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The injectivity radius of Lie manifolds

Tuesday, 7 November 2017 18:00 (50 minutes)

Lie manifolds were introduced by Ammann, Lauter and Nistor. These are a large class of noncompact complete (Riemannian) manifolds well behaved for the study of index theory on noncompact spaces. Their geometric structure is described by a Lie algebra of vector fields on a suitable compactification with corners. Equivalently by a Lie algebroid over the compactification. In this talk we will present the main geometrical features of Lie manifolds. In particular we will explain how the theory of connections and their associated geodesic flow on Lie algebroids leads to the proof that every Lie manifold has uniformly positive injectivity radius, a result recently obtained in collaboration with G. De Philippis and N. Gigli.

Presenter: ANTONINI, Paolo