Seminarium geometrów

www.math.uni.wroc.pl/dgt/

Środa, 11.12.2019, 14:15, s. 602

Jan Czajkowski (UWr)

Percolation on hyperbolic groups: boundary dimension of a cluster

Abstract: We will consider clusters of Bernoulli percolation on hyperbolic groups quasi-isometric to H^3 (e.g. on Coxeter reflection groups of bounded polyhedra in H^3). The Gromov boundary of such group is homeomorphic to S^2. The question is whether the cluster boundaries in S^2 are a.s. zero-dimensional when the probability of keeping each edge in the percolation subgraph is greater than but close to the critical probability. We will try to prove that using facts from a talk by Longmin Wang on branching random walks in hyperbolic groups (IM UWr, 18 Apr 2019) and using stochastic domination of the percolation cluster by trajectory of such a branching random walk. Hausdorff dimensions of the cluster boundary and of the trajectory boundary will play a key role.