

1145-05-1427

Ahmad Abdi and **Gerard Cornuejols***, gc0v@andrew.cmu.edu, and **Dabeen Lee**. *Intersecting restrictions in clutters*. Preliminary report.

A clutter is *intersecting* if the members do not have a common element yet every two members intersect. It has been conjectured that for clutters without an intersecting minor, total primal integrality and total dual integrality of the corresponding set covering linear system are equivalent. In this talk, we present a polynomial characterization of clutters without an intersecting minor. One important class of intersecting clutters comes from projective planes, namely the *deltas*, while another comes from graphs, namely the *blockers of extended odd holes*. Using similar techniques, we will provide a polynomial algorithm for finding a delta or the blocker of an extended odd hole minor. This result is quite surprising as finding a delta or an extended odd hole minor is NP-hard. (Received September 21, 2018)