



MATH AMSUD project

On non-Kähler complex manifolds with trivial canonical bundle

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Abstract: A complex manifold of complex dimension n has holomorphically trivial canonical bundle if there exists a nowhere vanishing holomorphic $(n,0)$ -form. Recently, much interest has been devoted to studying compact complex manifolds with this property. For instance, any compact nilmanifold with an invariant complex structure has trivial canonical bundle, and it is not Kähler unless it is a torus. In this talk we will provide new examples of this kind of complex manifolds: first, among solvmanifolds and second, among complex manifolds obtained as the product of two normal almost contact manifolds. Joint work with M. Origlia and A. Tolcachier.