

Year: 2007

Vol.: 71

Fasc.: 1-2

**Title:** Some results on the geometry of tangent bundle of Finsler manifolds

**Author(s):** Bing Ye Wu

In this paper we study the geometry of tangent bundle of a Finsler manifold endowed with Sasaki metric and obtain some results. We characterize the Riemannian manifold as the Finsler manifold such that the vertical lift of any vector field is divergence-free or equivalently, such that the horizontal distribution is minimal in the tangent bundle of the slit tangent bundle, and prove that the almost complex structure on the slit tangent bundle is integrable if and only if the base manifold has zero flag curvature. In that case, the slit tangent bundle is Kählerian. We also prove that the slit tangent bundle is locally symmetric if and only if the base manifold is locally Euclidean. Our results generalize the corresponding results for the Riemannian setting in the literature.

**Address:**

Bing Ye Wu  
Department of Mathematics  
Minjiang University  
Fuzhou, Fujian, 350108  
China