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Nota di contenuto	Preface; Contents; 1 Finsler Manifolds; 1.1 Historical remarks; 1.2 Finsler manifolds; 1.3 Basic examples; 1.4 Fundamental invariants; 1.5 Reversible Finsler structures; 2 Geometric Quantities on a Minkowski Space; 2.1 The Cartan tensor; 2.2 The Cartan form and Deicke's Theorem; 2.3 Distortion; 2.4 Finsler submanifolds; 2.5 Imbedding problem of submanifolds; 3 Chern Connection; 3.1 The adapted frame on a Finsler bundle; 3.2 Construction of Chern connection; 3.3 Properties of Chern connection; 3.4 Horizontal and vertical subbundles of SM 4 Covariant Differentiation and Second Class of Geometric Invariants4.1 Horizontal and vertical covariant derivatives; 4.2 The covariant derivative along geodesic; 4.3 Landsberg curvature; 4.4 S-curvature; 5 Riemann Invariants and Variations of Arc Length; 5.1 Curvatures of Chern connection; 5.2 Flag curvature; 5.3 The first variation of arc length; 5.4 The second variation of arc length; 6 Geometry of Projective Sphere Bundle; 6.1 Riemannian connection and curvature of projective sphere bundle; 6.2 Integrable condition of Finsler bundle; 6.3 Minimal condition of Finsler bundle

7 Relation among Three Classes of Invariants7.1 The relation between Cartan tensor and flag curvature; 7.2 Ricci identities; 7.3 The relation between S-curvature and flag curvature; 7.4 Finsler manifolds with constant S-curvature; 8 Finsler Manifolds with Scalar Curvature; 8.1 Finsler manifolds with isotropic S-curvature; 8.2 Fundamental equation on Finsler manifolds with scalar curvature; 8.3 Finsler metrics with relatively isotropic mean Landsberg curvature; 9 Harmonic Maps from Finsler Manifolds; 9.1 Some definitions and lemmas; 9.2 The first variation; 9.3 Composition properties
9.4 The stress-energy tensor9.5 Harmonicity of the identity map; Bibliography; Index

Sommario/riassunto

This introductory book uses the moving frame as a tool and develops Finsler geometry on the basis of the Chern connection and the projective sphere bundle. It systematically introduces three classes of geometrical invariants on Finsler manifolds and their intrinsic relations, analyzes local and global results from classic and modern Finsler geometry, and gives non-trivial examples of Finsler manifolds satisfying different curvature conditions.