

# ON THE FREE DISTRIBUTIVE LATTICES

Nako Nachev

**Abstract.** *In this paper we consider the numbers of free distributive lattice with finite generators. This problem is very difficult. Let we denote with  $FDL(n)$  the numbers of elements of free distributive lattice with  $n$  generators. Then we have  $FDL(1) = 1$ ,  $FDL(2) = 4$  and  $FDL(3) = 18$ . Here we obtain  $FDL(4) = 166$ ,  $FDL(5) = 7669$  and  $FDL(6) > 1000000$ . Variable  $FDL(n)$  is always finite for every natural  $n$ .*

Nako Nachev<sup>1,\*</sup>

<sup>1</sup> Paisii Hilendarski University of Plovdiv,  
Faculty of Mathematics and Informatics,  
236 Bulgaria Blvd., 4003 Plovdiv, Bulgaria

