

**CO-FILTERS IN
SEMILATTICE-ORDERED SEMIGROUP WITH APARTNESS**

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ABSTRACT. In this paper, we introduce the concepts of co-filter, ordered co-filter and normal co-filter in semilattice-ordered semigroups with apartness, and study their interrelationships and fundamental properties. The logic environment of this article are Intuitionistic logic – the logic without the principle TND and Bishop’s constructive algebra. Recognizing, understanding and accepting of these new concepts are based on cancellativity of the internal operation and co-order relation according to the apartness relation in such semigroups.

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Received: January 04, 2018. *Revised:* March 05, 2018.

2010 *Mathematics Subject Classification:* 03F65, 06F05.

Key words and phrases: Constructive mathematics, semigroup with apartness, semilattice-ordered semigroup, co-filters.

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