

## SEMIGROUPS DERIVED FROM $(\Gamma, N)$ -SEMIHYPERGROUPS AND $T$ -FUNCTOR

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### Abstract

The main purpose of this paper is to introduce the concept of  $(\Gamma, n)$ -semihypergroups as a generalization of hypergroups, as a generalization of  $n$ -ary hypergroups and obtain an exact covariant functor between the category  $(\Gamma, n)$ -semihypergroups and the category semigroups. Moreover, we introduce and study complete part. Finally, we obtain some new results and some fundamental theorems in this respect.

**Keywords:**  $(\Gamma, n)$ -semihypergroup,  $\Theta$ -relation,  $T$ -factor, fundamental semigroup.

**2010 Mathematics Subject Classification:** 20N15.

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Received 22 January 2015

Revised 25 February 2015