

Special Issue

Mathematical Modeling: From Nonlinear Dynamics to Complex Systems

Message from the Guest Editors

This Special Issue is focused on advanced nonlinear dynamical systems, both in theory and application. Particular emphasis will be given to the control of electronic nonlinear circuits and devices. Moreover, this issue is addressed to the study of distributed systems like electrical networks and complex systems. Therefore, the essential aim of this Special Issue is to encourage authors to integrate contributions, from local behaviors to global behaviors. Papers taking into account big data to build models are welcome, as are experimental papers. Advanced ideas with preliminary results should also be presented to stimulate future wide audience studies. Mathematical modeling should be stressed and numerical methods are also well accepted. Topics of the Special Issue are: -nonlinear devices control techniques; -bifurcation analysis of strong nonlinear systems; -nonlinear electronic circuits; -identification from experimental data of dynamics systems; -complex networks; -power grid; -networks from local unit to global behavior; -cellular nonlinear networks from nano scale to tera node numbers; -networks of reservoir memory; -memristors based networks.

Guest Editors

Prof. Dr. Luigi Fortuna

Dipartimento di Ingegneria Elettrica Elettronica e Informatica,
Universita degli Studi di Catania, Viale A. Doria 6, 95125 Catania, Italy

Dr. Claudia Corradino

University of Maryland University College, College Park, MD 20742, USA

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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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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).