

Title: On pseudosymmetric manifolds

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In the literature, there are two different notions of pseudosymmetric manifolds, one by CHAKI [7] and other by DESZCZ [16], and there are many papers related to these notions. The object of the present paper is to deduce necessary and sufficient conditions for a CHAKI pseudosymmetric [7] (resp. pseudo Ricci symmetric [8]) manifold to be Deszcz pseudosymmetric (resp. Ricci pseudosymmetric). We also study the necessary and sufficient conditions for a weakly symmetric [58] (resp. weakly Ricci symmetric [59]) manifold by Tamássy and Binh to be Deszcz pseudosymmetric (resp. Ricci pseudosymmetric). We also obtain the reduced form of the defining condition of weakly Ricci symmetric manifolds by TAMÁSSY and BINH [59]. Finally we give some examples to show the independent existence of such types of pseudosymmetry which also ensure the existence of Roter type and generalized Roter type manifolds and the manifolds with recurrent curvature 2-form ([2], [29]) associated to various curvature tensors.

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