

## Results

[1] T. Noda, Reduction of locally conformal symplectic manifolds with examples of non-Kähler manifolds, *Tsukuba J. Math.* Vol.28(2004), 127-136

In this paper, we give a generalization of Marsden-Weinstein reduction for symplectic manifolds to locally conformal symplectic manifolds(: A pair  $(M, \Omega)$  of a  $C^\infty$ -manifold  $M$  and a nondegenerate 2-form  $\omega$  on  $M$  such that there exists a closed 1-form  $\omega$  on  $M$  satisfying  $d\Omega = \omega \wedge \Omega$ ). Especially, in the case where  $(M, \Omega)$  is a locally conformal Kähler manifold, the reduction space is a locally conformal Kähler manifold. Applying this result to Hopf manifolds, we obtain non-Kähler manifolds in general dimension and compute its cohomology rings.

[2] T. Noda and M. Oda, Laplacian Comparison and Sub-mean-value Theorem for Multiplier Hermitian Manifolds, *J. Math. Soc. Japan*, Vol 56, no. 4(2004), 1211-1219

Let  $(M^n, J, g)$  be a Kähler manifold and let  $\tilde{g} = e^{-\psi/n}g$  be a multiplier Hermitian metric on  $M$  (i.e.  $\psi$  is the Hamiltonian function of a holomorphic vector field on  $M$ ). In this paper, we prove a Laplacian comparison theorem and sub-mean value theorem for multiplier Hermitian manifolds. In general, a metric conformal to a Kähler metric has torsion and good results cannot be expected. However in multiplier Hermitian case, the Ricci curvature can be controlled under suitable conditions because the conformal factor is a Hamiltonian of a holomorphic vector field.

[3] K. Ichikawa and T. Noda, Stability of foliations with complex leaves on locally conformal Kähler manifolds, *math.DG/0501543*

Kamber and Tondeur studied harmonicity for foliations on Riemannian manifolds. In this paper we give sufficient conditions that harmonic foliations are stable. The main result is “Harmonic foliations on compact locally conformal Kähler manifolds with bundle-like metric foliated by complex submanifolds are stable”. We also obtain “The canonical foliations on compact Vaisman manifolds are stable” and “The foliations on compact Kähler manifolds with a bundle-like metric foliated by complex submanifolds are stable.” as corollaries.