Domination and Irredundance for Independence Systems

Drew J. Lipman, Clemson University

In 1978 Cockayne, et al. proved the classical domination inequality chain. Since then several variations on this inequality chain have been produced using different notions of independence, domination and irredundance. In this talk I will generalize several of these results by proving the generalized domination inequality chain on independence systems. This generalized inequality chain produces interesting results for special classes of matroids, as well as connections to geometry.

Keywords: domination inequality, independence systems, matroids