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**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  $x \in M, y \in T_xM \setminus \{0\}$ . 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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