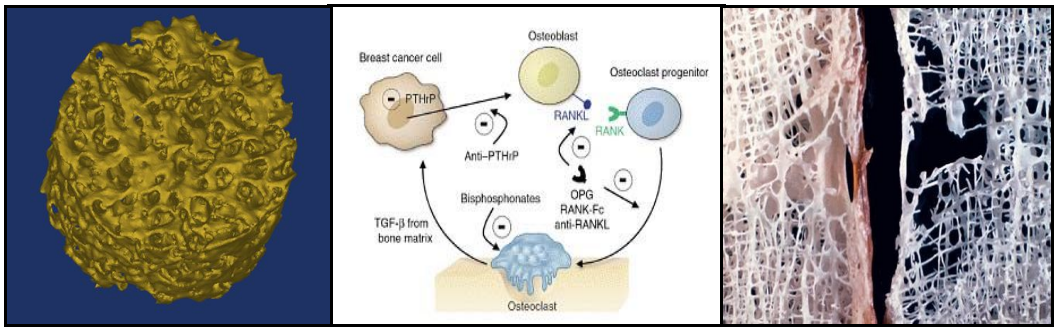
Invitation to Seminar (WS 2011/12)

Biology, Mathematics and Physics of the Bone



Objective

Bone is a highly dynamic tissue which adapts to mechanical loads and regulates many functions of the human body, e.g. calcium homeostasis and blood cell maturation. How are bone tissues organized and what are their functions? How can bone cells sense mechanical stimuli? What is bone remodeling, and what are the mechanisms? How do bone cells communicate and influence each other? Such and similar questions will be addressed.

The main focus of the seminar is the introduction of mathematical models by means of talks, discussions, and computer simulations. The seminar comes in four parts, “Structure and function”, “Cellular dynamics and homeostasis”, “Mechanobiology” and “Modeling bone diseases”. The full program results from the kickoff meeting.

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

Time and location

The seminar will take place on **4 Monday afternoons** at **14:00-17:00**
(dates to be announced).

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

Kickoff meeting and distribution of talks

October 17, 2011, **14.00-15.00**

Organizers

Robert Müller, Christoph Landsberg, Andreas Deutsch, ZIH, TU Dresden
Manfred Bobeth, Institute for Materials Science, TU Dresden

Seminar website

http://www.tu-dresden.de/zih/lehre/bio/ws1112_sem

Contact

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