Even Factor of 2-Edge-Connected Graphs

Nastaran Haghparast
Amirkabir University of Technology
nhaghparast@aut.ac.ir

(joint work with Dariush Kiani)

By Petersen's theorem every birdgless cubic graph G has a 2-factor. By a strengthening of Petersen's theorem this graph has a 2-factor containing two arbitrary prescribed edges. Fleischner generalised Petersen's theorem and proved that every bridgeless graph with $\delta(G) \geq 3$ has an even factor. Jackson and Yoshimoto showed that every bridgeless simple graph with $\delta(G) \geq 3$ has an even factor in which every component has order at least four. In this paper we extend these results.

MSC2000: 05C70.

Keywords: Even Factor, 2-Factor, 2-Edge-Connected.