Literature Seminar

College Seminar
Winter 2015
Wednesdays 13.15-15.00 in 1.023

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The basic idea for this semester is to choose papers that:

(1) Have broad appeal with a clean, interesting result;
(2) Can be reasonably explained in 2 lectures starting from basics (i.e. not requiring any prior specialized knowledge).

We'll then have two lectures for each paper (two people per paper) giving background, explaining the proof, and giving applications. We have a pre-approved list of papers, but are welcome to suggestions. If you have a particular paper or a subject in mind, mention it to someone and we'll try to come up with an appropriate paper.

1. Pre-approved Papers

(1) W. Fulton and R. Lazarsfeld, On the connectedness of degeneracy loci and special divisors.
(2) J. Kollár, Nonrational Hypersurfaces.
(3) S. Mori and H. Sumihiro, On Hartshorne's Conjecture.
(4) I. Reider, Vector Bundles of Rank 2 and Linear Systems on Algebraic Surfaces.
(5) D. Mumford, Theta characteristics of an algebraic curve.
(6) C. Voisin, Theoreme de Torelli pour les cubiques de $\mathbb{P}^5$ (and A. Beauville and R. Donagi, La variete des droites d'une hypersurface cubique de dimension 4).
(7) L. Göttsche, The Betti numbers of the Hilbert scheme of points on a smooth projective surface.
(8) T. Graber, J. Harris, and J. Starr, Families of rationally connected varieties.
(9) M. Green and R. Lazarsfeld, Deformation theory, generic vanishing theorems, and some conjectures of Enriques, Catanese and Beauville.