

Speaker: Laura Ghezzi (CUNY)

Title: Linear Syzygies in Minimal Free Resolutions of Algebraic Varieties.

Abstract: Minimal free resolutions are a very convenient tool in Commutative Algebra and Algebraic Geometry. The main idea is that we “approximate” the coordinate ring of an algebraic variety with free modules over a polynomial ring, and therefore we can study the variety by successively solving systems of linear equations. In this talk, after reviewing the necessary background, I will focus on a conjecture, which I recently solved, about the presence of a long strand of linear syzygies (i.e., columns of linear entries in the matrices) in the resolution of a set of distinct points in the projective space.