

COLLOQUIUM

University of Notre Dame
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Will give a lecture entitled
Kaehler-Einstein metrics on toric varieties

On
Monday, May 2, 2011

at 4:15 PM in Room 117 Hayes-Healy Hall

Abstract:

The existence of Kaehler-Einstein metrics on Fano manifolds is related to solving certain complex Monge-Ampere equation. In general, there will be some obstructions to solve the equation. In case of complex surfaces, Tian's theorem tells us that there exists a Kaehler-Einstein metric if and only if the automorphisms group on fano surfaces is reductive. For higher dimensional Fano manifolds, there is a famous Yau-Tian-Donaldson's conjecture which says that the existence should be related to some geometric stabilities. In this talk, I will discuss Kaehler-Einstein metrics on toric varieties in the smooth case or in the orbifold case. We show that the existence will be related to the vanishing of Futaki-invariant.