Title: Weakly stretch Finsler metrics

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In this paper, we introduce a new non-Riemannian quantity named mean stretch curvature. A Finsler metric with vanishing mean stretch curvature is called weakly stretch metric. This class of Finsler metrics contains the class of stretch metrics. First, we show that every complete weakly stretch Finsler manifold with bounded mean Cartan torsion is a weakly Landsberg manifold. Then, we prove a rigidity theorem stating that every compact weakly stretch manifold with negative flag curvature reduces to a Riemannian manifold. Finally, we show that every generalized Berwald Randers metric with a Killing form β with respect to α is a weakly stretch metric if and only if it is a Berwald metric.

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