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Bipartite graphs decomposable into closed trails

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Abstract

Let $G = K_{a,b}$, where a, b are even or $G = K_{a,a} - M_{2a}$, where $a \geq 1$ is an odd integer and M_{2a} is a perfect matching in $K_{a,a}$. It has been shown ([3,4]) that G is arbitrarily decomposable into closed trails. Billington asked if the graf $K_{r,s} - F$, where s, r are odd and F is a (smallest possible) spanning subgraph of odd degree, is arbitrarily decomposable into closed trails ([2]).

In this article we answer the question in the affirmative.

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