On 2-Factors with Prescribed Properties in a Bipartite Graph

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摘要   Liu and Yan gave the degree condition for a balanced bipartite graph $G=(V_1,V_2;E)$ to have k vertex-disjoint quadrilaterals containing any given k independent edges $e_1,\ldots, e_k$ of G, respectively. They also conjectured that for any k independent edges $e_1,\ldots, e_k$ of G, G has a 2-factor with k cycles $C_1,C_2,\ldots, C_k$ with respect to $\{e_1,e_2,\ldots, e_k\}$ such that $k-1$ of them are quadrilaterals. In this paper, we prove this conjecture.

关键词   Bipartite graph   Vertex-disjoint   Quadrilateral   2-Factor

分类号   05C38

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