Speaker: Jesus Martinez-Garcia
Johns Hopkins University

Thursday, February 26, 2015
2:00 PM
125 Hayes-Healy Hall

Title: On the moduli space of cubic surfaces and their anticanonical divisors

Abstract:

We study variations of GIT quotients of log pairs (X,D) where X is a hypersurface of some fixed degree and D is a hyperplane section. GIT is known to provide a finite number of possible compactifications of such pairs, depending on one parameter. Any two such compactifications are related by birational transformations. We describe an algorithm to study the stability of the Hilbert scheme of these pairs, and apply our algorithm to the case of cubic surfaces. Finally, we relate this compactifications with the (conjectural) moduli space of log K-semistable pairs. This is work in progress with Patricio Gallardo (University of Georgia).