Special Issue

AI Algorithm Design and Application

Message from the Guest Editor

Computational intelligence (CI) usually refers to the ability of a computer to learn a specific task from data or experimental observation. In the last decade, deep learning has received widespread attention, especially deep neural networks. In fact, some of the most successful AI systems are based on CI. Not only this, neural networks, such as evolutionary computation, fuzzy systems, etc., have also achieved state-of-the-art performance in a lot of difficult tasks and facilitated the creation of new products and services in many different fields. The purpose of this Special Issue is to provide advanced CI-based methods to solve some challenging practical problems, such as few-shot learning, large-scale optimization, uncertainty, etc. Of particular interest are the innovative researches trying to connect mathematics with CI, involving explainable neural networks, neuro-evolution, CI-based meta-heuristics, parallel meta-heuristics with GPU computing, etc. From the application side, we welcome papers introducing novel CI-based methods for computer vision, bioinformatics, electronics, automatics, and industrial engineering.

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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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