

**Meeting:** 1003, Atlanta, Georgia, SS 24A, AMS Special Session on Design Theory and Graph Theory, I

1003-05-1219      **Ralph Faudree** and **Ronald J Gould\*** (rg@mathcs.emory.edu), Dept. of Math. and CS,  
Atlanta, GA 30322, and **Michael S Jacobson**. *On 2-Factor Hamiltonian Graphs*.

In this talk we consider the question of determining the maximum number of edges in a hamiltonian graph of order  $n$  that contains no 2-factor of another type. By this we mean every 2-factor of the graph is isomorphic with the hamiltonian cycle. Such graphs are termed 2-factor hamiltonian graphs. We obtain exact results for both bipartite graphs, and general graphs, and we further identify extremal graphs. In some cases the extremal graphs are unique and in others they are not. (Received October 04, 2004)