On decomposing 3-**uniform hypergraphs into loose** m-**cycles**

A *loose m-cycle* is a 3-uniform hypergraph with vertex set $\{v_1, v_2, \ldots, v_{2m}\}$ edge set $\{\{v_1, v_2, v_3\}, \{v_3, v_4, v_5\}, \ldots, \{v_{2m-1}, v_{2m}, v_1\}\}$. We consider the problem of decomposing $K_v^{(3)}$, the complete 3-uniform hypergraph of order v, into edge-disjoint loose m-cycles. We settle the problem in the case $m = 4$.

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