

Graduate Student Colloquium

Counting lines on a cubic surface

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Abstract: A classical problem in algebraic geometry is to study the space of algebraic subspaces of an algebraic space. A cubic surface is a projective variety studied in algebraic geometry. It is an algebraic surface in three-dimensional projective space defined by a single algebraic equations of degree 3. One of the oldest and most beautiful statements in algebraic geometry is that on a smooth cubic surface there are exactly 27 lines. We begin with the classical approach, in a terms of cubic forms, and then proceed to the more modern approach, in which the cubic surface is considered as a blow up of the projective planes in 6 points.

Food will be provided.

Monday, October 12 at 4:00 PM in BH 209
