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The s -Hamiltonian index. (English) [Zbl 1223.05166](#)
Discrete Math. 308, No. 20, 4779-4785 (2008).

Summary: For integers k, s with $0 \leq k \leq s \leq |V(G)| - 3$, a graph G is called s -Hamiltonian if the removal of any k vertices results in a Hamiltonian graph. For a simple connected graph that is not a path, a cycle or a $K_{1,3}$ and an integer $s \geq 0$, we define $h_s(G) = \min\{m : L^m(G) \text{ is } s\text{-Hamiltonian}\}$ and $l(G) = \max\{m : G \text{ has a divalent path of length } m \text{ that is not both of length } 2 \text{ and in a } K_3\}$, where a divalent path in G is a non-closed path in G whose internal vertices have degree 2 in G . We prove that $h_s(G) \leq l(G) + s + 1$.

MSC:

05C45 Eulerian and Hamiltonian graphs

Cited in **3** Documents

Keywords:

s -Hamiltonian graph; s -Hamiltonian index; divalent path; spanning Eulerian subgraph; dominating Eulerian subgraph

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