Canonical extensions of frames *via* fitted sublocales and strongly exact filters

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In this talk I explain how a number of recent constructions from pointfree topology e.g. [1, 2, 6, 7] can be viewed as certain types of canonical extensions. The latter is a theory of completion of ordered structures due to Jónnson and Tarski [4, 5], originally devised to extend Stone duality to give a topological semantics to modal logic.

This work is an extension of the earlier work [3]. Our approach allows one to transfer results about important classes of sublocales to the corresponding classes of filters and vice versa. Furthermore, the setting of canonical extensions automatically gives new universal properties for the lattices of these classes of sublocales.

Finally, we will also discuss how properties of canonical extensions relate to standard topological properties of frames.

References

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