

EXTERIOR SEMI-ALGEBRAS

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ABSTRACT. (Joint work with Letterio Gatto) In this talk, we review negation maps and “systems,” and their application to linear algebra in a rather general framework that includes both tropical algebra and hyperfields.

The usual definition of Grassmann (exterior) algebras generalizes directly to semi-algebras, and has a built-in negation function for elements of degree ≥ 2 , so the theory of systems can be applied directly to Gatto’s theory, unifying results of linear algebra from different perspectives including the classical perspective.

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