

# Chordal matroids arising from generalized parallel connections

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In 1961, Dirac showed that chordal graphs are exactly the graphs that can be constructed from complete graphs by a sequence of clique-sums. By analogy with Dirac's result, we define the class of  $GF(q)$ -chordal matroids as those matroids that can be constructed from projective geometries over  $GF(q)$  by a sequence of generalized parallel connections across projective geometries over  $GF(q)$ . We characterize the class of such matroids in terms of forbidden induced minors for all powers of  $q$  and also in terms of forbidden flats whenever  $q$  is prime. This talk is based on joint work with James Oxley.

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