

Generalized Ricci flow on aligned homogeneous spaces

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Given a differentiable manifold M , a generalized metric is a pair (g, H) , where g is a Riemannian metric on M and H is a closed 3-form. The fixed points of the generalized Ricci flow are the so-called generalized Einstein metrics, which are pairs (g, H) such that H is g -harmonic and $\text{Rc}(g) = \frac{1}{4}H_g^2$. We consider two standard Einstein homogeneous spaces $M_i = G_i/K$, where G_i is a simple compact Lie group and K is a closed subgroup satisfying certain additional conditions, and we define the homogeneous space $M := G_1 \times G_2/\Delta K$. Recently, Lauret and Will proved the existence of a generalized Einstein metric (g_0, H_0) on each of these spaces. In this talk, we will first provide an overview of these concepts and prove that (g_0, H_0) is asymptotically stable for the generalized Ricci flow on M , among a subset of G -invariant metrics known as diagonals. Furthermore, if $G_1 = G_2$ the generalized Einstein metric is globally stable.

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