

On complex Riemannian Einstein foliations

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The aim of this talk is the study of Einstein condition for leafwise complex Riemannian metrics on manifolds endowed with complex foliations. Firstly, we make some general considerations about the geometry of complex Riemannian foliations (not necessarily leafwise holomorphic), we introduce a leafwise characteristic connection and we write Einstein equations with respect to it. As for instance, we investigate Einstein condition for the complex Riemannian foliation defined by the double vertical bundle of a Lagrange space. Next, using an one-to-one correspondence between leafwise holomorphic Riemannian metrics and leafwise anti-Kählerian metrics, we study the Einstein condition for a leafwise holomorphic Riemannian metric and the associated real leafwise anti-Kählerian metric on a manifold endowed with a complex foliation.

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