Ampleness of the CM Line Bundle on the Moduli Space of Varieties of General Type.

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Abstract

Moduli spaces are indispensable objects of the classification theory of algebraic varieties. They are algebraic varieties, the points of which are in algebraic one-to-one correspondence with varieties in a fixed class. For varieties of general type, which form the largest class of varieties that admit a moduli classification, the corresponding compact moduli space is called the moduli of KSBA stable varieties, after Kollr, Shepherd-Barron and Alexeev. This space in dimension one specializes to the widely investigated compact moduli space of stable curves. I present a joint work with Chenyang Xu confirming a conjecture on the ampleness of the CM line bundle on the moduli space of KSBA varieties. This line bundle originates from differential geometry, from the theory of Kahler-Einstein metrics, and earlier was known to be ample on the open locus parametrizing smooth varieties.

Wednesday, 15 April 2015
4:00 pm
Smith Hall 204
Tea and refreshments will be served at 3:45pm.

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