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Mathematische Institute der WWU – Kolloquium Wilhelm Killing

Extremal geometry of a Brownian porous medium

Prof. Dr. Frank den Hollander (Universität Leiden, NL)

23.01.2014, 16:30 Uhr, Hörsaal M 5

The path $W[0,t]$ of a Brownian motion on a d-dimensional torus T^d run for time t is a random compact subset of T^d. In this talk we look at the geometric properties of the complement $C(t) = T^d \setminus W[0,t]$ as $t \to \infty$ for $d \geq 3$. Questions we address are the following: 1. What is the linear size of the largest region in $C(t)$? 2. What does $C(t)$ look like around this region? 3. Does $C(t)$ have some sort of 'component-structure'? 4. What are the largest capacity, largest volume and smallest principal Dirichlet eigenvalue of the components of $C(t)$? We speculate about what happens for $d = 2$, which is much harder to understand. Joint work with Jesse Goodman (Haifa)

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

Fachbereich 10
Mathematik und Informatik
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