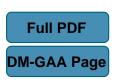
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## M-SOLID GENERALIZED NON-DETERMINISTIC VARIETIES

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## Abstract

A generalized non-deterministic hypersubstitution is a mapping which maps operation symbols of type  $\tau$  to the set of terms of the same type which does not necessarily preserve the arity. We apply the generalized non-deterministic hypersubstitution to an algebra of type  $\tau$  and obtain a class of derived algebras of type  $\tau$ . The generalized non-deterministic hypersubstitutions can be also applied to sets of equations of type  $\tau$ . We obtain two closure operators which turn out to be a conjugate pair of completely additive closure operators. This allows us to apply the theory of conjugate pairs of additive closure operators to characterize M-solid generalized non-deterministic varieties of algebras.

**Keywords:** generalized non-deterministic hypersubstitution, conjugate pair of additive closure operators, *M*-solid generalized non-deterministic variety.

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S. Lekkoksung

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