

Special Issue

Mathematical Modeling and Simulation of Oscillatory Phenomena

Message from the Guest Editors

Oscillatory phenomena have been observed in many dynamical systems encountered in natural sciences and technology. Much of physiology operates in an oscillatory manner, including in the examples of hormone oscillations, oscillatory gene expressions, and oscillation in muscles; oscillation processes are also observed in ecosystem populations, biochemistry, mechanics, population dynamics and there are thermodynamic oscillations, oscillations in market economies, and so on. This Special Issue focuses on the modeling and simulation of nonlinear dynamical systems of various nature that exhibit oscillation as their fundamental mode of behavior. Papers are invited from those who work on oscillation theory or in any one of the areas in which existing tools and methods are applied to investigate the oscillatory phenomena of a given dynamical system modeling a real-world problem. Having in mind that the delay is one of the major causes of oscillations in dynamical systems, we are particularly interested in (but not exclusively) the oscillation theory of time-delay systems.

Guest Editors

Dr. Irena Jadlovská

Prof. Dr. Tongxing Li

Prof. Dr. Syed Abbas

Prof. Dr. Said R Grace

Deadline for manuscript submissions

closed (30 November 2023)



Mathematics

an Open Access Journal
by MDPI

Impact Factor 2.2
CiteScore 4.6



mdpi.com/si/96349

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

[mdpi.com/journal/
mathematics](https://mdpi.com/journal/mathematics)





Mathematics

an Open Access Journal
by MDPI

Impact Factor 2.2
CiteScore 4.6



[mdpi.com/journal/
mathematics](https://mdpi.com/journal/mathematics)



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

Author Benefits

High Visibility:

indexed within Scopus, SCIE (Web of Science), RePEc, and other databases.

Journal Rank:

JCR - Q1 (Mathematics) / CiteScore - Q1 (General Mathematics)

Rapid Publication:

manuscripts are peer-reviewed and a first decision is provided to authors approximately 18.4 days after submission; acceptance to publication is undertaken in 2.4 days (median values for papers published in this journal in the first half of 2025).