
PETER NELSON, University of Waterloo

Induced binary submatroids

A binary matroid M can be thought of as a set X of nonzero vectors in an 'ambient' vector space V over the field $\text{GF}(2)$. Intersecting X with a subspace W of V gives a smaller matroid N with ambient space W ; we say that N is an induced submatroid of M . This gives a rich partial order on binary matroids that is analogous to the induced subgraph order, having its own natural structural and extremal questions with interesting answers. We discuss some new results in this area that concern matroidal analogues of chromatic number, chi-boundedness and claw-free graphs. No knowledge of matroid theory will be assumed.