

Séminaire de mathématiques et leurs applications

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Title: A quantitative inequality for the eigenvalue of a Schrodinger operator in the ball.

Abstract: In this talk, we investigate a quantitative inequality for the first eigenvalue $\lambda(V)$ of $-\Delta - V$ with Dirichlet boundary conditions with respect to the potential V under L_1 and L_∞ constraints in the ball. The solution is known to be a characteristic function V^* . We aim at proving that $\lambda(V) - \lambda(V^*) \geq C\|V - V^*\|_1^2$ for some $C > 0$.