Duality for sheaf representations and related decompositions of distributive lattice-ordered algebras

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The main content of this talk concerns joint work with Sam van Gool providing a dual characterisation of c-soft sheaf representations of distributive lattice ordered algebras over stably compact spaces. However, as this is a highly technical subject, the talk will proceed from an analysis of basic Stone/Priestley duality from the point of view of sheaf representations through duality for Boolean product decompositions to the general setting of the main result, focussing on explaining the concepts involved. Finally, the dual form of sheaf representations invite natural generalisations, falling outside the realm of sheaf representations. One such generalisation was introduced in my PhD work and in on-going work with Anna Carla Russo we have shown that it includes the dual construction of the poset sums of Peter Jipsen and Franco Montagna as well as the Priestley and Esakia sums introduced and used by Peter Jipsen to prove decomposition theorems for various classes of ordered algebras.

References

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