

1116-14-1607 **Mario Kummer** and **Cynthia Vinzant*** (clvinzan@ncsu.edu). *Reciprocal linear spaces and their Chow forms.*

A reciprocal linear space is the image of a linear space under coordinate-wise inversion. This nice algebraic variety appears in many contexts and its structure is governed by the combinatorics of the underlying hyperplane arrangement. A reciprocal linear space is also an example of a hyperbolic variety, meaning that there is a family of linear spaces all of whose intersections with it are real. This special real structure is witnessed by a determinantal representation of its Chow form in the Grassmannian. In this talk, I will introduce reciprocal linear spaces and discuss the relation of their algebraic properties to their combinatorial and real structure. (Received September 20, 2015)