HAKIM DUALITY FOR MV-ALGEBRAS

We develop the basic duality theory for mv-algebras along the lines of Hakim work on rings (as in R. Hartshorne, *Algebraic Geometry* Springer 1977), and as a particular case of the general categorical theory (as in M. Coste, *Localization, Spectra and Sheaf Representation*, Springer LNM 753). We can represent any mv-algebra as the global sections of a sheaf of mv-chains. The real interval [0, 1] is a mv-algebra, and an application of our results is the McNaughton theorem that says that any piecewise linear [0, 1]-valued function on $[0, 1]^n$ is globally given by a n-ary term of the theory. We shall not assume any knowledge on mv-algebras, and all the mv-algebra theory we shall need can be rapidly explained.