Algebra and Geometry Seminar

Speaker: Lauren Cranton Heller (University of California, Berkeley)

Title: Characterizing multigraded regularity on products of projective spaces

Abstract: Eisenbud and Goto described the Castelnuovo-Mumford regularity of a sheaf on projective space in terms of three different properties of the corresponding graded module: its betti numbers, its local cohomology, and its truncations. For the multigraded generalization of regularity defined by Maclagan and Smith, these three conditions are no longer equivalent. I will characterize each of them for sheaves on products of projective spaces.