ON THE RAINBOW CONNECTIVITY OF DIGRAPHS

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An arc-coloured digraph $D$ is said to be rainbow connected if for every two vertices $u$ and $v$ there is an $uv$-path whose all arcs have different colours. The minimum number of colours required to make the digraph rainbow connected is called the rainbow connectivity number of $D$, denoted $rc(D)$. This concept was first presented for unoriented graphs by Chartrand et al. in [2], and it was extended to oriented graphs by Dorbec et al. in [3].

In this talk we present our study on the rainbow connectivity number of circulant digraphs and we will provide sharp lower and upper bounds for any cactus digraph. Also, we will established bounds for this parameter under some operations on digraphs.

Keywords: rainbow connectivity, digraph.

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References


