SPECTRAL MEASURES OF JACOBI OPERATORS WITH RANDOM POTENTIALS

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Abstract. Let $H_\omega$ be a self-adjoint Jacobi operator with a potential sequence $\{\omega(n)\}_n$ of independently distributed random variables with continuous probability distributions and let $\mu_\omega^\phi$ be the corresponding spectral measure generated by $H_\omega$ and the vector $\phi$. We consider sets $A(\omega)$ which depend on $\omega$, but are independent of two consecutive given entries of the sequence $\omega$, and prove that $\mu_\omega^\phi(A(\omega)) = 0$ for almost every $\omega$. This result is applied to show equivalence relations between spectral measures for random Jacobi matrices and to study the interplay of the eigenvalues of these matrices and their submatrices.


Keywords and phrases: Spectral measures, Jacobi matrices, random potential.

REFERENCES