



symmetry



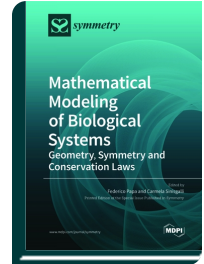
Special Issue Reprint

Mathematical Modeling of Biological Systems: Geometry, Symmetry and Conservation Laws

www.mdpi.com/books/reprint/4853

Edited by
Federico Papa
Carmela Sinisgalli

ISBN 978-3-0365-2764-2 (Hardback)
ISBN 978-3-0365-2765-9 (PDF)



Mathematical modeling is a powerful approach supporting the investigation of open problems in natural sciences, in particular physics, biology and medicine. Applied mathematics allows to translate the available information about real-world phenomena into mathematical objects and concepts. Mathematical models are useful descriptive tools that allow to gather the salient aspects of complex biological systems along with their fundamental governing laws, by elucidating the system behavior in time and space, also evidencing symmetry, or symmetry breaking, in geometry and morphology. Additionally, mathematical models are useful predictive tools able to reliably forecast the future system evolution or its response to specific inputs. More importantly, concerning biomedical systems, such models can even become prescriptive tools, allowing effective, sometimes optimal, intervention strategies for the treatment and control of pathological states to be planned.

The application of mathematical physics, nonlinear analysis, systems and control theory to the study of biological and medical systems results in the formulation of new challenging problems for the scientific community. This Special Issue includes innovative contributions of experienced researchers in the field of mathematical modelling applied to biology and medicine.



Order Your Print Copy
You can order print copies at
www.mdpi.com/books/reprint/4853

MDPI Books offers quality open access book publishing to promote the exchange of ideas and knowledge in a globalized world. MDPI Books encompasses all the benefits of open access – high availability and visibility, as well as wide and rapid dissemination. With MDPI Books, you can complement the digital version of your work with a high quality printed counterpart.



Open Access

Your scholarly work is accessible worldwide without any restrictions. All authors retain the copyright for their work distributed under the terms of the Creative Commons Attribution License.



Author Focus

Authors and editors profit from MDPI's over two decades of experience in open access publishing, our customized personal support throughout the entire publication process, and competitive processing charges as well as unique contributor discounts on book purchases.



High Quality & Rapid Publication

MDPI ensures a thorough review for all published items and provides a fast publication procedure. State-of-the-art research and time-sensitive topics are released with a minimum amount of delay.



High Visibility

Due to our global network and well-known channel partners, we ensure maximum visibility and broad dissemination. Title information of books is sent to international indexing databases and archives, such as the Directory of Open Access Books (DOAB), and the Verzeichnis Lieferbarer Bücher (VLB).



Print on Demand and Multiple Formats

MDPI Books are available for purchase and to read online at any time. Our print-on-demand service offers a sustainable, cost-effective and fast way to publish MDPI Books printed versions.