Abstract

A Connected graph G is a Hamiltonian laceable if there exists in G a Hamiltonian path between every pair of vertices in G at an odd distance. G is a Hamiltonian-t-Laceable (Hamiltonian-t*-Laceable) if there exists in G a Hamiltonian path between every pair (at least one pair) of vertices at distance at most t in G. In this paper we explore the Hamiltonian-t*-laceability number of graph L (G) i.e., Line Graph of G and also explore Hamiltonian-t*-Laceable of Line Graphs of Sunlet graph, Helm graph and Gear graph for t=1,2 and 3.

**Index Terms**

Computer Science

Applied Mathematics

**Keywords**

Connected graph  Line graph  Sun let graph  Helm graph  Wheel graph  Gear graph and Hamiltonian-t-laceable graph.