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Descrizione fisica	1 online resource (304 p.)
Collana	Atlantis Studies in Variational Geometry, , 2214-0700 ; ; 3
Disciplina	510
Soggetti	Global analysis (Mathematics) Manifolds (Mathematics) Mechanics Mathematical physics Global Analysis and Analysis on Manifolds Classical Mechanics Mathematical Applications in the Physical Sciences
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Description based upon print version of record.
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	Calculus of variations on fibre bundles -- Noether's first theorem -- Lagrangian and Hamiltonian field theories -- Lagrangian and Hamiltonian nonrelativistic mechanics -- Global Kepler problem -- Calculus of variations on graded bundles -- Noether's second theorems -- Yang–Mills gauge theory on principal bundles -- SUSY gauge theory on principal graded bundles -- Gauge gravitation theory on natural bundles -- Chern–Simons topological field theory -- Topological BF theory.
Sommario/riassunto	The book provides a detailed exposition of the calculus of variations on fibre bundles and graded manifolds. It presents applications in such areas as non-relativistic mechanics, gauge theory, gravitation theory and topological field theory with emphasis on energy and energy-momentum conservation laws. Within this general context the first and second Noether theorems are treated in the very general setting of reducible degenerate graded Lagrangian theory.