

Goldstern, Martin**Tools for your forcing construction.** (English) [Zbl 0834.03016](#)

Judah, Haim (ed.), Set theory of the reals. Proceedings of a winter institute on set theory of the reals held at Bar-Ilan University, Ramat-Gan (Israel), January 1991. Providence, RI: American Mathematical Society (Distrib.), Isr. Math. Conf. Proc. 6, 305-360 (1993).

Summary: A preservation theorem is a theorem of the form: "If $\langle P_\alpha, Q_\alpha: \alpha < \delta \rangle$ is an iteration of forcing notions, and every Q_α satisfies φ in V^{P_α} , then P_δ satisfies φ ." We give a simplified version of a general preservation theorem for countable support iteration due to Shelah. This version is particularly useful for problems dealing with sets of reals. We give several examples of applications, among them "countable support iteration of proper ω^ω -bounding forcing notions is ω^ω -bounding". We also review the basic facts about countable support iteration and proper forcing, as well as Souslin proper forcing notions.

For the entire collection see [\[Zbl 0821.00016\]](#).

MSC:[03E40](#) Other aspects of forcing and Boolean-valued modelsCited in **36** Documents**Keywords:**[preservation theorem](#); [iteration of forcing](#); [countable support iteration](#); [sets of reals](#); [proper forcing](#)