A graded model theory

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Abstract

Hájek's monograph "Metamathematics of Fuzzy Logic" was the starting point of a long stream of research on mathematical fuzzy logic. Among many other aspects, Hájek's proposed program included the study of first-order logics to deal with reasoning with graded predicates. This gave rise to a number of papers by himself and others on a graded model theory, which generalizes classical model theory by considering structures where predicates are interpreted on a many-valued scale. In this talk we will discuss the motivations of such theory and survey its main results and latest contributions.