Hamiltonian Laceability in Cubic Bipartite Graphs

E. Cheng, Oakland University, C.-N. Hung, Da-Yeh University, L.-H. Hsu, Providence University, and U. Sharma*, Rochester High School

A connected bipartite graph is Hamiltonian-laceable if there exists a Hamiltonian path between any two vertices in opposite bipartition subsets. The edge join (3 join) provides a natural way of joining two *cubic* bipartite graphs together. We study in particular Hamiltonian-laceablity and related properties of graphs that are the edge join of cubic bipartite graphs. Understanding the conditions necessary for an edge join of graphs to be Hamiltonian-laceable allows us to construct many Hamiltonian-laceable graphs with various classes of existing graphs.

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