

Conditions for uniformly convergence of expansions of continuous functions from Nikolskii classes in eigenfunction expansions of the Schrödinger operator on closed domain

ABSTRACT

In this work, spectral expansions of the Schrödinger operator $-Δ + q(y_1, y_2)$ with the singular potential from $W_2^1(Ω)$ are investigated. Using the asymptotical estimation of spectral function of Schrödinger operator on closed domain uniformly convergence of eigenfunction expansions of continuous functions from Nikolskii classes is proved. Properties of the continuous functions from Nikolskii classes are used.

Keyword: Eigenfunction expansions; Operator theory; Riesz mean; Schrödinger operator; Uniformly convergence