Restricted triangulation on circulant graphs

ABSTRACT

The restricted triangulation existence problem on a given graph decides whether there exists a triangulation on the graph's vertex set that is restricted with respect to its edge set. Let $G = C(n, S)$ be a circulant graph on n vertices with jump value set S. We consider the restricted triangulation existence problem for G. We determine necessary and sufficient conditions on S for which G admitting a restricted triangulation. We characterize a set of jump values $S(n)$ that has the smallest cardinality with $C(n, S(n))$ admits a restricted triangulation. We present the measure of non-triangulability of $K_n - G$ for a given G.

Keyword: Triangulation; Circulant graph