

## GENERALIZED EXTERIOR ALGEBRAS

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### S u m m a r y

Exterior algebras and differential forms are widely used in many fields of modern mathematics and theoretical physics. In this work, we define a notion of  $N$ -metric exterior algebra, which depends on  $N$  matrices of structure constants. The usual exterior algebra (Grassmann algebra) can be considered as a 0-metric exterior algebra. The Clifford algebra can be considered as a 1-metric exterior algebra.  $N$ -metric exterior algebras for  $N \geq 2$  can be considered as generalizations of the Grassmann and Clifford algebras. Specialists consider models of gravity that are based on a mathematical formalism with two metric tensors. We hope that the 2-metric exterior algebra considered in this work can be useful for the development of this model in gravitation theory and, especially, in the description of fermions in the presence of a gravity field.