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Einladung zum Vortrag   24. November 2010

von

Frau Dr. Katharina Best
UNIVERSITÄT ULM

Binary random trees in the modelling of cellular ageing

From a mathematical point of view, the process of cell division can be seen as a binary tree. We aim at modelling cellular division processes of eucaryots, i.e. organisms whose cells contain complex structures enclosed within membranes, e.g. higher developed organisms. This leads us to consider a one-parameter family of random trees introduced by Aldous & Shields (1988) in the context of algorithm theory.

We are interested in the profile of these trees and study their time evolution in order to learn about their growth. In our case, the differential equation governing this time evolution can be solved explicitly. This provides us with both, asymptotic scaling laws and finite time results for the first and second moment of the profiles. We discuss the implications for the biological situation.

Termin: Mittwoch, 08. Dezember 2010, 14:15 Uhr

Ort: Universität Ulm, Helmholtzstr. 18, Raum E60

Interessenten sind herzlich eingeladen.
Der Vortrag findet im Rahmen unseres Forschungsseminars statt.

gez. E. Spodarev