

THE EDIT DISTANCE FUNCTION OF SOME GRAPHS

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Abstract

The edit distance function of a hereditary property $\mathcal{H}$ is the asymptotically largest edit distance between a graph of density $p \in [0, 1]$ and $\mathcal{H}$. Denote by P_n and C_n the path graph of order n and the cycle graph of order n , respectively. Let C_{2n}^* be the cycle graph C_{2n} with a diagonal, and $\widetilde{C}_n$ be the graph with vertex set $\{v_0, v_1, \dots, v_{n-1}\}$ and $E(\widetilde{C}_n) = E(C_n) \cup \{v_0v_2\}$. Marchant and Thomason determined the edit distance function of C_6^* . Peck studied the edit distance function of C_n , while Berikkyzy *et al.* studied the edit distance of powers of cycles. In this paper, by using the methods of Peck and Martin, we determine the edit distance function of C_8^* , $\widetilde{C}_n$ and P_n , respectively.

Keywords: edit distance, colored regularity graphs, hereditary property, clique spectrum.

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