Mathematical Modeling and Study of Nonlinear Dynamic Processes

Message from the Guest Editor

The development of computer technology has opened up new opportunities for the study of nonlinear dynamic processes. For example, using high-precision calculations, one can construct good approximations to unstable cycles contained in attractors of systems with quadratic nonlinearities. Of particular interest now are mathematical models whose equations have a non-smooth or discontinuous right-hand side. The development of qualitative and numerical methods brings about new ideas about the structure of attractors of dynamical systems. In recent years, the recurrent motions of dynamical systems have been studied in many papers. The classical results of general systems theory were generalized to the non-autonomous case, and the Poincaré recurrences statistics were also studied. These problems are the focus of this Special Issue. Particular attention is paid to modeling nonlinear dynamic systems with regular and chaotic behavior using modern numerical methods.

Guest Editor

Prof. Dr. Alexander Pchelintsev

Department of Higher Mathematics, Tambov State Technical University, Sovetskaja Str. 106, 392000 Tambov, Russia

Deadline for manuscript submissions

closed (30 April 2025)

Computation

an Open Access Journal by MDPI

Impact Factor 1.9
CiteScore 4.1

mdpi.com/journal/
computation

MDPI

About the Journal

Message from the Editor-in-Chief

You are invited to submit the results of your research for consideration and publication in *Computation,* an international open access journal, which is published monthly online by MDPI.
The editorial board and staff of *Computation* are dedicated to establishing a benchmark journal for the world scientific and engineering communities for original research articles, reviews, conference proceedings (i.e., peer reviewed full articles), and communications, in the cutting-edge areas of computational biology, computational chemistry, computational social science and computational engineering.

Editor-in-Chief

Prof. Dr. Ali Cemal Benim
Center of Flow Simulation (CFS), Department of Mechanical and Process Engineering, Duesseldorf University of Applied Sciences, D-40476 Duesseldorf, Germany

Author Benefits

High Visibility:
indexed within Scopus, ESCI (Web of Science), CAPlus / SciFinder, Inspec, dblp, and other databases.

Journal Rank:
JCR - Q2 (Mathematics, Interdisciplinary Applications) / CiteScore - Q1 (Applied Mathematics)

Rapid Publication:
manuscripts are peer-reviewed and a first decision is provided to authors approximately 16.7 days after submission; acceptance to publication is undertaken in 5.6 days (median values for papers published in this journal in the first half of 2025).