

1112-05-219

**Abdollah Khodkar\*** (akhodkar@westga.edu), University of West Georgia, 1601 Maple Street, Carrollton, GA 30118. *Pancyclic, Bipancyclic and Oddly Bipancyclic Graphs.*

A graph with  $n$  vertices is **pancyclic** if, for every  $k$  in the range  $3 \leq k \leq n$ , it contains a cycle of length  $k$ . Pancyclic graphs, which were first introduced by Bondy in 1971, are a generalization of Hamiltonian graphs, which have a cycle of the maximum possible length.

A bipartite graph with  $n$  vertices,  $n$  even, is said to be **bipancyclic** if it contains cycles of all even lengths from 4 to  $n$ . Similarly, a bipartite graph with  $n$  vertices,  $n$  odd, is said to be **oddly bipancyclic** if it contains cycles of all even lengths from 4 to  $n - 1$ .

A pancyclic graph is called **uniquely pancyclic** if it contains precisely one cycle of each length. Uniquely bipancyclic graphs and uniquely oddly bipancyclic graphs are defined similarly. In this talk we will learn more about this topic.

(Received August 04, 2015)