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Proper class forcing

The technique of forcing in set theory factors nicely into two steps: take the topos of double-negation sheaves on a given poset, then form a model of material set theory in the internal language of that topos. There is an extension of this technique called proper class forcing where one can take a large partial order satisfying certain stratification conditions and then perform forcing over it. This talk will construct the topos-theoretic analogue of proper class forcing, and show that one can recover material set theory much as for a Grothendieck topos using Shulman's concept of autology. This will then be applied to an independence result of interest to the theory of stacks.