Séminaire d'analyse

UNIVERSITÉ
LAVAL

5 Septembre 2014
13h30

<u>Conférencier</u>

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<u>Titre</u>

Sub-Laplacian Eigenvalues on Sasakian Manifolds

Résumé

The sub-Laplacian is a natural differential operator on Sasakian manifolds. We study how sub-Laplacian eigenvalues can be bounded by some geometric invariants of Sasakian manifolds. There is a Ricci curvature associated with an intrinsic connection on Sasakian manifolds, called the Tanaka-Webster Ricci curvature. We first recall some basic definitions. Then we give upper bounds for eigenvalues of the sub-Laplacian in terms of the lower bound of the Tanaka-Webster Ricci curvature. We also give sub-Laplacian eigenvalue upper bounds on any contact manifold which is "conformal" to a Sasakian manifold. This is joint work with Gerasim Kokarev.