

INVITATION TO SEMINAR IN MATHEMATICAL BIOLOGY (WS 2014/15)

SIMPLE MODELS OF BIOLOGICAL COMPLEXITY



OBJECTIVE

Biological complexity is brought about by huge collections of interacting molecules and cells. Interestingly, simple mathematical models can offer insight into organization principles of biological complexity. For example, organismic swarms can arise on the basis of local alignment and attraction rules. Biological evolution proceeds on the basis of mutation and selection.

The main focus of the seminar is the introduction of simple mathematical models addressing key problems from collective motion/swarming, pattern formation and scaling, regeneration, cancer and other diseases. By means of talks presented by the seminar participants key questions and mathematical models will be introduced. The full program results from the kickoff meeting.

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

TIME AND LOCATION

The seminar will take place on 4 **Monday** afternoons **14.00-17.00**:

November 17, December 8, January 19 and February 2

Location: **INF-1096**, Computer Science Dept. of TU Dresden at **Nöthnitzer Str. 46**

KICKOFF MEETING AND DISTRIBUTION OF TALKS

October 27, 14.00-15.00, INF-1096

ORGANIZERS

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SEMINAR WEBSITE

www.tu-dresden.de/die_tu_dresden/zentrale_einrichtungen/zih/lehre/bio/ws1415_sem

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