Special Issue

Symmetries in Optimization Theory and Its Applications

Message from the Guest Editors

Symmetry in optimization theory has become increasingly significant, supporting advancements across a wide range of scientific and engineering disciplines. Recent progress in optimization has greatly impacted fields such as data science, economics, control systems, and machine learning, where symmetric structures play a vital role in creating efficient and reliable optimization techniques.

This Special Issue invites researchers to present their latest work on the theoretical and practical aspects of symmetry in optimization. Topics of interest include, but are not limited to, symmetric cone optimization, combinatorial optimization, sparse and statistical optimization, optimization in finance and economics, interior-point and first-order methods, optimization for neural networks, reinforcement learning, and mathematical modeling.

Guest Editors

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Dr. Jinhang Zuo

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Deadline for manuscript submissions

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About the Journal

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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