



Geometry Webinar AmSur/AmSul

Stability of Einstein metrics on homogeneous spaces of non-simple Lie groups

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Resumo: The study of the existence and classification of Einstein metrics on compact homogeneous spaces G/K varies significantly depending on whether the Lie group G is simple or not. Even for the standard metric, the classification of compact homogeneous spaces of the form $M=G/K$, where G is non-simple and the standard metric is Einstein, remains an open problem. The only known examples are the Ledger-Obata spaces, along with four infinite families and three isolated spaces found by Nikonorov and Rodionov in the 1990s. In the first part of the talk, I will present the structural conditions these examples must satisfy and explore the stability type of these standard Einstein metrics as critical points of the scalar curvature functional on the space of all unit volume, G -invariant metrics on M , this was joint work with Jorge Lauret. The second part will focus on homogeneous spaces of the form $M=H\times H/\Delta K$, where H/K is an irreducible symmetric space. I will examine the stability type of non-diagonal Einstein metrics found by Lauret and Will.