

Harvard-M.I.T. Algebraic Geometry Seminar

VOLUMES OF LINE BUNDLES AND CONVEX BODIES

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While ample divisors on a projective variety satisfy many beautiful properties that render their behavior particularly tractable, it was traditionally believed that arbitrary effective divisors are mired in pathology. However it has recently become clear that a surprising amount of the classical picture goes through in general, provided that one works in an asymptotic setting. At the same time, many open questions remain.

In the first part of the talk I will give a general introduction to this circle of ideas, focusing on the volume of line bundles. This is an invariant that encodes the rate of growth of multiples of an effective divisor. Then I will describe some work in progress with Mustata involving a construction, essentially due to Okounkov, that relates this invariant to the volume (in the classical sense) of a convex body.

Tuesday, February 28th

3:00 p.m.

MIT Room 2-190

<http://www-math.mit.edu/ags/>