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Intermittency for hyperbolic Anderson models with time-independent Gaussian noise

Abstract

Intuitively, inttermittency refers to a state of the system with random noise in which the high peak is rare but real. In mathematics, it can be described in terms of moment asymptotics of the system.

Compared to the parabolic Anderson equation, the inttermittency for hyperbolic Anderson equation is much harder and less investigated due to absence of Feynman-Kac formula that links the parabolic Anderson equation to Brownian motions. In this talk, I will report some recent progress in this direction. In particular, I will show how the large deviation technique is combined with Malliavin calculus to achieve the precise moment asymptotics.

The talk is based on a collaborating work joint with Balan, R. and Chen, L.