THE LEAFWISE LAPLACIAN OF A SINGULAR FOLIATION AND ITS SPECTRUM

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A. Connes showed that in certain cases, the spectrum of the Laplacian of a complete Riemannian manifold can be computed by realizing the manifold as a leaf of a (regular) foliation on a compact manifold. In this lecture we will discuss the extension of this method to singular foliations. In particular, we will explain the construction of the appropriate longitudinal pseudodifferential calculus, which allows the definition of the Laplacian of any singular foliation. This is joint work with Georges Skandalis.

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