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L-ordered neighborhood systems of stratified *L*-concave structures. (English) Zbl 1465.52004
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Summary: Based on a complete residuated lattice L , the notion of stratified L -concave structures is introduced, which is the dual structure of convex structures in the L -setting. For characterizing it, L -ordered neighborhood systems and L -ordered interior operators in the framework of stratified L -concave spaces are introduced. Moreover, it is shown that L -ordered neighborhood spaces, L -ordered interior spaces and stratified L -concave spaces are isomorphic from the view of category.

MSC:

52A01 Axiomatic and generalized convexity

03E72 Theory of fuzzy sets, etc.

06A15 Galois correspondences, closure operators (in relation to ordered sets)

Keywords:

complete residuated lattice; L -ordered neighborhood system; L -ordered interior operator; stratified L -concave structure

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