1035-82-1486

Marek Biskup* (biskup@math.ucla.edu), Department of Mathematics, UCLA, Los Angeles, CA 90095-1555, and Wolfgang König (koenig@math.uni-leipzig.de), Fakultät für Mathematik und Informatik, Universität Leipzig, D-04009 Leipzig, Germany. Eigenvalue order statistics for random Schrödinger operators with doubly exponential tails. Preliminary report.

I will discuss the eigenvalue order statistics for random Schrödinger operator $\Delta + \xi$ on $\ell^2(\mathbb{Z}^d)$, where Δ is the lattice Laplacian and ξ an i.i.d. random field with a doubly exponential upper tail. The leading eigenvalues of this operator restricted to a finite box converge, after a shift and scaling, to a Poisson point process as the size of the box tends to infinity. This observation is of interest as it feeds into a larger result dealing with strong path localization for the random walk in a random potential and/or mass concentration in the so called parabolic Anderson model. (Received September 20, 2007)