

A meeting report:
BIOMATH19 in Bedlewo, Poland

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BIOMATH - Mathematical Methods and Models in Biosciences is a conference series that brings together scientists and researchers from different countries and continents, those who develop and apply mathematical and computational tools to study phenomena in the broad fields of life sciences. This multidisciplinary meeting forum provides a generous platform that covers discussions from biology, ecology, epidemiology, medicine, biotechnology, bioengineering, environmental science, and such others.

This year, the conference was organized in Poland, in the Conference Center of Institute of Mathematics of Polish Academy of Sciences in Będlewo from 16-22 June 2019. There were about hundred participants from different parts of the world. The conference was initiated with a gathering of young participants (*School for Young Scientist*) like graduate students, postdocs and junior faculties in the evening of 16th to stimulate and generate interactions and introductions among themselves.

The main session started with an interesting talk by Jean Clairambault (Laboratoire Jacques-Louis Lions, France) on cancer cells and the emergence of drug-induced drug resistance. There were about ten keynote speakers in all five days: R. Ouifki (University of Pretoria, South Africa), V. Capasso (University of Milano, Italy), A. Świerniak (Silesian University of Technology, Poland), A. Marciniak-Czochra (Heidelberg University, Germany), N. Dimitrova (Bulgarian Academy of Sciences, Bulgaria), H. Ueda (University of Tokyo/RIKEN, Japan), J. Kubiak (Institute of Genetics & Development of Rennes, France), R. Rudnicki (University of Silesia, Poland), who lectured on interesting topics such as epidemic models, models of anaerobic digestion process, protein kinetic model, pattern formation, and tumor-immune interactions.

Fifteen general sessions took place in all five days including one mini-symposium, where some sessions were held concurrently. Session topics included epidemic models, reaction-diffusion systems, blood flow models, prey-predator models, model of retinal vasculogenesis, Models of low-grade glioma, human vaccination behavior, swarm behavior, tissue modelling, model of coalesce & jumps, neural model, and such others. The mini-symposium was focused on Mathematical Methods in Cancer Immunology and Infectious Diseases started with a very interesting and illustrated talk by Grzegorz Rempała (Ohio State University, USA). On the last day of the meeting, there was a poster session by graduate students and postdocs.

A special session on the fourth day of the conference was organized to celebrate the birthday of Prof. Jacek Banasiak. The session highlighted main results of his research career followed by a concert and meeting of his group of close friends and co-workers in the banquet dinner!

The conference is co-organized by many institutes such as Banach Center – Polish academy of Science, University of Warsaw, Mathematical Biosciences Institute, Łódź University of Technology, University of Pretoria, and Bulgarian Academy of Sciences.

The scientific contents presented in the meeting were varied, novel and challenging. Most of talks, especially plenary talks resulted in much lively discussion after and during the breaks. Several interactions and contacts led to interesting collaborations. All participants have enjoyed the meeting and also social program (including enhancing field tour to Raczyński Palace in Rogalin, and Kornik castle, which talk about history of Poland in the medieval times).

The next meeting BIOMATH20 of this series will be organized in the University of Pretoria, South Africa.