Title: Finsler conformal transformations and the curvature invariances

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This article studies the global conformal transformations $f$ on a Finsler space $(M, F)$, which satisfy $f^* F = e^{c(x)} F$, where $F := F(x, y)$ is a Finsler metric on $M$ and $x \in M$, $y \in T_x M \setminus \{0\}$. We obtain the relations between some important geometric quantities of $F$ and their correspondences respectively, including Riemann curvatures, Ricci curvatures, Landsberg curvatures, mean Landsberg curvatures and $S$-curvatures. Then, we discuss the properties of those conformal transformations on $(M, F)$ which preserve Ricci curvature, Landsberg curvature, mean Landsberg curvature and $S$-curvature respectively.

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