Editorial

This second issue devoted to MV-algebras contains recent new developments of this theory.

The paper of L. P. Belluce and myself deals with the "Orthogonal" decompositions of the set of prime ideals of an MV-algebra, endowed with the usual spectral topology. Some results are parallel to those already known for lattice-ordered groups, but the proofs are based strictly on MV-technology. The case semisimple has been particularly emphasized because semisimple MV-algebras represent the algebraic counterpart of Bold Fuzzy Set Theory.

R. Giuntini studies a generalization of the concept of MV-algebras, precisely the quantum MV-algebras, introduced in a previous paper of the same author, just to give a suitable algebraic structure to the class of all effects of any Hilbert space (the "quantum counterpart" of the unit interval). It is proved that the logic, based on weakly-linear quantum MV-algebras to which the effects of an Hilbert space give rise, is finitely axiomatizable.

MV-algebras and lattice-ordered Abelian groups with strong unit are categorically equivalent via a functor due to D. Mundici (J. Funct. Anal. 65 (1986) 15-63). G. Georgescu, F. Liguori and G. Martini use this functor to study convergent and Cauchy sequences in MV-algebras.

A. Filipoiu, G. Georgescu and A. Lettieri establish results about maximal MV-algebras, a class of algebras very close to those existing for rings and distributive lattices. This class of algebras is entirely characterized.

The conclusive paper of S. Ray proves that any complete and atomic Boolean algebra can be represented by an adequate family of its own triangular norms. The general representation theorem for Boolean algebras remains open as well for MV-algebras. This note is very interesting for fuzzy theorists since it is well known the enormous impact that triangular norms have in Fuzzy Set Theory.

I sincerely thank all the invited authors and the editorial staff of the journal for making possible these two special issues.

Salvatore Sessa
Associate Editor