

The equi-affine curvatures of curves in 3-dimensional pseudo-Riemannian manifolds

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As it is well-known, a pseudo-Riemannian manifold (M, g) can always be treated as an equi-affine manifold (M, ∇, Ω) with the ∇ being the Levi-Civita connection and Ω the natural volume form.

For curves in a 3-dimensional pseudo-Riemannian manifold, relations between equi-affine curvatures and the standard Frenet curvatures will be presented.