► MENACHEM MAGIDOR, *Getting forcing axioms by finite support iteration.*
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Forcing axioms (like Martin's Axiom -**MA**, The Proper Forcing Axiom-**PFA** or Martin's Maximum -**MM**) provide some of the most appealing and interesting directions in which one can extend **ZFC** and decide important statement which are otherwise independent. At accepted forcing axioms provide a lot of information about sets of size $\aleph_1$. Thus the stronger forcing axioms like **PFA** and **MM** decide the value of the continuum as well as many statements about the structure of H_{ω_1}. It seems very interesting to try and get generalizations of these axioms that will have deep impact of the structure of larger sets (e.g. sets of size $\aleph_2$) .

The main obstacle for getting such generalizations is the available techniques for iterating forcings. The techniques used for proving the consistency of axioms like **PFA** or **MM** is either countable support of revised countable support iteration. There are serious obstacles for generalizing it to larger cardinals.

Recently Neeman (following Mitchell and Friedman) introduced a version of finite support iteration of proper forcings which allowed him to get a model of **PFA** by a different techniques. His technique can be generalized to higher cardinals and so he can get the consistency of higher versions of **PFA**.

Following Neeman, Gitik and the author generalized this techniques to semi-proper forcings and so get a different proof of the consistency of **MM** . These techniques allow one to get higher versions of **MM**.

In this talk we shall survey these results and state some open problems. We shall try to make the talk accessible to a general Logic audience . (At least the first half of it..)