

Detailed heat kernel estimates and laws of the iterated logarithm

熊谷 隆 (京都大学)

In this talk, I will present some recent work on laws of the iterated logarithm for stochastic processes with detailed heat kernel estimates. Based on two-sided heat kernel estimates for a class of symmetric jump processes on metric measure spaces, we establish laws of the iterated logarithm (LIL) for sample paths, local times and ranges. In particular, the LILs are obtained for stable-like processes on d -sets. This is an on-going work with P. Kim (SNU) and J. Wang (Fujian U. and RIMS). If time permits, I will also present some work on lamplighter random walks on fractal graphs, which is a joint work with C. Nakamura (RIMS).