

1086-53-1747

**Mihai Bailesteanu\*** ([mbailest@z.rochester.edu](mailto:mbailest@z.rochester.edu)). *Spin(7) Manifolds - Old and new.*

Spin(7) manifolds are 8 dimensional Riemannian manifolds that have a cross product on their tangent bundles, which generate a 4-form. We can define some canonical vector fields on these manifolds, which in turn allows us to define some type of moment map. The goal of having a moment map is to study the topology of the underlying manifold. We will discuss some recent developments. (Received September 24, 2012)