

Mathematics and CS Seminar

Thick points of random walk and multiplicative chaos

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The study of thick points of planar random walk, that is points where the walk goes back unusually often, goes back to a famous paper of Erdos and Taylor in 1960. This talk will be dedicated to recent progress on this topic. I will in particular discuss the scaling limit of the set of thick points, considerably refining estimates of Dembo, Peres, Rosen and Zeitouni. This scaling limit is described by a random measure which is the analogue of Gaussian multiplicative chaos measures for the local times of planar Brownian motion. I will discuss the construction of this new object and some of its properties. Finally, I will explain a characterisation of this random measure which is a key step in the proof of the above scaling limit.

Tuesday, December 10, 2019 04:30pm - 05:30pm

SR 14, 2 OG., OMP 1, University of Vienna



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