



Mathematics Colloquium

K-stability of cubic threefolds

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Abstract

We prove the K-moduli space of cubic threefolds is identical to their GIT moduli. More precisely, the K-(semi,poly)-stability of cubic threefolds coincide to the corresponding GIT stabilities, which could be explicitly calculated. In particular, this implies that all smooth cubic threefolds admit Kähler-Einstein metric as well as provides a precise list of singular KE ones. To achieve this, the main new ingredient is an estimate in dimension three of the normalized volumes of kawamata log terminal singularities introduced by Chi Li. This is a joint work with Chenyang Xu.

Tuesday, 19 September 2017, 4pm

Smith Hall 204

Tea and refreshments will be served at 3:45pm.