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Mathematische Institute der WWU – Kolloquium Wilhelm Killing

# The extremal process of branching Brownian motion

Professor Anton Bovier (Universität Bonn)

11.10.2012, 16:30 Uhr, Hörsaal M 5

Branching Brownian motion is a classical and canonical process in probability theory. It is the simplest continuous time spatial branching process. A property of key interest is the structure of the process near its maximum for large times. This was first studied in the 70ies by McKean, who discovered a deep connection to a classical reaction diffusion equation, the F-KPP equation. Bramson exploited these facts to reveal precise asymptotics of the maximum of BBM. In this talk I present some recent results obtained with Nicola Kistler and Louis-Pierre Arguin on the full extremal process of BBM. In particular, we show that the extremal process of BBM converges to a new type of cluster point process. Moreover, we obtain an ergodic theorem showing that the time-average of the extremal process of BBM converges almost surely to a random cluster point process. This proves and extends a conjecture by Lalley and Sellke from 1987.

Tee wird ab 16:00 Uhr im Sitzungszimmer SR 0 des Mathematischen Instituts serviert.

Fachbereich 10  
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