Yannick Bonthonneau
Title: Resonances-free regions for cusp manifolds

Abstract: I will explain how one can construct a parametrix for the scattering determinant at high frequencies, for cusp manifolds --- finite volume, hyperbolic ends, negative curvature. The main consequence is that the resonances are either in a vertical strip near the axis Re s = 1/2, or outside of some log region. When the curvature is constant, it has been known since Selberg that all the resonances really are in a vertical strip. However, in variable curvature, a variety of behaviour is possible for the set of resonances that lie outside of the strip, as I propose to show.