Westfälische
Wilhelms-Universität
Münster

FACHBEREICH 10
MATHEMATIK UND INFORMATIK
Prof. Dr. Matthias Löwe
Dekan

28.02.2011

Einladung

Am Freitag, dem 25. März 2011, Hörsaal M5, 11:00 Uhr

spricht

Peter Pfaffelhuber, Freiburg

The evolution of genealogical trees

Zusammenfassung:

My research focuses on probabilistic aspects in the life sciences. Here, the field of mathematical population genetics offers the most interesting and challenging research questions. In the main part of my talk, I will present recent projects with Andrej Depperschmidt, Andreas Greven and Anita Winter. We construct a tree-valued Markov process describing the evolution of genealogical relationships in populations of constant size N. We concentrate on equally fit individuals, i.e. neutral evolution and consider the diffusion limit $N \to \infty$. We shed some light on the state space of the process, and state the well-posedness of the corresponding martingale problem. From the tree-valued process we derive a Markov dynamics which describes the evolution of sample tree-lengths.

Auf diesen Vortrag wird besonders hingewiesen

Matthias Löwe, Dekan