

Colimits and quotients of distributive lattices and similar structures

Aleš Pultr *

Frame congruences and resulting colimits in the category of frames (and similarly in the category of commutative quantales) are often very easy to handle due to the following two facts:

- (1) the completeness and the nature of congruence lattices yields a canonical representation of congruence classes by their largest (“saturated”) elements, and
- (2) the Heyting operation provides a handy computation tool.

In general distributive lattices, σ -frames, q -lattices, etc., one has neither. Nevertheless one can exploit the frame (resp. quantale) techniques for these more general structures to obtain transparent constructions in the respective categories as well. For instance we can gain more insight into coproducts and easily deduce the basic characterization theorem.

*Based on a joint work with R. N. Ball.