

PAST EVENTS - SCIENTIFIC REPORTS

CIM SUMMER SCHOOL ON MATHEMATICS IN BIOLOGY AND MEDICINE 2004

Report

The school was held on 20-24 September 2004 at *Instituto Gulbenkian de Ciência* (IGC), organized by Gabriela Gomes, Jorge Carneiro, Pedro Coutinho, Isabel Gordo, Jose Faro and Francisco Dionisio, endorsed by Centro Internacional de Matemática (CIM), and sponsored by Fundação para a Ciência e a Tecnologia (FCT) and Lusolab. The aim of the summer school was to promote the use of mathematical modeling in biology and medicine and this aim was fully accomplished. Several areas of research on mathematical biology (such as epidemiology, population biology and population genetics, immunology and developmental biology) were tackled with success. The school included a short course by each of the invited speakers, and sessions for participants to present and discuss their research. The invited speakers and the subject of their lectures in the summer school were:

- Jacob Koella (University of Paris, France), *An evolutionary view of the epidemiology and control of malaria*.
- Gil McVean (University of Oxford, UK), *Modeling genetic variation*.

- Graham Medley (University of Warwick, UK), *Infectious disease control: the usefulness of toy models*.
- Markus Owen (University of Nottingham), *Mathematical and computational modeling in developmental biology*.
- Alan S. Perelson (Los Alamos National Laboratory, USA), *Modeling Viral Infections*.
- Lee Segel (The Weizmann Institute of Science, Israel), *Choosing an appropriate immune response*.

The school had the participation of about 60 research students and post-docs, from Europe, Africa and America. Overall, participants were interested and interactive. The outcome was pleasing and motivating, and we are preparing a similar event on a biannual basis.

The Organizing Committee: Jorge Carneiro, Pedro Coutinho, Francisco Dionisio, José Faro, Gabriela Gomes, Isabel Gordo.