

Languages of Logic and Applications *

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Abstract

Concerning the logical description languages, in the past 40-50 years many authors have introduced a number of structurally very different first-order languages. Meanwhile some of these first-order languages follow the structure of a given future model, other ones have been prepared for the description of an arbitrary model. Another ones do not follow the whole structure of any model: they have been prepared only for the relations definable over the universe in order to be able to prove the generalizations of a number of difficult logical results.

We have investigated the different approaches and concluded that they do not mean essential differences. In fact, they have been only motivated by seeking for an easier way to achieve the target. The aim of the semantic of the first order languages is the interpretation of the language. The interpretation of the symbols of a language is based on some model. Differences in the semantics here come from the considerations whether we focus on unique models or concentrate to all models over a given universe. At the same place the naming problem of the universe element of the model arises. The efforts for solving this problem lead to different approaches as well.

Here we present the most important language definitions and some characteristic semantics. Moreover, we try to point out the suitability connections of languages and semantics definitions.

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