1. Record Nr. UNINA9910154751903321 Autore Kumpera Antonio Titolo Lie Equations, Vol. I: General Theory. (AM-73) // Donald Clayton Spencer, Antonio Kumpera Pubbl/distr/stampa Princeton, NJ:,: Princeton University Press,, [2016] ©1973 **ISBN** 1-4008-8173-0 Descrizione fisica 1 online resource (312 pages) Collana Annals of Mathematics Studies; ; 274 Disciplina 512/.55 Soggetti Lie groups Lie algebras Differential equations Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia Bibliographic Level Mode of Issuance: Monograph Note generali Nota di bibliografia Includes bibliographical references and index. Nota di contenuto Frontmatter -- Foreword -- Glossary of Symbols -- Table of Contents -- Introduction -- A. Integrability of Lie Structures -- B. Deformation Theory of Lie Structures -- Chapter I. Jet Sheaves and Differential Equations -- Chapter II. Linear Lie Equations -- Chapter III. Derivations and Brackets -- Chapter IV. Non-Linear Complexes -- Chapter V. Derivations of Jet Forms -- Appendix, Lie Groupoids -- References --Index Sommario/riassunto In this monograph the authors redevelop the theory systematically using two different approaches. A general mechanism for the deformation of structures on manifolds was developed by Donald Spencer ten years ago. A new version of that theory, based on the differential calculus in the analytic spaces of Grothendieck, was recently given by B. Malgrange. The first approach adopts Malgrange's idea in defining jet sheaves and linear operators, although the brackets and the non-linear theory arc treated in an essentially different manner. The second approach is based on the theory of derivations, and its relationship to the first is clearly explained. The introduction describes examples of Lie equations and known integrability theorems, and gives applications of the theory to be developed in the following chapters and in the subsequent volume.