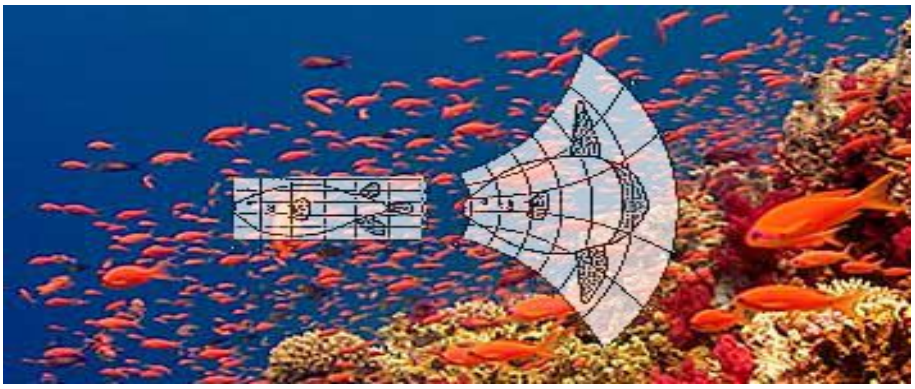
Invitation to Lecture (SS 2011)

Introduction to Mathematical Biology I



Objective

The life sciences are rapidly turning from qualitative to quantitative sciences. To integrate the increasing amount of data in a systematic way, development and application of mathematical models are required. The goal of the lecture is an introduction into the mathematical modelling of biological problems from genetics, evolution, cell and developmental biology. The focus of the lecture is on getting to know important mathematical model structures and methods (especially differential and partial differential equations, stochastic processes, cellular automata and complex networks). Accompanying tutorials allow for acquiring experience in the application of modelling methods. By this, participants receive a profound introduction to modern biomathematical concepts.

During the two-semester course, key questions in biological development and corresponding mathematical models will be introduced and the biological interpretation of mathematical analysis will be demonstrated. This course is suitable for but not restricted to graduates (at least Vordiplom) in biology, mathematics, physics, medical and computer science.

Time and Location

Lectures: Tuesday, 16.45-18.15, Start: **April 5**
INF – E10, Computer Science Dept. of TU Dresden, Nöthnitzer Str. 46

Tutorials: biweekly, Wednesday, 16.45-18.15, INF-E10

Lecturers

Dr. Lutz Brusch, ZIH, TU Dresden
Prof. Dr. Andreas Deutsch (coordinator), ZIH, TU Dresden
Dr. Wilfried Schenk, Institute for Mathematical Stochastics, TU Dresden

Lecture website

http://www.tu-dresden.de/zih/lehre/bio/

Contact

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