

Seminar

12. Mai 2011 15:30h HS 44-465



zu folgendem Vortrag wird herzlich eingeladen:

Reflections on the problem of the longitudinal growth of long bones in mammals

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The slow lengthening of long bones in mammals via the evolution of the so-called growth plate is an interesting problem of mechanobiology. First analogies and differences between the evolution of the growth plate and the progress of phase-transformation fronts are noted. Second, on account of biophysical data several modellings of the growth plate itself and its progress are considered. Finally, the special modelling that views the growth plate as a zone of gradient variation of its structural properties but in very slow time evolution is considered. The possibility to exploit nonlinear signals (bell shapes, kinks) in the nonlinear elasticity of the considered tissues superimposed on this quasi-static evolution, is then envisaged delivering various signatures for these signals, which are characteristic of the considered growth plate structure. Works in co-operation with A.B. Freidin and A.V. Porubov (St Petersburg) and M. Rousseau (Paris).



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