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Title : Localization of the continuous Anderson hamiltonian in 1-d and its transition.

Abstract : We consider the continuous Schrödinger operator $-d^2/dx^2 + B'(x)$ on the interval $[0,L]$ where the potential B' is a white noise. We study the spectrum of this operator in the large L limit. We show the convergence of the smallest eigenvalues as well as the eigenvalues in the bulk towards a Poisson point process, and the localization of the associated eigenvectors in a precise sense. We also find that the transition towards delocalization holds for large eigenvalues of order L , where the limiting law of the point process corresponds to Sch_{τ} , a process introduced by Kritchevski, Valko and Virag for discrete Schrodinger operators. In this case, the eigenvectors behave like the exponential Brownian motion plus a drift, which proves a conjecture of Rifkind Virag. Joint works with Cyril Labbé.