Generalized beta conformal change and special finsler spaces

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In this work, we introduce and investigate a general transformation or change ofFinsler metrics, which is referred to as a generalized □-conformal change, namely,L(x, y) −! L(x, y) = f(e□(x)L(x, y), □(x, y)).This transformation combines both □-change and conformal change in a general setting.The change of the fundamental Finsler connections, together with their associatedgeometric objects, are studied. The change of the torsion and curvature tensorsof the fundamental Finsler connections are computed. The conditions for the transformedspace to be Berwald, Landesberg and locally Minkowskian are determined.Some invariants and various special Finsler spaces, namely, quasi C-reducible, SemiC-reducible, C-reducible, C2-like, S3-like and S4-like, are investigated. The transformationof 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 □-conformal change is a projective change isinvestigated and some known results in this context are generalized. The most importantchanges of Finsler metrics existing in the literature are shown to be an outcomeof this generalized □-conformal change as special cases. Some of the results obtainedin this thesis are generalizations of known results and some are new.