

Decomposing Complete Graphs into Non-Lobsters With 12 or Fewer Edges

Bryan Freyberg, Seth Johnson*, Emerson Rock*, University of Minnesota Duluth

A tree is a caterpillar if the removal of its leaves results in a path. A tree is a lobster if the removal of its leaves results in a caterpillar. For a graph G , a G -decomposition of the complete graph K_n is a set of edge-disjoint copies of G that partition the edge set of K_n . It is known that every small tree T which is a caterpillar or a lobster decomposes K_n whenever $n \equiv 0, 1 \pmod{|E(T)|}$. We prove a similar result for the non-lobster trees with 12 edges or less.

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