HOMOGENEOUS DIRICHLET FORMS AND THEIR SPECTRAL ASYMPTOTICS ON A CLASS OF P.C.F. SELF-SIMILAR SETS

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ABSTRACT. In this talk, we consider the homogeneous but not-necessarily selfsimilar Dirichlet forms on a class of p.c.f. self-similar sets. We obtain the sharp estimates of the eigenvalue asymptotic law of the associated Laplacians. The known examples include the so-called asymptotically one-dimensional diffusions on the Sierpinski gasket and their generalizations. We also construct new examples which support multi-parameter diffusions and study their spectral asymptotics as application. This is a jointwork with Qingsong Gu and Ka-sing Lau.

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