

VARIETIES AND HYPERVARIETIES OF ALGEBRAS AND  
NEW DISCRETE MATHEMATICAL FUNCTIONS

Yu. M. Movsisyan

Department of Mathematics and Mechanics, Yerevan State University

E-mail: *movsisyan@ysu.am*

It is commonly known that the free Boolean algebra on  $n$  free generators is isomorphic to the Boolean algebra of Boolean functions of  $n$  variables. The free bounded distributive lattice on  $n$  free generators is isomorphic to the bounded lattice of monotone Boolean functions of  $n$  variables. In this talk we present the varieties and hypervarieties of algebras with similar functional representations of free finitely generated algebras.

A number of open problems are formulated.