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Descrizione fisica	1 online resource (450 p.)
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Soggetti	Symmetry (Physics) Hamiltonian systems
Lingua di pubblicazione	Inglese
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Note generali	Description based upon print version of record.
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	Physical symmetry and geometrical symmetry -- On symmetries associated with Hamiltonian dynamics -- One-parameter transformation groups -- Everywhere : local invariance -- Lie transformation groups and Lie algebras -- Dynamical symmetry in Hamiltonian mechanics -- Symmetries of classical Kepler motion -- Dynamical symmetry in Schrodinger quantum mechanics -- Spectrum-generating Lie algebras and groups admitted by Schroedinger equations -- Dynamical symmetry of regularized hydrogen-like atoms -- Uncovering approximate dynamical symmetries : examples from atomic and molecular physics -- Rovibronic systems -- Dynamical symmetry of Maxwell's equations.
Sommario/riassunto	Whenever systems are governed by continuous chains of causes and effects, their behavior exhibits the consequences of dynamical symmetries, many of them far from obvious. ""Dynamical Symmetry"" introduces the reader to Sophus Lie's discoveries of the connections between differential equations and continuous groups that underlie this observation. It develops and applies the mathematical relations between dynamics and geometry that result. Systematic methods for uncovering dynamical symmetries are described, and put to use. Much material in the book is new and some has only recently appeared in

