Queen's Algebraic Geometry
— Seminar —

Asymptotic Invariants in Algebraic Geometry

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Abstract

We will take a closer look at two asymptotic invariants associated to a Cartier divisor, which came to prominence in recent years. First, one can define the volume of a divisor, measuring the rate of growth of sections of powers of the divisor. Second, following Lazarsfeld and Mustata, one can associate a convex body to a Cartier divisor, called the Okounkov body. In this talk I will start by giving a brief exposition of the construction of both invariants, with the main focus of presenting the connections between the two. Then my aim is to answer the question of how many convex bodies appear as Okounkov bodies of Cartier divisors and sketch a few interesting questions arising out of this work. If time permits, I will try to show the importance of Okounkov bodies when one wants to work in the setup of non-complete multigraded linear series.

Monday 13 September 2010
16:30 – 17:30
319 Jeffery Hall