



Minisymposium 24 - Probability and Geometry

Semi-classical limit of the bottom of spectrum of a Schrödinger operator on a path space over a compact Riemannian manifold

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We determine the limit of the bottom of spectrum of Schrödinger operators with variable coefficients on Wiener spaces and path spaces over finite dimensional compact Riemannian manifolds under semi-classical limit. The problem on path spaces over Riemannian manifolds are considered as a problem on Wiener spaces by Ito's map. However the coefficient operator is not a bounded linear operator and the dependence on the path is not continuous in the uniform convergence topology if the Riemannian curvature tensor on the underlying manifold is not equal to 0. The difficulties are solved by using unitary transformations of the Schrödinger operators by approximate ground state functions and estimates in the rough path analysis.