

The ultrafilter number for uncountable κ

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Abstract

In joint work with Andrew-Brooke Taylor, Vera Fischer and Sy-David Friedman we provide a model in which $u(\kappa) = \kappa^+ < 2^\kappa$ holds for a supercompact cardinal κ . I will present the construction of such a model in the countable case and explain why, the straightforward generalization to an uncountable cardinal does not work, as well as the construction of our model and its main properties.

Moreover we will study the values of other natural generalizations of classical cardinal characteristics in this model. For this purpose we generalize some standard facts that hold in the countable case as well as some classical forcing notions and their properties.