

Conference Report

The 6th TSIMF Conference on Computational and Mathematical Bioinformatics and Biophysics (CMBB) was held at Tsinghua Sanya International Mathematics Forum (TSIMF), Sanya, China, during December 16 - 20, 2024.

Organizers:

Stephen S.-T. Yau, Beijing Institute of Mathematical Sciences and Applications, China

Guowei Wei, Michigan State University, USA

Shan Zhao, The University of Alabama, USA

Chenglong Yu, Monash University, Australia

Presentations

This conference consists of 37 invited talks, which provide an overview of the recent advances and current status of research on CMBB.

Here are the highlights of the program:

- Talks were delivered by researchers from diverse fields, including mathematics, statistics, biology, physics, chemistry, medicine, computer science, covering various interdisciplinary areas in CMBB.
- Talks were delivered by researchers at different stages, including leading figures in the field of CMBB (e.g. Yiqin Gao, Peking University; Qi Wang, University of South Carolina; Jianhua Xing, University of Pittsburgh; Dmytro Kozakov, Stony Brook University), senior and junior researchers, postdocs, and graduate students.
- The CMBB workshop series has attracted many mathematicians, especially **pure mathematicians**, to enter this new interdisciplinary field. At least four pure mathematicians have presented their research on related topics: Zhigang Yao, National University of

Singapore (Statistics and Geometry); Jie Wu, BIMSA (Topology); Yuanzhen Shao, University of Alabama (PDE Analysis); Jinqiao Duan, Great Bay University (Stochastics and PDE).

Participants

A total of 47 participants attended this conference.

- 47 participants are from four countries/regions, including USA (12), Singapore (4), Poland (1), China (30).
- 10 participants are PhD students or recent graduates from Tsinghua University, BIMSA, and National University of Singapore.
- The participants include 6 females.

Publication

To record this important event in the field of mathematical biology, a special issue will be published in the journal, Communications in Information & Systems (CIS)

<https://www.intlpress.com/site/pub/pages/journals/items/cis/home/main/index.php>.

The manuscript due date is March 1, 2025. Several participants have expressed their interests in submitting their manuscripts to this special issue.

Summary

The CMBB workshop series have attracted more people from mathematics and biology to work on the modeling and computation of biophysics and bioinformatics and fostered further collaborations among them. Moreover, the TSIMF workshop series will stimulate new research directions in mathematics and computation to address fundamental challenges in biophysics and bioinformatics.