Combinatorics Seminar

Wednesday, Mar. 11, 2009

1:00 pm in Hume 331

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Cycles and subsets of vertices in graphs

ABSTRACT

A graph is hamiltonian if it has a cycle containing all vertices of the graph. Beginning from a result of Dirac obtained in 1952, many results on sufficient conditions that relate to degree sum and neighborhood of all vertices, for hamiltonicity, have been obtained. As two generalizations of hamiltonian problem, we study long cycles and cyclable sets of vertices under conditions relating only vertices in a subset of vertices. A subset of vertices S is cyclable if there is a cycle C containing all vertices of S. Clearly a graph is hamiltonian if the set of all its vertices is cyclable. In this talk, we introduce some results obtained in recent years.