Some Deformations of Nearly Kenmotsu f-manifolds

Yavuz Selim Balkan

Düzce University, Faculty of Arts and Sciences, Department of Mathematics,
Konuralp Campus, 81620, Düzce, Turkey
`y.selimbalkan@gmail.com`

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In this work, we introduce nearly Kenmotsu f-manifolds. Firstly, we compute some fundamental Riemannian curvature properties. Then we prove that a nearly Kenmotsu f-manifold is locally isometric to the warped product of s time real line and a nearly Kähler manifold. Furthermore, we show that there do not exist nearly Kenmotsu hypersurfaces of globally framed type of nearly Kähler manifolds. Next, we apply some D-conformal transformations to nearly Kenmotsu f-manifolds. We obtain some necessary and sufficient conditions for main and deformed manifolds. Moreover, we get a new class of globally framed manifolds called nearly α-Kenmotsu f-manifold from nearly Kenmotsu f-manifold under some compatible D-conformal transformations. Finally, we some examples to prove existence of these type manifolds

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