

On Stretch Curvature of Finsler Manifolds

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Abstract

In this paper, Finsler metrics with relatively non-negative (resp. non-positive), isotropic and constant stretch curvature are studied. In particular, it is showed that every compact Finsler manifold with relatively non-positive (resp. non-negative) stretch curvature is a Landsberg metric. Also, it is proved that every (α, β) -metric of non-zero constant flag curvature and non-zero relatively isotropic stretch curvature on a manifold of dimension $n \geq 3$ has a constant characteristic scalar along the geodesics. Two dimensional Finsler manifolds of relatively stretch curvature are studied, too

Keywords: Stretch curvature, Relativity stretch curvature, Flag curvature, (α, β) -metric, Randers metric

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