



Symmetry in Optimization and Control with Real World Applications

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Message from the Guest Editors

Dear colleagues,

Due to the advancement of technology, many challenging practically significant real world problems emerge. These problems arise in a wide range of disciplines, such as physics, chemistry, core engineering (civil, chemical, electrical and mechanical), biology, defence and computer sciences. They can often be formulated as optimization or control problems, and hence, methodologies and techniques in optimization and control are clearly indispensable for solving these problems. Due to the existence of symmetry in certain systems in nature and engineering, many mathematical models and optimization problems arising possess some form of symmetry. For example, in some constrained optimization problems, certain variables appear symmetrically in the objective and constraint functions. The purpose of this Special Issue is to publish a selection of original high-quality papers, presenting substantial novel latest research achievements in optimization and control with application to important real-world engineering problems involving complex systems...





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Message from the Editor-in-Chief

Symmetry is ultimately the most important concept in natural sciences. It is not surprising then that very basic and fundamental research achievements are related to symmetry. For instance, the Nobel Prize in Physics 1979 (Glashow, Salam, Weinberg) was received for a unified symmetry description of electromagnetic and weak interactions, while the Nobel Prize in Physics 2008 (Nambu, Kobayashi, Maskawa) was received for the discovery of the mechanism of spontaneous breaking of symmetry, including CP symmetry. Our journal is named *Symmetry* and it manifests its fundamental role in nature.

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