



北京理工大学

数学与统计学院学术报告

The BESQ Flow and its Application

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摘要: The BESQ flow is a collection of squared Bessel processes driven by the same white noise starting at all space-time points in the right half plane, studied by Aïdékon, Hu and Shi in 2023 (arXiv:2306.12716) as the local time flow of a two-sided perturbed reflecting Brownian motion. In this talk, I will introduce some properties of BESQ flows: regularity, duality, bifurcation, etc. I will present how to construct some known models by BESQ flows: the skew Brownian flow studied by Burdzy and Chen 2001 and Burdzy and Kaspi 2004, which is a flow of solutions to the SDE $dX_t = dB_t + (2p - 1)dL_t(X)$ with parameter $0 < p < 1$; and the interval partition evolutions studied in a series of papers by Forman, Pal, Rizzolo, Shi and Winkel in recent years, as scaling limits of Chinese restaurant processes. This talk is based on works with Elie Aïdékon, Quan Shi and Yaolin Yu.

邀请人: 孙振尧、侯浩杰