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Note generali	Description based upon print version of record.
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	From the Contents: From Riemann manifolds to Riemann manifolds -- From Riemann manifolds to Euclidean manifolds -- Coordinates -- Surfaces of Gaussian curvature zero -- Sphere to tangential plane': polar (normal) aspect -- Sphere to tangential plane': transverse aspect -- Sphere to tangential plane: oblique aspect -- Ellipsoid-of-revolution to tangential plane -- Ellipsoid-of-revolution to sphere and from sphere to plane -- Sphere to cylinder: polar aspect -- Sphere to cylinder: transverse aspect.
Sommario/riassunto	In the context of Geographical Information Systems (GIS) the book offers a timely review of Map Projections. The first chapters are of foundational type. We introduce the mapping from a left Riemann manifold to a right one specified as conformal, equiaerial and equidistant, perspective and geodetic. In particular, the mapping from a Riemann manifold to a Euclidean manifold ("plane") and the design of various coordinate systems are reviewed . A speciality is the treatment of surfaces of Gaussian curvature zero. The largest part is devoted to the mapping the sphere and the ellipsoid-of-revolution to tangential

plane, cylinder and cone (pseudo-cone) using the polar aspect, transverse as well as oblique aspect. Various Geodetic Mappings as well as the Datum Problem are reviewed. In the first extension we introduce optimal map projections by variational calculus for the sphere, respectively the ellipsoid generating harmonic maps. The second extension reviews alternative maps for structures , namely torus (pneu), hyperboloid (cooling tower), paraboloid (parabolic mirror), onion shape (church tower) as well as clothoid (Hight Speed Railways) used in Project Surveying. Third, we present the Datum Transformation described by the Conformal Group C10 (3) in a threedimensional Euclidean space , a ten parameter conformal transformation. It leaves infinitesimal angles and distance ratios equivariant. Numerical examples from classical and new map projections as well as twelve appendices document the Wonderful World of Map Projections.