



## Modelling of Mass Transport Processes in Biological Media

About the Book: *Modelling of Mass Transport Processes in Biological Media*

This is the 4<sup>th</sup> book of the Elsevier book series on modelling transport in biological media. The work examines theoretical, physiological, and computational aspects of the modelling of mass transport in biosystems and biological processes.

The book is written to an advanced academic and research audience from the level of graduate student upwards. We anticipate a work of 500 pages that make up a collection of about 15 peer-reviewed chapters.

The proposed book provides a compendium of recent advances in theoretical and computational modelling of bio-transport phenomena. The primary distinction of this book is that its focus is on applications of transport models that are relevant to a range of physiological processes and biomedical technologies.

This book is contracted for publication in 2021 (anticipated final draft submission by mid-2021).

The publisher will pay the senior author of each chapter an honorarium of 100.00USD. The senior author of each chapter will also receive 1 print copy of the book and 1 electronic copy of the book.

Descriptions of the previous books in this Elsevier Series are available online:

*Transport in Biological Media* (2013)

<https://www.sciencedirect.com/book/9780124158245>

*Heat Transfer and Fluid Flow in Biological Processes* (2015)

<https://www.sciencedirect.com/book/9780124080775>

*Modeling of Microscale Transport in Biological Processes* (2017)

<https://www.sciencedirect.com/book/9780128045954>

## About the Editorial Team

Sid Becker is the Director of Postgraduate Studies in the Department of Mechanical Engineering at the University of Canterbury. He is an Alexander von Humboldt Fellow, has contributed to journal editorial work at the Journal of Porous Media, Special Topics and Reviews in Porous Media, and the Journal of Thermal Science. He edited the previous three books of this Elsevier published series: *Transport in Biological Media* (2013), *Heat Transfer and Fluid Flow in Biological Processes* (2015), and *Modeling of Microscale Transport in Biological Processes* (2017).

Andrey Kuznetsov is a Professor in the Department of Mechanical & Aerospace Engineering at North Carolina State University and holds a joint professorial position at the University of North Carolina. He has held editorial positions at the Proceeding of the Royal Society A, the Journal of Porous Media, and the Journal of Heat Transfer. He is a Fellow of American Society of Mechanical Engineering, and a Member of the Scientific Council of the International Center of Heat and Mass Transfer. He has edited previous books in this Elsevier published series: *Transport in Biological Media* (2013), and *Heat Transfer and Fluid Flow in Biological Processes* (2015).

Filippo de Monte is a Mechanical Engineering Professor in the Department of Industrial and Information Engineering and Economics at University of L'Aquila, Italy, and holds a visiting professorial position at Michigan State University. He has held editorial positions at the Open Thermodynamics Journal, the Mathematical Problems in Engineering, and currently at Heat Transfer Engineering as guest editor. He was a Senior Member of American Institute of Aeronautics and Astronautics. He is co-author of a chapter in the Elsevier book series: *Advances in Heat Transfer* (2020).

Giuseppe Pontrelli is the research director at IAC-CNR (National Research Council) in Rome, Italy. He holds editorial positions at the Journal of Mathematical Biosciences, the Journal of Porous Media, and at Special Topics & Reviews in Porous Media. Over the years, he has worked on many research projects and developed mathematical models and computational methods for complex systems related to health. He has authored over 90 papers in international scientific periodicals and multiple book chapters.

Dan Zhao is the Director of the Master of Engineering Studies at the Department of Mechanical Engineering at the University of Canterbury. He is the Chief Editor at the International Journal of Aerospace Engineering and holds editorial positions at 6 journals including the American Institute of Aeronautics and Astronautics (AIAA), New Zealand's Royal Society, and Aerospace Science and Technology. He is an associate fellow of the AIAA and a Fellow of the Royal Aeronautical Society. He authored the Elsevier published book: *Wind Turbines and Aerodynamics Energy Harvesters* (2019).