

1154-35-2638

**Svitlana Mayboroda\*** (svitlana@umn.edu), **Guy David** and **Marcel Filoche**. *The landscape law for the integrated density of states*. Preliminary report.

The present paper establishes sharp non-asymptotic estimates from above and below on the integrated density of states of the Schrödinger operator  $L = -\Delta + V$ , using a counting function for the minima of the landscape, a solution to the equation  $Lu = 1$ . The results are deterministic, and rely on the new uncertainty principle. Narrowing down to the context of disordered potentials, we derive the best currently available bounds on the integrated density of states for the Anderson model in  $R^d$ . In particular, this settles the long-debated question of applicability of the landscape theory to the potentials associated to the Anderson localization. (Received September 17, 2019)