

## SOME RESULTS IN BIPOLAR-VALUED FUZZY ORDERED $\mathcal{AG}$ -GROUPOIDS

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### Abstract

In this paper, we introduce the concept of bipolar-valued fuzzification of ordered  $\mathcal{AG}$ -groupoids and discuss some structural properties of bipolar-valued fuzzy two-sided ideals of an intra-regular ordered  $\mathcal{AG}$ -groupoid.

**Keywords:** Ordered  $\mathcal{AG}$ -groupoid, intra-regular ordered  $\mathcal{AG}$ -groupoid, bipolar-valued fuzzy two-sided ideal, (strong) negative s-cut, (strong) positive t-cut.

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