Special Issue

Computational Intelligence in Real-World Optimization Problems: From Theory to Practice

Message from the Guest Editor

Researchers in engineering and science are facing optimization problems of ever-increasing complexity. These challenges encompass non-analytic 'black-box' functions, noisy landscapes, dynamic and uncertain settings, and big data, to name a few. In these settings, classical mathematical optimization and analysis methods may perform poorly. This has motivated the development and application of computational intelligence (CI) methods for handling such problems. The goal of this Special Issue is to present a curated collection of papers that describe the current state of the art in the theory and application of CI-based methods to real-world optimization problems. As such, relevant topics for this Special Issue include the following: CI-based optimization search methods; Applied optimization; Fuzzy logic and neural networks applications in optimization; CI in informatics, data mining and big data problems; Pertinent mathematical methods for enhancing the performance of CI-based methods; Real-world applications of CI in science and engineering.

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Deadline for manuscript submissions

30 April 2026

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Mathematics

an Open Access Journal by MDPI

**Impact Factor 2.2
CiteScore 4.6**

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Message from the Editor-in-Chief

The journal *Mathematics* publishes high-quality, refereed papers that treat both pure and applied mathematics. The journal highlights articles devoted to the mathematical treatment of questions arising in physics, chemistry, biology, statistics, finance, computer science, engineering and sociology, particularly those that stress analytical/algebraic aspects and novel problems and their solutions. One of the missions of the journal is to serve mathematicians and scientists through the prompt publication of significant advances in any branch of science and technology, and to provide a forum for the discussion of new scientific developments.

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