

COMBINATORICS
SEMINAR

Edges in 2-factor Isomorphic Graphs

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Abstract: A graph G is considered 2-factor isomorphic if it contains a 2-factor F , and all other 2-factors are isomorphic to F . In other words, if F is viewed as a multiset of the unlabeled cycles it contains, then all other 2-factors may be viewed as the same multiset. Faudree, Gould, and Jacobson calculated the maximum number of edges for 2-factor hamiltonian graphs as a function of $|V(G)|$. In this talk I will generalize this result to any chosen 2-factor, any 2-factor with a fixed number of cycles, and any unspecified 2-factor. Constructions of graphs that attain these bounds arise naturally from the calculations.

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