

1117-14-263

Dustin Cartwright*, Department of Mathematics, 227 Ayres Hall, Knoxville, TN 37996-1320. *A quantitative version of Mnëv's theorem.*

A matroid is a combinatorial structure recording all incidences between vectors in a fixed vector configuration and the linear spaces spanned by subsets of vectors. Mnëv's theorem says that realization spaces of matroids can be as complicated as arbitrary systems of polynomial equations, in terms of singularities and in terms of finding rational solutions. I will give some background on this theorem and then talk about a version of Mnëv's theorem over the integers, for which the size of the matroid can be bounded in an explicit way. (Received January 15, 2016)