



INSTITUT FÜR
MATHEMATIK

Fachbereich 08 – Physik, Mathematik und Informatik



JOHANNES GUTENBERG
UNIVERSITÄT MAINZ

M. Birkner / L. Hartung / A. Klenke

Oberseminar Stochastik

Am **Dienstag, 25. Juni 2024** wird

Timo Schlüter (Universität Basel)

einen Vortrag halten mit dem Titel:

“Pair Coalescence times of ancestral lineages of two-dimensional logistic branching random walks”

Abstract:

Consider two ancestral lineages sampled from a system of two-dimensional branching random walks with logistic regulation in the stationary regime. We study the asymptotics of their coalescence time for large initial separation and find that it agrees with well known results for a suitably scaled two-dimensional stepping stone model and also with Malécot's continuous space approximation for the probability of identity by descent as a function of sampling distance. This can be viewed as a justification for the replacement of locally fluctuating population sizes by fixed effective sizes. Our main tool is a joint regeneration construction for the spatial embeddings of the two ancestral lineages.

Zeit: Dienstag, 25. Juni 2024, 14 Uhr c.t.

Ort: Raum 05-136, Institut für Mathematik, Staudingerweg 9, 55128 Mainz

Alle Interessierten sind herzlich eingeladen!

gez. i. A. Estelle Bonmann

<https://www.stochastik.mathematik.uni-mainz.de/>