

Abstract

The Twisted Higher Harmonic Signature for Foliations

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We prove that the higher harmonic signature of an even dimensional oriented Riemannian foliation of a compact Riemannian manifold with coefficients in a leafwise $U(p,q)$ flat complex bundle is a leafwise homotopy invariant. We also prove the leafwise homotopy invariance of the twisted higher Betti classes. Consequences for the Novikov conjecture for foliations and for groups are investigated.