



DEPARTMENT OF MATHEMATICS AND COMPUTER SCIENCE

Colloquium

MODULI OF UNIFORMLY K-STABLE FANO VARIETIES

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ABSTRACT

Fano manifolds are complex projective manifolds with positive first Chern class. Since their algebraic counterparts, Fano varieties, form one of the three “building blocks” of algebraic varieties in the sense of birational geometry, it is important to construct moduli spaces that parameterize such objects.

In order to have well behaved moduli spaces for Fano varieties, it seems natural to restrict oneself to Fano varieties that are K-stable. Note that K-stability is an algebraic notion that characterizes when a Fano manifold admits a Kähler-Einstein metric. After surveying past results on the existence of moduli spaces for K-stable Fano varieties, I will discuss recent progress on constructing such moduli spaces algebraically. These results are based on joint works with Yuchen Liu and Chenyang Xu.

Wednesday, 31 October 2018

4:00 pm

Smith Hall 204

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

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