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	Soggetti	Partial differential equations Mathematical physics Differential geometry Physics Mechanics Mechanics, Applied Materials science Partial Differential Equations Mathematical Applications in the Physical Sciences Differential Geometry Mathematical Methods in Physics Solid Mechanics Materials Science, general
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	Nota di contenuto	Compensated compactness with more geometry -- GLOBAL ISOMETRIC EMBEDDING OF SURFACES IN R3 -- Singular perturbation problems involving curvature -- Lectures on the Isometric Embedding Problem (M^n, g) IR^m, $m = \frac{n}{2}(n + 1)$ -- Continuum mechanics of the interaction of phase boundaries and dislocations in solids -- Manifolds in a theory of microstructures -- On the Geometry and Kinematics of Smoothly Distributed and Singular Defects -- Non-Metricity and the Nonlinear Mechanics of Distributed Point Defects -- Are microcontinuum field theories of elasticity amenable to experiments? –

A review of some recent results -- ON THE VARIATIONAL LIMITS OF LATTICE ENERGIES ON PRESTRAINED ELASTIC BODIES -- Static Elasticity in a Riemannian Manifold -- Calculating the bending moduli of the Canham-Helfrich free-energy density -- Elasticity of Twist-Bend Nematic Phases.

Sommario/riassunto	This book examines the exciting interface between differential geometry and continuum mechanics, now recognised as being of increasing technological significance. Topics discussed include isometric embeddings in differential geometry and the relation with microstructure in nonlinear elasticity, the use of manifolds in the description of microstructure in continuum mechanics, experimental measurement of microstructure, defects, dislocations, surface energies, and nematic liquid crystals. Compensated compactness in partial differential equations is also treated. The volume is intended for specialists and non-specialists in pure and applied geometry, continuum mechanics, theoretical physics, materials and engineering sciences, and partial differential equations. It will also be of interest to postdoctoral scientists and advanced postgraduate research students. These proceedings include revised written versions of the majority of papers presented by leading experts at the ICMS Edinburgh Workshop on Differential Geometry and Continuum Mechanics held in June 2013. All papers have been peer reviewed.