

Berezin-Li-Yau Inequalities with a Correction Term

S.Wugalter

In the talk I will discuss lower bound on a sum of eigenvalues of the operator $-\Delta$ with the Dirichlet boundary conditions. This bound known as the Berezin-Li-Yau inequality and it has a large number of applications in mathematical physics. In a recent joint work with H. Kovařík and T. Weidl we found an improvement of this inequality for two-dimensional domains. We proved that a positive term can be added to the r.h.s. of the inequality. This new correction term has almost optimal asymptotical behaviour.