

Special Issue

Modeling and Simulation for Optimizing Complex Dynamical Systems

Message from the Guest Editor

The modeling and simulation (M&S) of dynamical systems are essential for solving problems across various fields of applied mathematics, including physics, biology, engineering, economics, and beyond. By employing diverse mathematical modeling techniques to better understand system behavior, improve and optimize performance, and even design new systems. This Special Issue aims to compile the latest research achievements in the field of dynamical system M&S. We particularly seek contributions that not only focus on M&S but also explore the optimization of complex dynamical systems based on M&S. We welcome original research articles and comprehensive review papers on topics including, but not limited to, the following: Mathematical modeling methodologies for dynamical systems; Efficient and accurate computational simulation methods; Simulation-based optimization techniques; Data-driven and machine learning approaches; Applications across various fields.

Guest Editor

Dr. Seon Han Choi

Department of Electronic and Electrical Engineering, Ewha Womans University, Seoul, Republic of Korea

Deadline for manuscript submissions

31 January 2026



Mathematics

an Open Access Journal
by MDPI

Impact Factor 2.3
CiteScore 4.6



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Mathematics
Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland
Tel: +41 61 683 77 34
mathematics@mdpi.com

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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.

Editor-in-Chief

Prof. Dr. Francisco Chiclana

School of Computer Science and Informatics, De Montfort University,
The Gateway, Leicester LE1 9BH, UK

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