

## The cyclic flats of L-polymatroids

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In recent years,  $q$ -polymatroids have drawn interest because of their connection with rank-metric codes. For a special class of  $q$ -polymatroids called  $q$ -matroids, the fundamental notion of a cyclic flat has been developed as a way to identify the key structural features of a  $q$ -matroid. In this talk, we will see a generalisation of the definition of a cyclic flat that can apply to  $q$ -polymatroids, as well as a further generalisation, L-polymatroids. The cyclic flats of an L-polymatroid is essentially a reduction of the data of an L-polymatroid such that the L-polymatroid can be retrieved from its cyclic flats. As such, in matroid theory, cyclic flats have been used to characterise numerous invariants.

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