STCR-Lightlike Submanifolds of an Indefinite Kähler Manifold

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In the present paper, we introduce a new class of lightlike submanifolds, namely, Screen Transversal Cauchy Riemann (STCR)-lightlike submanifolds, of indefinite Kähler manifolds. We show that this new class is an umbrella of screen transversal lightlike, screen transversal totally real lightlike and CR-lightlike submanifolds. We give an example of a STCR lightlike submanifold, investigate the integrability of various distributions obtain a characterization of such lightlike submanifolds in a complex space form and find new conditions for the induced connection to be a metric connection.