COLLOQUIUM

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Ricci Curvature in Noncommutative Geometry

Mathematics and Statistics

Date: Friday, December 02, 2016
Time: 3:30 - 4:30 PM
Room: RIC 208

Abstract: In the noncommutative world, spectral triples play the role of geometric objects such as Riemannian manifolds. Scalar curvature, as the first geometric invariant, has already been introduced for spectral triples, and computed for some examples. In this talk, we will firstly show how the Ricci curvature can be seen as a spectral functional, namely the functional defined by localized graded zeta function of the full Laplacian of the de Rham complex localized by smooth homorphisms of cotangent bundle. Then we will use this definition to introduce the Ricci functional for the noncommutative two torus and compute the Ricci density, which is equal to the Ricci operator in the classical case.This talk is based on an in progress joint work with M. Khalkhali and R. Floricel.

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