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.