

Ricci negative solvmanifolds and their nilradicals

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In the homogeneous case, the only curvature behavior that is far from understood is negative Ricci curvature. In this talk, we will focus on the special case of solvable Lie groups with a left-invariant metric. We will give several examples that indicate how hard it is to describe the nilradicals of solvable Lie algebras admitting a Ricci negative metric. Also, we give a characterization of derivations on a nilpotent Lie algebra that give rise to a Ricci negative solvable extension. This is joint work with Jorge Lauret (FaMAF - Universidad Nacional de Cordoba).