



北京理工大学

数学与统计学院学术报告

Greatest Ricci lower bounds of projective horospherical manifolds of Picard number one

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摘要: A horospherical variety is a normal G -variety such that a connected reductive algebraic group G acts with an open orbit isomorphic to a torus bundle over a rational homogeneous manifold. The projective horospherical manifolds of Picard number one are classified by Pasquier, and it turned out that the automorphism groups of all nonhomogeneous ones are non-reductive, which implies that they admit no Kahler-Einstein metrics. As a numerical measure of the extent to which a Fano manifold is close to be Kahler-Einstein, we compute the greatest Ricci lower bounds of projective horospherical manifolds of Picard number one using the barycenter of each moment polytope with respect to the Duistermaat-Heckman measure based on a recent work of Delcroix and Hultgren. In particular, the greatest Ricci lower bound of the odd symplectic Grassmannian $SGr(n, 2n+1)$ can be arbitrarily close to zero as n grows.

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