

Optimal potentials for Schrödinger operators

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We consider the Schrödinger operator $-\Delta + V(x)$ on $H_0^1(\mathbb{O})$, where \mathbb{O} is a given domain of \mathbb{R}^d . Our goal is to study some optimization problems where an optimal potential $V \geq 0$ has to be determined in some suitable admissible classes and for some suitable optimization criteria, like the energy or the Dirichlet eigenvalues.