

The central curve of a linear program

Date Tuesday, March 5

Time 3 pm

Location 303 Mudd

Abstract: The central curve of a linear program is an algebraic curve specified by a hyperplane arrangement and a cost vector. This curve is the union of the various central paths for minimizing or maximizing the cost function over any region in this hyperplane arrangement. I will discuss the algebraic properties of this curve and its beautiful global geometry, both of which are controlled by the corresponding matroid of the hyperplane arrangement.