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The ascending subgraph decomposition problem. (In English)

Combinatorics, graph theory, and computing, Proc. 18th Southeast. Conf., Boca Raton/Fl. 1987, Congr. Numerantium 58, 7-14 (1987).

[For the entire collection see Zbl 638.00009.]

Let G be a graph of positive size q , and let n be that positive integer for which $\binom{n+1}{2} \leq q < \binom{n+2}{2}$. Then G is said to have an ascending subgraph decomposition if G can be decomposed into n subgraphs G_1, G_2, \dots, G_n without isolated vertices such that G_i is isomorphic to a proper subgraph of G_{i+1} for $1 \leq i \leq n - 1$. Several classes of graphs possessing an ascending subgraph decomposition are described.

Classification:

05C70 Factorization, etc.

Keywords:

ascending subgraph decomposition