

1116-03-1869

Atila Prates Correia* (atila.correia@usp.br), Rua Dr. Tito Roberto Liberato 63,
Apartment 904, Aquarius, Sao Jose dos Campos, Sao Paulo 12246150, Brazil. *N-dimensional De Morgan Algebras and Further Applications.*

This article exhibits specific cases of two and three dimensional De Morgan algebras, their relative generalizations to any higher dimension (which are not De Morgan), their properties and some applications. An attentive reader shall realize its theorems are quite similar to those of the Boolean algebra. Indeed, the resulting sets and its operations presented in the first and third sections came out from a personal struggling to generalize the Godel's algebra, which is already an enlargement of the Boolean. In fact, if we set $n = 1$ in the addition and product definitions given below, they are exactly reduced to their suchlike Godel's versions. Nonetheless, the n -dimensional negation, when restricted to $n = 1$, is closer in meaning to the corresponding Fuzzy algebra version, that is to say, $\neg x = 1 - x$. In the second section, it is presented an application to a page rank algorithm based on the previous theoretical development. Although it does not work as a search tool, it can be used by all of them. At last, within the same application, it must be emphasized there is given a function which allows us to determine the efficiency of the Internet sharing behavior, either locally and globally. (Received September 21, 2015)