HEREDITY IN FUNDAMENTAL LEFT COMPLEMENTED ALGEBRAS

Marina Haralampidou and Konstantinos Tzironis

Abstract. In the present paper, we introduce the notion of a fundamental complemented linear space, through continuous projections. This notion is hereditary. Relative to this, we prove that if a certain topological algebra is fundamental, then a concrete subspace is fundamental too. For a fundamental complemented linear space, we define the notion of continuity of the complementor. In some cases, we employ a generalized notion of complementation, that of (left) precomplementation. In our main result, the continuity of the complementor for a certain fundamental complemented (topological) algebra is inherited to the induced vector complementor of the underlying linear space of a certain right ideal. Weakly fundamental algebras are also considered in the context of locally convex ones.

Full text

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References


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Keywords: Fundamental complemented algebra, complemented linear space, fundamental complemented (topological) linear space, vector complementor, weakly fundamental algebra, axially closed element.

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Heredity in fundamental left complemented algebras

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