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Collana	UNIPA Springer Series, , 2366-7516
Disciplina	512.55 512.482
Soggetti	Topological groups Lie groups Differential equations Calculus of variations Category theory (Mathematics) Homological algebra Nonassociative rings Rings (Algebra) Topological Groups, Lie Groups Ordinary Differential Equations Calculus of Variations and Optimal Control; Optimization Category Theory, Homological Algebra Non-associative Rings and Algebras
Lingua di pubblicazione	Inglese
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Nota di bibliografia	Includes bibliographical references.
Nota di contenuto	Preface. - Introduction -- 1 A short survey on Lie theory and Finsler Geometry -- 2 Remarks on infinite-dimensional representations of the Heisenberg algebra -- 3 Character, Multiplicity and Decomposition Problems in the Representation Theory of complex Lie Algebras -- 4 The BCH-Formula and Order Conditions for Splitting Methods Winfried Auzinger, Wolfgang Herfort, Othmar Koch, and Mechthild Thalhammer -- 5 Cohomology Operations Defining Cohomology Algebra of the Loop Space -- 6 Half-Automorphisms of Cayley-Dickson Loops -- 7

Invariant control systems on Lie groups -- 8 An Optimal Control Problem for a Nonlocal Problem on the Plane -- 9 On the geometry of the domain of the solution of nonlinear Cauchy -- 10 Reduction of some semi-discrete schemes for an evolutionary equation to two-layer schemes and estimates for the approximate solution error -- 11 Hilbert's Fourth Problem and Projectively Flat Finsler Metrics -- 12 Holonomy theory of Finsler manifolds -- 13 Lepage Manifolds.

Sommario/riassunto

This book collects a series of contributions addressing the various contexts in which the theory of Lie groups is applied. A preliminary chapter serves the reader both as a basic reference source and as an ongoing thread that runs through the subsequent chapters. From representation theory and Gerstenhaber algebras to control theory, from differential equations to Finsler geometry and Lepage manifolds, the book introduces young researchers in Mathematics to a wealth of different topics, encouraging a multidisciplinary approach to research. As such, it is suitable for students in doctoral courses, and will also benefit researchers who want to expand their field of interest.
