

SPECIAL SECTION/ISSUE

Title

Mathematical Modeling in Medical Problems

Editors

Prof. Katarzyna Rejniak

Moffitt Cancer Center & Research Institute, USA

email: kasia.rejniak@moffitt.org

profile: <http://rejniak.net/RejniakLab>

Prof. Barbara Pękala

University of Rzeszów, Poland

email: bpekala@ur.edu.pl

profile: <https://t.ly/6w-d>

Prof. Agnieszka Bartłomiejczyk

Gdańsk University of Technology, Poland

email: agnbartl@pg.edu.pl

profile: <http://mostwiedzy.pl/en/agnieszka-bartlomiejczyk-13028-1>

About

For many years, mathematical modeling has been successfully used in many fields of science, such as physics, economics, biology, and chemistry. Recently, mathematicians and computer scientists have also addressed challenging questions in medicine. This special publication is focused on recent advances in mathematical modeling of medical problems. Mathematical models help to explain a disease's course and deepen our understanding of many processes involved in its development. Consequently, the analysis of such models allows us to answer important questions posed by clinicians or doctors. Since analytical solution of such problems is often a time-consuming or even impossible task, computational methods may be necessary to provide a solution. This includes the use of numerical methods of solving differential equations or computational simulations of agent-based models, which depend on the initial data and other model parameters.

Scope

The special publication aims to showcase the wide spectrum of applications of mathematical models in medicine. We invite manuscripts related (but not limited) to the following topics:

- modeling of cancer growth and treatment
- modeling of heart diseases
- health care in an epidemiological context or in other current social problems
- modeling in pharmacokinetics and pharmacodynamics.

Important dates

Submission deadline: **15 October 2022**

Notification of acceptance: **30 December 2022**

Possible publication: **2023**

Information for authors

- The papers should meet high quality journal manuscript guidelines, in terms of research results, editorial quality, and language. Poorly written manuscripts will not be considered for review.
- The submission must be done online at www.amcs.uz.zgora.pl/?action=submission.
Important! In your submission (paper file), please put as the first keyword capitalized and asterisked **MATHEMATICS**.
- The papers should be prepared with the journal LaTeX template, following strictly the guide for authors available at www.amcs.uz.zgora.pl/?action=guide.
- The submissions will undergo a review process, following the journal rules.
- The final decision will be made by the journal's Editor-in-Chief and Guest Editors.
- Please note that publication in AMCS is subject to page charges, invoiced upon paper acceptance. For details, please visit www.amcs.uz.zgora.pl/?action=guide.

Technical assistance

amcs@uz.zgora.pl