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INTERNAL MODELS FOR ANY FINITE SUBSET OF THE AXIOMS OF THE IMPREDICATIVE THEORY OF CLASSES

In Global and local choice functions (Israel J. Math. 22 (1975)), Gaifman proved that \( \text{ZFGC} \) (i.e., Zermelo-Fraenkel with a global choice function) is a conservative extension of \( \text{ZFC} \) (ZF with the axiom of choice). In order to carry out this proof, he constructed internal models for finite subsets of the axioms of \( \text{ZFGC} \). His methods do not use forcing, as was the case with the previous proof by Felgner (cf. Comparison of the axioms of local and universal choice, Fund. Math. 49 (1960)).

The purpose of this paper is to adapt Gaifman’s method to the impredicative theory of classes. This is the theory, due in essence to Morse, which uses impredicative form of the axiom of class specification (for this theory see the appendix of Kelley, General Topology, Mostowski, Constructible Sets with Application or, Chuaqui, Internal and forcing models for the impredicative theory of classes, to appear in Diss. Math.).

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