K-Theory, Quadratic Forms and Number Theory Seminar

Title: On the compressibility of quasilinear hypersurfaces

Speaker: Stephen Scully (University of Nottingham)

Date: Thu 16th February 2012 at 4:00PM

Location: Mathematical Sciences Seminar Room (Ag 1.01)

Abstract: An algebraic variety is called incompressible if every rational endomorphism of itself is dominant. Compressibility problems have long been of interest in the study of projective homogeneous varieties for actions of automorphism groups of various classical algebraic structures over arbitrary fields. Recent work on the construction and study of certain incompressible varieties for the proof of the Bloch-Kato conjecture has yielded a wealth of new techniques with which to approach problems of this sort. In the case of quadric hypersurfaces, many results have been obtained using a range of new and classical methods. I will describe analogues of some of these results for a large class of nowhere smooth varieties over fields of positive characteristic - so called quasilinear hypersurfaces.