares the value of a variable being controlled with the desired value, and applies the control signal to bring the variable to a desired value. It brings the necessity to research for control algorithms. Examples of these control algorithms are the adaptive, neural network, fuzzy, backstepping, sliding mode, robust, feedback, observer-based algorithms. Additionally, the stability of the mentioned control algorithms could be analyzed.

The objective of this Special Issue of Mathematics is to cover the optimization and control algorithms.



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Message from the Editor-in-Chief

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