GENERALIZED BETA CONFORMAL CHANGE AND SPECIAL FINSLER SPACES

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In this work, we introduce and investigate a general transformation or change of Finsler metrics, which is referred to as a generalized 0-conformal change, namely,L(x , y) L(x , y) = f (eu(x) L(x , y), [3(x, y))•This transformation combines both 0-change and conformal change in a general set-ting. The change of the fundamental Finsler connections, together with their associ-ated geometric objects, are studied. The change of the torsion and curvature tensors of the fundamental Finsler connections are computed.. The conditions for the trans-formed space to be Berwald, Landesberg and locally Minkowskian are determined. Some invariants and -various special Finsler spaces, namely, quasi C-reducible, Semi C-reducible, C -reducible, C2-like, S3-like and S4-like, are investigated. The transfor-mation of the T tensor is obtained and some interesting special cases are deduced. The b-condition is introduced and its effect on some special Finsler spaces is studied. The condition under which a generalized 0-conformal change is a projective change is investigated and some known results in this context are generalized. The most impor-tant changes of Finsler metrics existing in the literature are shown to be an outcome of this generalized 13-conformal change as special cases. Some of the results obtained in this thesis are generalizations of known results and some are new.