

## HYPERIDENTITIES IN MANY-SORTED ALGEBRAS

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### Abstract

The theory of hyperidentities generalizes the equational theory of universal algebras and is applicable in several fields of science, especially in computers sciences (see e.g. [2, 1]). The main tool to study hyperidentities is the concept of a hypersubstitution. Hypersubstitutions of many-sorted algebras were studied in [3]. On the basis of hypersubstitutions one defines a pair of closure operators which turns out to be a conjugate pair. The theory of conjugate pairs of additive closure operators can be applied to characterize solid varieties, i.e., varieties in which every identity is satisfied as a hyperidentity (see [4]). The aim of this paper is to apply the theory of conjugate pairs of additive closure operators to many-sorted algebras.

**Keywords:** hypersubstitution; hyperidentity; heterogeneous algebra.

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