



## Letter to Editor

### Progressive Ordinary Mates of Frenet Curvature in Euclidean 3-Space

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Let  $(M, F)$  be a finished foliated Riemannian complex and all leaves be reduced. Let  $(M', F')$  be a foliated Riemannian complex of non-positive cross-over sectional ebb and flow. Expect that the cross-over Ricci curvature  $\text{Ric}^Q$  of  $M$  fulfills  $\text{Ric}^Q \geq -\lambda_0$  at all point  $x \in M$  and  $\text{Ric}^Q > -\lambda_0$  sooner or later  $x_0$ , where  $\lambda_0$  is the infimum of the range of the fundamental Laplacian following up on  $L^2$ - basic functions on  $M$ . Then, at that point, each transitionally consonant guide  $\phi: M \rightarrow M'$  of limited cross-over energy is transversally steady.

We work on the past outcome "A total Ricci soliton whose metric  $g$  is K-contact and the soliton vector field  $X$  is rigorously contact, is reduced Sasakian Einstein" and show that, if a total Ricci soliton  $(M, g, X)$  whose metric  $g$  is a contact metric and the soliton vector field  $X$  is stringently contact, then, at that point,  $X$  is a microscopic automorphism and  $g$  is Einstein. At last, for a Ricci soliton with  $X$  as the Reeb vector field, we show that  $(M, g)$  is conservative Einstein and Sasakian.

Lee and Suh demonstrated that there don't exist Hopf hypersurfaces with equal Ricci tensor in the intricate quadric  $Q^m = SO_{m+2}/SO_m SO_2$  for  $m \geq 4$ . In this paper, expanding the consequence of Lee and Suh, we show that, for  $m \geq 3$ ,  $Q^m$  doesn't concede Hopf hypersurfaces with repetitive Ricci tensor. This suggests that there don't exist Hopf hypersurfaces in  $Q^m$  ( $m \geq 3$ ) with equal Ricci tensor.

In hyperbolic geometry there are a various ideas to quantify the broadness or width of a raised set. In the initial segment of the paper we gather them and analyze their properties. Then we acquaint another idea with measure the width and thickness of an arched body. Correspondingly, we characterize three classes of bodies, groups of steady with, assemblages of consistent breadth and bodies having the steady shadow property, separately. We demonstrate that the property of consistent measurement follows to the satisfaction of steady shadow property, and the two of them are more grounded as the property of steady width. In the last piece of this paper, we present the thickness of a consistent body and demonstrate a variation of Blaschke's hypothesis on the bigger circle recorded to a plane-arched assortment of given thickness and diameter.

Related with a Frenet bend  $\alpha$  in Euclidean 3-space  $E^3$ , there exists the thought of normal mate  $\beta$  of  $\alpha$ . In this article, we stretch out the regular mate  $\beta$  to successive normal mates  $\{\alpha_1, \alpha_2, \dots, \alpha_{n\alpha}\}$  with  $\alpha_1 = \beta$ . We call each curve  $\alpha_i$ ,  $i \in \{1, 2, \dots, n\alpha\}$ , the  $i$ -th normal mate. The principle motivation behind this article is to concentrate on the connections between the given Frenet bend  $\alpha$  with its successive normal mates  $\{\alpha_1, \alpha_2, \dots, \alpha_{n\alpha}\}$ .

Unitals can be acquired as terminations of relative unitals by means of parallelisms. Relative  $SL(2, q)$ -unitals are relative unitals of request  $q$  conceding an ordinary activity of  $SL(2, q)$ . The development of those relative unitals is because of Grundhöfer, Stroppel and Van Maldeghem and roused by the activity of  $SL(2, q)$  on the old style (Hermitian) unital. For relative  $SL(2, q)$ -unitals, we present a class of parallelisms for odd request and one for square request and process their stabilizers. For every one of the known parallelisms of relative  $SL(2, q)$ -unitals, we register all interpretations with fixates on the square at limitlessness.

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