

Conformal transformations on Finsler warped product manifolds

By YALU FENG (Urumqi) and XIAOLING ZHANG (Urumqi)

Abstract. In this paper, we study conformal transformations on Finsler warped product manifolds. We obtain sufficient and necessary conditions of conformal transformations preserving relatively isotropic Landsberg curvature invariant. Further, by solving the equation system, we completely determine all Landsberg metrics which are conformally related to the warped product metrics of Landsberg type and obtain a class of non-regular unicorn Finsler metrics.

YALU FENG &
XIAOLING ZHANG
COLLEGE OF MATHEMATICS
AND SYSTEMS SCIENCE
XINJIANG UNIVERSITY
URUMQI, 830046
P. R. CHINA

Mathematics Subject Classification: 53B40, 53C60.

Key words and phrases: Finsler warped product manifolds, conformal transformations, Landsberg curvature.