

Distributive dual p-algebras edit

Abbreviation: DdpAlg

Definition 1. A *distributive dual p-algebra* is a structure $\mathbf{L} = \langle L, \vee, 0, \wedge, 1, + \rangle$ such that

$\langle L, \vee, 0, \wedge, 1 \rangle$ is a bounded distributive lattices

x^+ is the *dual pseudocomplement* of x : $x^+ \leq y \iff x \vee y = 1$

Morphisms. Let \mathbf{L} and \mathbf{M} be distributive dual p-algebras. A morphism from \mathbf{L} to \mathbf{M} is a function $h : L \rightarrow M$ that is a homomorphism:

$h(x \vee y) = h(x) \vee h(y)$, $h(x \wedge y) = h(x) \wedge h(y)$, $h(0) = 0$, $h(1) = 1$, $h(x^+) = h(x)^+$

Basic Results.

Examples.

1.

Properties. (description)

Classtype	variety
Equational theory	decidable
Quasiequational theory	
First-order theory	
Congruence distributive	yes
Congruence modular	yes
Congruence n-permutable	
Congruence regular	
Congruence uniform	
Congruence extension property	yes
Definable principal congruences	
Equationally def. pr. cong.	
Amalgamation property	yes
Strong amalgamation property	
Epimorphisms are surjective	
Locally finite	
Residual size	

Finite Members. $f(n)$ = number of members of size n .

$$f(1) = 1$$

$$f(2) = 1$$

$$f(3) = 1$$

$$f(4) =$$

$$f(5) =$$

$$f(6) =$$

$$f(7) =$$

Subclasses.

Distributive double p-algebras

Superclasses.

Distributive lattices

REFERENCES

[1]