Invitation to Seminar in Mathematical Biology (SS 2013)

To model or not to model?

The complex behaviour of living systems often defies our cause-effect trained intuition. In theory, the integration of experimental studies with mathematical models and numerical simulations should enable us to still gain mechanistic understanding. Comparison of model predictions to experiments is a powerful tool for rigorously excluding alternative hypotheses. In practice, however, defining the specific biological question, identifying key data sets and choosing an adequate model framework and abstraction level are problems in their own right. Often experience is needed to solve these latter problems.

In this seminar, classical and recent papers with applications to cell and developmental biology will be presented. We then discuss the strengths and weaknesses of the chosen modelling approaches. The seminar is intended for undergraduate and graduate students in mathematics, biology, physics, medical or computer sciences who are interested in this highly interdisciplinary application field.

Time and Location
The seminar will take place on 4 **Monday** afternoons **15.00-18.00**:
27 May, 10 June, 24 June, 8 July
Location: **INF-1096**, Computer Science Dept. of TU Dresden at Nöthnitzer Str. 46
Kickoff meeting and distribution of talks: **22 April**, 15.00-16.00, INF-1096

Organizers: Fabian Rost, Walter de Back, Osvaldo Chara, Lutz Brusch and Andreas Deutsch
Zentrum für Informationsdienste und Hochleistungsrechnen (ZIH), TU Dresden
Seminar website: **http://www.tu-dresden.de/zih/lehre/bio/ss13_sem**
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