

Abstract Submitted
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Geometry of the Conservative Transformation Group: Reformulation of a covariant derivative for tensors, spin tensors and spinors and a theory of mass. EDWARD GREEN¹, University of North Georgia — An enlargement of the covariance group of general relativity which may unify the known forces has been developed by Pandres. Using tetrads on a four-dimensional space, this new transformation group, called the conservation group, contains the group of diffeomorphisms as a proper subgroup. With this extension there arises a need for reformulating appropriate covariant derivatives of tensors, spin tensors and spinors. We develop this extension which we call the stroke derivative and compare our connections to those of the usual spin covariant derivative and spinor covariant derivative. We also exhibit a natural way to introduce mass and show that mass is invariant under the group of conservative transformations.

¹This is a second talk that I hope to present at SESAPS. This talk has lower priority in my opinion, so if only one talk is allowed, please use the talk on "Conservative Transformation Group: Geometry of the Quantum?"

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