

Abstract

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Spectral asymptotics on stationary spacetimes

Spectral asymptotics refers to Weyl's law and the Gutzwiller trace formula for the Laplacian of a compact Riemannian manifold. They are corner-stone results in non-relativistic quantum mechanics. The purpose of my talk – joint work with Alex Strohmaier– is to give a relativistic generalization of these results for any globally hyperbolic stationary spacetime with a compact Cauchy hyper surface. I will also briefly allude to generalizations to cases where the Cauchy hypersurfaces are of infinite volume. Almost any result in spectral asymptotics has a relativistic generalization.