



Mathematical Modelling in Studying Spatial Aspects of Population Dynamics

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)

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.





Editor-in-Chief

Prof. Dr. Francisco Chiclana

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

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.

Author Benefits

Open Access: free for readers, with article processing charges (APC) paid by authors or their institutions.

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

Journal Rank: JCR - Q1 (*Mathematics*) / CiteScore - Q1 (*General Mathematics*)

Contact Us

Mathematics Editorial Office
MDPI, St. Alban-Anlage 66
4052 Basel, Switzerland

Tel: +41 61 683 77 34
www.mdpi.com

mdpi.com/journal/mathematics
mathematics@mdpi.com
[X@MathematicsMDPI](https://twitter.com/MathematicsMDPI)