



Speaker: Luigi Lombardi
University of Illinois at Chicago

Tuesday, April 16, 2013
3:00 PM
258 Hurley Hall

Title: Comparison of cohomological support loci under derived equivalence

Abstract:

I will talk about equivalences of derived categories of coherent sheaves on smooth projective irregular varieties, i.e. those having non vanishing first Betti number. Fundamental tools in the study of the geometry of irregular varieties are the cohomological support loci introduced by Green and Lazarsfeld. We will study the behaviour of these loci under derived equivalence as suggested by a conjecture of Popa. In particular, by relating this problem to the conjectured derived invariance of Hodge numbers, I will verify Popa's conjecture in particular cases and present a few consequences regarding the derived invariance of numerical quantities and geometric properties of special classes of irregular varieties.