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https://biomath.math.bas.bg/biomath/index.php/bmcs

BIOMATH 2025: A conference overview

Roumen Anguelov[1,3], Milen Borisov[1], Nina Pesheva[2], Peter Rashkov[1]

[1]Institute of Mathematics and Informatics - BAS
roumen.anguelov@math.bas.bg, milen_kb@math.bas.bg,
p.rashkov@math.bas.bg

[2]Institute of Mechanics - BAS
nina@imbm.bas.bg

[3]University of Pretoria
roumen.anguelov@up.ac.za

The BIOMATH 2025 conference is the thirteenth in the series of BIOMATH conferences. The series was initiated in 2011, building similar meetings taking place since 1995. BIOMATH 2025 takes place at the Institute of Mechanics and the Institute of Mathematics and Informatics of the Bulgarian Academy of Sciences in Sofia, Bulgaria, 15-20 June 2025. The conference series is coordinated by an International Steering Committee comprising 18 dedicated scientists from 10 different countries. One of the main driving forces behind the BIOMATH series of conferences and one of the founders of the committee was Prof. Svetoslav Markov from the Institute of Mathematics and Informatics at the Bulgarian Academy of Science, who sadly passed away in 2023. The conference acknowledged his contribution to both the conference series and the publications associated with it.

BIOMATH conferences are forums for latest research in the life sciences based on applications of mathematics, as well as mathematics applied to or motivated by biological research. It is a multidisciplinary meeting forum for researchers who develop and apply mathematical and computational tools to study phenomena in the broad fields of biology, ecology, medicine, biophysics, biochemistry, pharmacokinetics, chemoinformatics, biotechnology, bio-engineering, environmental science and etc. In addition, BIOMATH 2025 includes a special topic session *Mathematical models of the immune system in human disease*, where advances in genetics and biochemistry have opened up new opportunities to gain knowledge about the organization, dynamics, and regulation of the human immune system. Further, the following priority directions are emphasized:

- Health and quality of life;
- Environmental protection. Utilization of raw materials and bioresources;

- Information and communication technologies.

Particularly important role is assigned to biomathematics in the first two priority directions, including mathematical modeling and applications in medicine and pharmacy, cellular processes, cancers, infectious diseases, biotechnology. There is traditional wide diversity of participation of BIOMATH both in terms of research topics in the filed and affiliation promoting the development of new ideas and building of international research teams. The 2025 edition of BIOMATH the conference is attended by 86 participants from 23 countries in Europe, North and South America, Africa and Asia. The scientific program includes 6 keynote lectures, 73 oral presentations, 17 posters.

The BIOMATH conferences pay special attention to the participation and support of young researchers. The School for Young Scientists is an integral part of the conference and it offers to doctoral students and early career researchers additional developmental and networking opportunities. In 2025 these include three excellent topical lectures presented by top scientists. The school's full program is available on the conference website.

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