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FAKULTÄT
FÜR MATHEMATIK, INFORMATIK
UND NATURWISSENSCHAFTEN
Fachbereich Mathematik

Kolloquium über Mathematische Statistik und Stochastische Prozesse

Naoufel Salhi

University of Tunis El Manar, Tunisia

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Some properties and asymptotics related to the generalized intersection local times of multidimensional Brownian motion

Abstract:
In dimension ≥ 4 the intersection local times of the Brownian motion fails to exist as a usual random variable and can be represented by a finite measure on the classical Wiener space. We provide some asymptotics concerning the mass of the Wiener space as well as the capacity of the support of this measure. We also present an estimate of the quadratic Wasserstein distance between this measure and the Wiener measure. Finally, a large deviation principle is stated.

Naoufel Salhi
salhi.naoufel@gmail.com

Kontakt:
Prof. Dr.Vitalii Konarovskyi
vitalii.konarovskyi@uni-hamburg.de
http://www.math.uni-hamburg.de/home/konarovskyi