

RANDOM SCHROEDINGER OPERATORS AND NOVIKOV-SHUBIN INVARIANTS OF GROUPS

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I will talk about random Schroedinger operators with random edge weights and their expected spectral measures μ_T near zero. We prove that the measure exhibits a spike of the form $C/(\log \varepsilon)^2$ (first observed by Dyson), without assuming independence or any regularity of edge weights. We then use the result to compute Novikov-Shubin invariants for various groups, including lamplighter groups and lattices in the Sol group. Joint work with Balint Virag.