

Some Classes of Lorentzian Alpha-Sasakian Manifolds with Respect to Quarter-Symmetric Metric Connection

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Abstract : The object of the present paper is to study a quarter-symmetric metric connection in a Lorentzian α -Sasakian manifold. We study some curvature properties of Lorentzian α -Sasakian manifold with respect to quarter-symmetric metric connection. We investigate quasi-projectively at, Φ -symmetric, Φ -projectively at Lorentzian α -Sasakian manifolds with respect to quarter-symmetric metric connection. We also discuss Lorentzian α -Sasakian manifold admitting quartersymmetric metric connection satisfying $P.S = 0$, where P denote the projective curvature tensor with respect to quarter-symmetric metric connection.

Keywords : quarter-symmetric metric connection, Lorentzian alpha-Sasakian manifold, quasi-projectively flat Lorentzian alpha-Sasakian manifold, phi-symmetric manifold

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