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ON MODELS WITH AUTOMORPHISMS

The talk is intended to give a report on problems and results in the model theory of generalized quantifiers, centralizing around the existence of models with automorphisms. Emphasis is laid on questions that were treated in the Freiburg logic group during the last years, e.g.

(i) To what extent can the technique of indiscernibles and its methodological power (including analogues of the Ehrenfeucht-Mostowski theorem) be transferred to extended logic? (H. Otto)

(ii) To what extent is it possible to develop a theory of (various kinds of) homogeneous models for extended logics? (H. Hildenberger)

The investigations aim in the development of a “working extended model theory”. The answers to question (ii) are related to variations of Shelah’s homogeneity property which are investigated for various extensions of first order logic by set theoretical quantifiers. The results, both the positive and the negative ones, are used to comment on possible future directions in the model theory of generalized quantifiers.

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