

# ABSTRACT

<b>Research Title</b>	Monotone Clones of Strings
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I. G. Rosenberg has classified all maximal clones on a finite set in terms of six classes of finitary relations. It is known that every proper subclone is contained in a maximal one; but it is in general not easy to decide which maximal clones contains a given proper subclone. Some results published by Baker and Pixley implies that a clone containing a near unanimity function is finitely generated. J. Demotrovics and L. Ronyai showed a finite generating set of the monotone clones of fences and crowns and they proved that clones of all fences contain a majority function while the case of crowns is particularly interesting because they admit no order-preserving near unanimity function.

*We define a certain order sets known as strings and strings of lattices to be a generalization of fences. We study the monotone clones of the form  $\text{Clo}(\leq)$  of all order-preserving operations of a string of lattices. We investigate some properties of monotone clones of fences and strings such as the preservation of the distance function. This allow us see a maximal clone of strings and hence a maximal clone of a string of lattices; a clone of a central relation.*

Even it is mysterious to construct such relations, we show an explicit central relation of a string of lattices. We proved that the monotone clones of strings of lattices are finitely generated by showing that they contain a majority operation. Besides, we present an explicit finite generating set, the set of all binary ordered operations , on a string.