Geproci sets: a new perspective on classification in algebraic geometry

Brian Harbourne
University of Nebraska-Lincoln (USA)

The classification of geproci subsets of projective space is a special instance of carrying an inverse scattering perspective over to a classification problem in algebraic geometry. A geproci set is a finite set of points in projective space whose image, when projected from a general point to a hyperplane, is a complete intersection.
This concept turns out to have not-yet-fully understood connections to combinatorics and representation theory, and possibly even quantum mechanics. The notion of a geproci set is only a few years old. This talk will introduce the concept, establish some basic facts, show some connections to combinatorics and representation theory, and state some open problems.