

## On uniquely representable $k$ -circular matroids

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In 1932 Hassler Whitney proved, in particular, that every 3-connected graph is a unique representative of its cycle matroid. From the results of Donald K. Wagner in 1985 it follows that every 3-connected graph, except for  $K_4$ , is a unique representative of its bicircular matroid. For a given  $k \in \mathbb{N}$ , we introduce the notion of the  $k$ -circular matroid of a graph and provide a criterion for a 3-connected graph to be a unique representative of its  $k$ -circular matroid. This criterion is a natural extension of the above mentioned Whitney and Wagner results.

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