A Deletion-Contraction Theorem for Internally 4-connected Graphs

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Tutte’s Wheels Theorem asserts that, for a 3-connected graph $G$, there is an edge $e$ in $G$ such that the deletion or contraction of $e$ from $G$ is 3-connected and simple unless $G$ is a wheel. In this talk, we present a similar result for internally 4-connected graphs. This theorem is a special case of a more general result for binary matroids.

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