## Asymptotyc behavior of the eigenvalue numbers of the operator $\Delta^2 + Q(x)$

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Let H is a separable Hilbert Space and  $E_n$  is an n-dimensional Euclidean space. We denoted the Hilbert space of all H-values functions defined on  $E_n$  which are measurable and satisfy the condition

 $\int_0^\infty \|f(x)\|_H^2 \, dx < \infty,$ 

with  $H_1 = L_2(E_n, H)$ . In this study, we obtain asymptotic behaviour of the numbers of the eigenvalues  $\leq \lambda \ (\lambda > 0)$  when  $\lambda \longrightarrow +\infty$  of the operator generated by the expression

(1) 
$$\Delta^2 + Q(x),$$

in  $H_1$ . In (1),  $\forall x = (x_1, x_2, \dots, x_n) \in E_n$ ,  $Q(x) = Q^*(x) \ge I$ , (I is an identity operator in H),  $Q^{-1}(x)$  is a compact operator in H and  $\Delta^2$  is a biharmonic operator. Joint work with Oya Baykal and Kevser Koklu.