

MINIMUM IDENTIFYING CODES IN CIRCULAR GRIDS OF GIVEN HEIGHT

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Given an integer h , we present an algorithm which finds a formula that allows to know, in a constant number of elementary operations, a minimum identifying code on circular grids of height h and length l , for all l .

This algorithm is a particular case of a generic algorithm we developed for address optimization problems on fasciagraphs and rotagraphs. A fasciagraph is a graph constituted by a structure which repeats itself along a path, a rotagraph is a graph constituted by a structure which repeats itself along a cycle. Hence these graphs generalize grids and circular grids, respectively.

We implemented this algorithm for a height 3, and furthermore, we used our results to compute the minimum density of an identifying code on the infinite band of height 3, which is lower than the previous best known bound.