Kobayashi’s Conjecture for HyperKähler Manifolds.

Prof. Ljudmila Kamenova (Stony Brook University)

Abstract

The Kobayashi pseudometric on a complex manifold $M$ is the maximal pseudometric such that any holomorphic map from the Poincare disk to $M$ is distance-decreasing. Kobayashi has conjectured that this pseudometric vanishes on Calabi-Yau manifolds. Using ergodicity of complex structures, we prove this conjecture for any hyperkaehler manifold that admits a deformation with a Lagrangian fibration, and its Picard rank is not maximal. We shall discuss the proof of Kobayashi’s conjecture for K3 surfaces and for certain hyperkaehler manifolds. These results are joint with S. Lu and M. Verbitsky.

Wednesday, 23 October 2013
3:00 pm
Notice special time!
Smith Hall 204
Tea and refreshments will be served at 2:45pm.

http://math.newark.rutgers.edu/~xiaowwan/Colloquium/