



Biomath Communications

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BIOMATH 16 International Conference and School for Young Scientists

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Attracted by common interests in mathematics and biology, 65 mathematical scientists converged on Blagoevgrad, Bulgaria in June 2016 for the annual international conference on Mathematical Methods and Models in the Biosciences, BIOMATH 16, and the associated School for Young Scientists. Hosted by the South-West University “Neofit Rilski,” the venue was the University Center Bachinovo, situated in lovely forest surroundings with a pathway by the river leading to town.

The mathematics represented in over 50 oral and poster presentations included advances in numerical methods, geometric data analysis, dynamical systems and partial differential equations, and surface geometry. The biological topics were similarly diverse: participants learned, for example, about the spread and control of diseases such as malaria, the ubiquity of renewal equations in population dynamics and epidemiology, how magnetic fields interact with DNA, biomechanics and protein folding, and molecular dynamics approaches to biomolecular information processing. In the Roumen Tsanev plenary lecture, Slavka Tcholakova presented on the kinetics of the breakage and coalescence of small droplets in emulsions. As there were no parallel

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Participants in Biomath16 attending a lecture.



Young scientists awards ceremony.

sessions, we all were able to get to know the work of all our colleagues in attendance. Discussions of biology, mathematics, science in general, as well as careers, local culture, and the experiences of participants from Europe, Africa, Asia and the two Americas formed the foundation during common meals. In the friendly atmosphere, junior and senior researchers got to know each other and to exchange career tips and scientific ideas. Twenty-three attendees were participants in the School for Young Scientists (SYS). These students presented talks and posters, learned about ecological modeling and pattern formation in expository lectures, and asked questions and offered ideas during two Hot Topics Workshops. The juried poster and oral presentations resulted in a number of awards for exemplary research and quality presentation.

Two excursions provided further opportunities for interaction. In a trip to the city of Kyustendil in the western part of Bulgaria, we experienced ancient Roman artifacts and ruins. The conference concluded with a visit to the Rila Monastery in the high mountains of Rila Monastery National Park. Also memorable was a folk dance performance by members of the university's dance school, followed by lessons and the invitation for all to join in. The welcoming atmosphere created by the organizers of BIOMATH 16 and the SYS encouraged collaboration and the broadening of interests beyond participants' current research focus. Support from the Bulgarian Academy of Sciences, the South-West University "Neofit Rilski", and the Union of Bulgar-



Biomath16 participants at the walls of Roman fortress near Kyustendil, western part of Bulgaria.



Folk dance lesson, following a folk dance presentation.

ian Mathematicians as well as the Society for Mathematical Biology and the European Society for Mathematical and Theoretical Biology allowed for a productive and inspiring week of biomathematics.