Dependence of the density of states on the probability distribution for discrete random Schrödinger operators on graphs

Chris Marx*

*Department of Mathematics, Oberlin College & Conservatory, 38 E College St., Oberlin, OH 44074, USA

We prove quantitative continuity results for the density of states measure (DOSm) and the integrated density of states (IDS) with respect to the underlying probability distribution (in weak-star topology) for a wide class of discrete random operators on graphs with a certain finite range structure. The latter, in particular, includes random lattice Schrödinger operators on $\mathbb{Z}^d$ with finite-rank potentials. Applications of these continuity results are given to the dependency of the DOSm and IDS on the disorder in the weak-disorder regime, and the continuity of the Lyapunov exponent in the probability measure for random Schrödinger operators in dimension one.

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