

Springer Volume - SEMA SIMAI Springer Series

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Title:

Mathematical models and computer simulations for biomedical applications

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Mathematical modeling and computer simulations are playing a crucial role in the solution of the complex problems arising in the field of biomedical sciences to provide a support to clinical and experimental practices in an interdisciplinary framework. Indeed, the development of mathematical models and efficient numerical simulation tools plays a more and more important role when dealing with such applications. Moreover, since the parameters in biomedical models have peculiar scientific interpretations and their values are often unknown, accurate estimation techniques need to be developed for parameter identification against the measured data of observed phenomena. In the light of the new challenges brought by the biomedical applications, computational mathematics paves the way for the validation of the mathematical models and the investigation of control problems.

This series is meant to host high-quality selected contributions containing original research results as well as comprehensive papers and survey articles including prospective discussion focusing on, but not limited to:

- Biomaterials, biomembranes, smart polymers and hydrogels
- Artificial organs, tissue engineering
- Stem cells, regenerative medicine, cell therapy
- Tumour growth and cancer therapeutics
- Personalized medicine and patient-tailored modeling
- Analysis and managing of epidemiological systems
- Artificial Intelligence applied to biological systems

This topics may constitute the Chapters of the book according to the contributions collected.

We are opening invitations to the participants of MCHBS2021 workshop, and other scientists, to contribute to this Volume by submitting original research articles, perspectives or review articles. All submitted papers will go through a peer-review process.

The expression of interest should be sent to the Email address:

bookmchbs2021@gmail.com.

Further instruction for complete submission to the Volume will be given later on.

Full text submission due date: April 30, 2022.

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Guest Editors