Topoi with enough points

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Topoi with enough points, ArXiv:2403.15338.



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Plan

Logical aspects of duality theory,



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- Logical aspects of duality theory,
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Motto:propositional first order theories \equiv Boolean algebras





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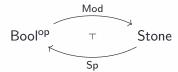


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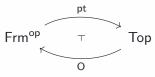
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There is a very general duality in which every other embeds, the duality between frames and topological spaces.





Frames



Frames

A frame is a complete lattice where the *infinitary distributivity rule* holds,

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The canonical example of frame is a topology. When (X, τ) is a topological space, τ is a frame.

$$\mathsf{O}:\mathsf{Top}\to\mathsf{Frm}^\mathsf{op}$$





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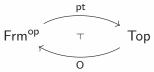


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When a frame has enough points, then $Opt(\mathcal{L}) \cong \mathcal{L}$.





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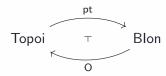
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Question: Can we push to the extreme the technology of Deligne

and unify every completeness theorem?





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