



Special Colloquium



Dr. Juliette Bruce
Brown University

Syzygies Beyond Projective Space

Abstract: A classical perspective originating with Hilbert and continuing through the modern work of Lazarsfeld, Voisin, and many others is that homological algebra over the standard graded polynomial ring provides many powerful tools for studying the geometry of varieties in projective space. Analogously one may hope for similar tools over multigraded polynomial rings to study the geometry of varieties embedded in other (toric) varieties. I will discuss recent work developing such tools, as well as some of the subtleties that arise when moving to toric varieties beyond projective space.

Keywords: Algebra, Geometry, Polynomials, Syzygies.

Thursday, Feb. 8, 12:05 – 12:50 pm in 1-309