

Contents

Acknowledgments	iii
Abstract	iv
Introduction	2
1 Basics of Finsler geometry	5
1.1 Differentiable manifold and tangent spaces	5
1.2 Vector bundles	8
1.3 Nonlinear connection	10
1.4 Finsler metrics	12
1.5 Finsler connections	15
1.5.1 Cartan connection	16
1.5.2 Chern connection	17
1.5.3 Hashiguchi connection	18
1.5.4 Berwald connection	19
2 Generalized β-conformal change	22
2.1 Generalized β -conformal change	23
2.2 Finsler metric and Cartan tensor	26
2.3 Canonical spray and Barthel connection	29
2.4 Fundamental Finsler connections	31
2.5 Torsion and curvature tensors	34
2.6 Concluding remarks	37
3 Generalized β-conformal change and special Finsler spaces	41
3.1 Important geometric objects	41
3.2 Special Finsler spaces	45
3.3 The T-tensor T_{lijk}	53
3.4 The b-condition	56
3.5 Projective change and generalized β -conformal change	59
Bibliography	63