

INVITATION TO SEMINAR (SS 07)
PRINCIPLES OF BIOLOGICAL DEVELOPMENT



OBJECTIVE

Biological development typically starts from a single fertilized cell, follows a precisely regulated sequence of steps and finally leads to an intricate pattern of differentiated tissues in the adult organism. It has turned out that biological development can be interpreted as cooperative phenomena emerging in a system of interacting cells and molecules. Accordingly, mathematical modelling is essential to understand key steps in the developmental dynamics, such as cell division, signalling, differentiation, segmentation or regeneration. In this seminar, we are focusing on the question: What are the principles of self-organization that conduct the pattern formation orchestra, and how can suitable mathematical models be analyzed? By means of talks and discussions key questions of biological development and suitable mathematical models will be introduced.

The seminar is intended for undergraduate and graduate students in mathematics, biology or computer science who are interested in this highly interdisciplinary field.

TIME AND LOCATION

The seminar will take place on 4 Friday afternoons (13.00-16.00, May 25, June 8, 22, July 6), Locations: alternating MPI-CBG, Pfotenhauerstr. 108, and ZIH, TU Dresden, Nöthnitzer Str. 46.

KICKOFF MEETING (DISTRIBUTION OF TALKS)

April 27, 2007, 13.00-14.00, at MPI-CBG, Seminar room, 3rd Floor.

ORGANIZERS

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APPLICATION AND FURTHER INFORMATION

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