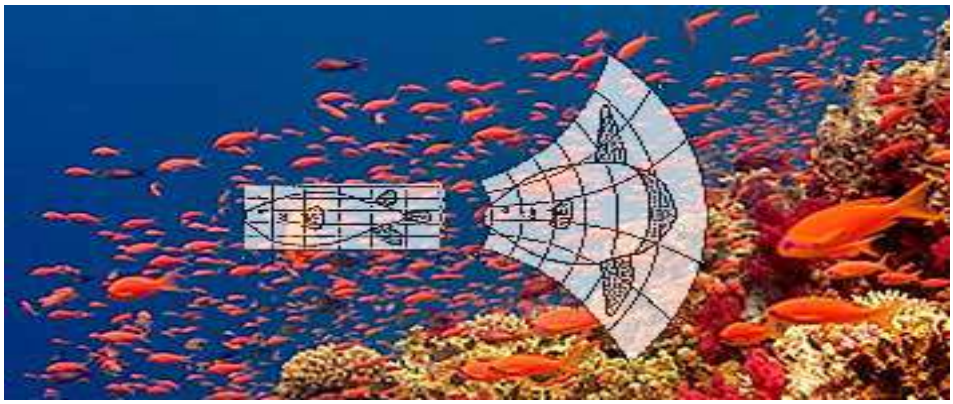
Invitation to new Lecture (WS 04/05)

Introduction to Mathematical/Theoretical Biology



Objective

The life sciences are rapidly turning from qualitative to quantitative sciences. This requires the application of mathematical models. The goal of the lecture is a pro-found introduction into the mathematical modelling of biological problems from genetics, evolution, developmental biology and physiology. Besides an introduction into the history of mathematical/theoretical biology the focus of the lecture is on getting to know important mathematical model structures and methods. Model structures are in particular finite difference, differential and partial differential equations, stochastic processes and cellular automata. Accompanying tutorials allow the independent solution of modelling tasks.

Precondition for participation is some affinity to mathematics. All necessary mathematical tools will be introduced. The seminar is intended for students and researchers in biology, mathematics, physics and computer science who are interested in this highly interdisciplinary research field.

Lecturers

Dr. Lutz Brusch, ZHR, TU Dresden
PD Dr. Andreas Deutsch (coordinator), ZHR, TU Dresden
Dr. Anja Voss-Böhme, Institut für Stochastik, TU Dresden

Time and Location

Lecture: *every Monday 9.20-10.50 (WIL-A 317),* ***Start: Oct. 11***
Tutorial: *every second Friday* 11.10-12.40 (*WIL-C 104),* ***Start: Oct. 15***

Application and further information

PD Dr. Andreas Deutsch, Zentrum für Hochleistungsrechnen (ZHR), TU Dresden
Tel. 463-31943, deutsch@zhr.tu-dresden.de
(Secretary Mrs. Vollheim, Tel. 463-35450)