FACTORIZATION OF PERMUTATIONS

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Abstract. The problem of factoring a permutation as a product of special types of transpositions, namely, those transpositions involving two positions with bounded distances, is considered. In particular, the minimum number, $\delta$, such that every permutation can be factored into no more than $\delta$ special transpositions is investigated. This study is related to sorting algorithms, Cayley graphs, and genomics.

Key words. Bubble sort, Cayley graph, Permutation, Symmetric group, Genomics.

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