

Einstein hypersurfaces of the cotangent bundle

Cornelia-Livia Bejan

Let M be a manifold endowed with a symmetric connection. On its cotangent bundle, the Riemann extension (introduced by Patterson and Walker) was generalized by Kowalski and Sekizawa to the natural Riemann extension, which is a semi-Riemannian structure of neutral signature. On the total space of the cotangent bundle, we construct and study a family of hypersurfaces on which the natural Riemann extension is semi-Riemannian, i.e. non-degenerate. We prove that these hypersurfaces are Einstein.