Oberseminar Mathematische Stochastik

Mittwoch, 2. Dezember 2015, 17:00 Uhr, M 6

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On Convex Hull of Multidimensional Random Walk

Abstract:
It is well known that the probability that a random walk stays positive by the time n does not depend on the distribution of the random walk if it is continuous and symmetric. We generalize this result to dimension two and mention the case of arbitrary dimension. We also derive a formula for the expected perimeter (and other intrinsic volumes) and number of faces of the convex hull of a multidimensional random walk with arbitrary continuous distribution. It turned out that the expected number of faces does not depend on the distribution, too.
Based on the joint work with V. Vysotsky: http://arxiv.org/abs/1506.07827.