Semi-Riemannian submersions from manifolds endowed metric mixed 3-structures

Gabriel Eduard Vîlcu   gvilcu@gta.math.unibuc.ro

University of Bucharest, Romania

Abstract

In this paper we introduce a new class of semi-Riemannian submersions from a manifold endowed with a metric mixed 3-structure onto an almost paraquaternionic hermitian manifold. We obtain some fundamental properties, discuss the transference of structures and the geometry of the fibres. In particular we obtain that such a submersion is a harmonic map, provided that the total space is mixed 3-cosymplectic or mixed 3-Sasakian. Moreover, a non-trivial example is given.