

Absolutely continuous spectrum for substitution trees

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We study a class of rooted trees with a substitution type structure. These trees are not necessarily regular but exhibit a lot of symmetries. The spectrum of the corresponding graph Laplace operator is purely absolutely continuous and consists of finitely many intervals. We show stability of absolutely continuous spectrum under small random perturbations. Moreover for such trees which are not regular the absolutely continuous spectrum is stable under small deterministic perturbations by radially symmetric potentials. (This is joint work with Daniel Lenz and Simone Warzel.)