

# Trends in Biomathematics: Stability and Oscillations in Environmental, Social, and Biological Models

Rubem P. Mondaini

Editor

# Trends in Biomathematics: Stability and Oscillations in Environmental, Social, and Biological Models

Selected Works from the BIOMAT  
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# Preface

The publication of the present book follows the fine tradition of books already published with selected papers accepted at the BIOMAT International Symposia on Interdisciplinary Mathematical and Biological Sciences. All these papers were selected for publication as chapters in the book, after their presentation in the scientific sessions of the conference and after a final peer review. We hoped that the pandemic situation will improve and that we can have a face-to-face conference in 2021. Unfortunately, we again had to organize the conference in an online format. We believe that once again the tradition of BIOMAT conferences in terms of the absence of parallel sessions, as well as their fundamental mission of strengthening the interdisciplinary scientific activities of our colleagues from developing countries, has been so efficient to support this tradition.

We hope that security conditions will allow the organization of at least one hybrid conference in 2022. We are however quite sure that if occasional difficulties should again impede the hope of organizing a face-to-face conference that would be desirable for a true interdisciplinary conference series, our tradition and the sense of duty of all our colleagues in the scientific community of the BIOMAT Consortium will once again suffice to preserve the professional competence of the organization and the scientific participation that is essentially due to all of them.

For this second online version of a BIOMAT Symposium, BIOMAT 2021—21st International Symposium on Mathematical and Computational Biology, we again benefited from the cooperation of the Brazilian Academic Network—RNP, and Dr. Beatriz Zoss, to whom we now express our sincere thanks for her professional expertise. BIOMAT 2021 benefited from the cooperation of all colleagues/authors of accepted papers and abstracts to bring together professional researchers and research students from 17 countries on four continents. The Scientific Program, which was followed with all necessary rigor, had 23 contributed lectures, 16 Keynote Speaker lectures, and 2 Keynote Speaker Tutorial lectures. We chose to work with Greenwich Mean Time (GMT), and the lectures were scheduled from 10:00 to 16:45 GMT, in order to maximize the presence of participants in countries from four continents. The lectures were organized into 20 scientific sessions from Monday morning, November 1, to Friday evening, November 5.

At the end of the opening session on Monday morning, November 1, 2021, 10:00 GMT, a few words were said in honor of Professor Nick Britton, who passed away in December 2020. We transcribe here what was said as a testimony of our deep gratitude to what our friend Nick Britton did for the BIOMAT Consortium and the honor of having him as a friend.

“At this opening session of the 21st BIOMAT International Symposium on Mathematical and Computational Biology, we have the duty and honor to pay tribute to Professor Nicholas Ferris Britton, Professor Emeritus of the University of Bath, UK.”

Nick Britton, as he became known throughout the world, especially in the 67 countries where he developed scientific activities, was responsible for the invitation made to the BIOMAT Consortium to organize the 2010 Annual Meeting of the Society for Mathematical Biology in Rio de Janeiro, Brazil, as a joint conference with the BIOMAT 2010 International Symposium.

Nick Britton was a keynote speaker at the BIOMAT International Symposia held in 2008, 2009, 2010, 2011, and 2014. He was also a member of the Consortium Board of Directors as one of the representatives of Western Europe. He was besides everything a wonderful human being, a very polite gentleman, and a great scientist. He had an enormous scientific dedication to interdisciplinary topics in mathematics and biology.

Nick passed away in December 2020, just before Christmas. He is deeply missed by all his colleagues, as well as former students and family members, such as his wife, mother, daughter, and three sisters, for the pain of his loss and the remembrance of what he represents to the entire scientific community. We would like to ask everyone to observe a minute’s silence to pay tribute to an old and great friend.

The Editor of the book would like to thank again the professional help given by his former PhD student, Dr. Simão C. de Albuquerque Neto, with all the conveniences (and inconveniences) in the use of the electronic platform and his kind way of helping the presentations of our colleagues in the scientific sessions. He also acknowledges the patience and competence of his wife Carmem Lucia S.C. Mondaini with the administration of technical matters related to the financial support of the conference, as well as for her collaboration with the reception of papers to be submitted to the peer review procedure. The Editor also takes this opportunity to inform you that our 12-year-old son, Romolo Mondaini, after trying to attend some of the talks in the time available between his classes, confirmed what he said last year during the BIOMAT 2020 conference that he also wants to be a scientist and a teacher. After 47 years as a university professor, all we can say is: May God forgive and help him!

Rio de Janeiro, Brazil  
November 06, 2021

R. P. Mondaini

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