

Lightlike Hypersurfaces of Golden Semi-Riemann Manifolds

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In this paper, we study lightlike hypersurfaces of Golden Semi-Riemann manifolds. An m -dimensional Semi-Riemannian manifold $(\tilde{M}, \tilde{g}, \tilde{P})$ is called a golden Semi-Riemannian manifold if the $(1,1)$ -tensor field \tilde{P} on \tilde{M} is a golden structure (i.e. $\tilde{P}^2 = \tilde{P} + I$) and $\tilde{g}(\tilde{P}X, Y) = \tilde{g}(X, \tilde{P}Y)$ for every tangent vector fields $X, Y \in \Gamma(TM)$. We investigate several properties of lightlike hypersurfaces of Golden Semi-Riemann manifolds. We define invariant lightlike hypersurfaces, screen semi-invariant lightlike hypersurfaces and radical anti-invariant lightlike hypersurfaces. We show that there is no radical anti-invariant lightlike hypersurface of Golden semi-Riemann manifold. In particular, we obtain some results for screen semi-invariant lightlike hypersurfaces of Golden Semi-Riemann Manifolds. We also give some special examples.

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