Global Continuity of the Integrated Density of States

Peter Hislop

University of Kentucky

We prove that the integrated density of states for random Schrödinger operators with Anderson-type potentials on $L^2(\mathbb{R}^d)$, for $d \geq 1$, is Hölder continuous at all energies. The single-site potential must be nonnegative and compactly supported, and the distribution of the random variable must be absolutely continuous with a bounded, compactly supported density. We also prove this result for random Anderson-type perturbations of the Landau Hamiltonian in two-dimensions under a rational flux condition. This is joint work with J. M. Combes and F. Klopp.