Mathematics, Statistics, and Computer Science   **@ UIC**

Algebraic Geometry Seminar

Kodaira vanishing for q-ample divisors

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Abstract: Line bundles sharing some but not all the good properties of ampleness have been investigated for quite some time, here we will focus on the cohomological point of view. Building on earlier work of Sommese and Demailly-Peternell-Schneider, Totaro came up with a very satisfactory theory of line bundles with partially vanishing higher cohomology to which we will refer as q-ample.

As it turns out, q-ampleness gives rise to interesting applications, including a useful concept of ampleness for subvarieties, where among others, one retains a Lefschetz hyperplane theorem (as showed by Ottem). The main focus of this talk will be a generalization of Kodaira vanishing to q-ample line bundles.

Wednesday, October 22 at 4:00 PM in SEO 427