Special Issue

Mathematical Modelling in Studying Spatial Aspects of Population Dynamics

Message from the Guest Editor

Classical theory of mathematical ecology began with population dynamics models that were built and validated on data collected from experiments performed with small laboratory microcosms. However, the understanding of the crucial role played by various spatial aspects in the functioning of population systems came quite soon, partly owing to the results obtained with the help of mathematical modelling. In turn, this understanding stimulated the development of new modelling approaches to the mathematical description of biophysical phenomena related to spatial factors..... The purpose of this Special Issue is to gather a collection of articles presenting recent research dealing with spatial phenomena in biological populations and communities, obtained with models based on various mathematical techniques: ODE and PDE systems, integro-differential equations, difference equations (mapping), individual-based models, box models, matrix models. Markov models, and others.

Guest Editor

Prof. Dr. Yuri V. Tyutyunov

Southern Scientific Centre of the Russian Academy of Sciences (SSC RAS), Chekhov Street, 41, 344006 Rostov-on-Don, Russia

Deadline for manuscript submissions

closed (31 May 2021)



Mathematics

an Open Access Journal by MDPI

Impact Factor 2.2 CiteScore 4.6



mdpi.com/si/42837

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

mdpi.com/journal/mathematics





Mathematics

an Open Access Journal by MDPI

Impact Factor 2.2 CiteScore 4.6



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).

