Kim, Hee Sik; Neggers, Joseph; So, Keum Sook
Order related concepts for arbitrary groupoids. (English) Zbl 1380.20057

Summary: In this paper, we introduce and explore suggested notions of ‘above’, ‘below’ and ‘between’ in general groupoids, Bin(X), as well as in more detail in several well-known classes of groupoids, including groups, semigroups, selective groupoids (digraphs), d/BCK-algebras, linear groupoids over fields and special cases, in order to illustrate the usefulness of these ideas. Additionally, for groupoid-classes (e.g., BCK-algebras) where these notions have already been accepted in a standard form, we look at connections between the several definitions which result from our introduction of these ideas as presented in this paper.

MSC:
20N02 Sets with a single binary operation (groupoids)
06A06 Partial orders, general
06F35 BCK-algebras, BCI-algebras

Keywords:
below; above; between; d/BCK-algebra; poset; Bin(X); order-preserving mapping; β-medial groupoid

Full Text: DOI Link