Special Issue

Mathematical Applications in Digitalization, Electrification, and Sustainable Development

Message from the Guest Editor

This Special Issue of the journal *Mathematics* is dedicated to contemporary mathematical methods and applications that play a crucial role in the processes of digitalization, electrification, and sustainable development. In the context of rapidly evolving technologies and increasing demands for energy efficiency and environmental sustainability, mathematics provides powerful tools for the modeling, analysis, and optimization of complex systems. This Special Issue explores various aspects of mathematical approaches, including numerical methods, optimization techniques, stochastic modeling, machine learning, and artificial intelligence, which are applied in the automation of industrial processes, smart electrical grids, renewable energy sources, and resource management. Special emphasis is placed on the development of mathematical models for energy efficiency, the forecasting and control of complex engineering systems, and algorithms for processing large datasets in the context of digital transformation.The aim of this Special Issue is to present new research and innovative mathematical solutions that support sustainable development and technological progress.

Guest Editor

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About the Journal

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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