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Titolo	Representations of Lie algebras : an introduction through gl _n // Anthony Henderson, School of Mathematics and Statistics, University of Sydney [[electronic resource]]
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Descrizione fisica	1 online resource (ix, 156 pages) : digital, PDF file(s)
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Soggetti	Representations of Lie algebras
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Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	Machine generated contents note: 1. Motivation: representations of Lie groups; 2. Definition of a Lie algebra; 3. Basic structure of a Lie algebra; 4. Modules over a Lie algebra; 5. The theory of SL ₂ -modules; 6. General theory of modules; 7. Integral GL _n -modules; 8. Guide to further reading; Appendix: solutions to the exercises; Bibliography; Index.
Sommario/riassunto	This bold and refreshing approach to Lie algebras assumes only modest prerequisites (linear algebra up to the Jordan canonical form and a basic familiarity with groups and rings), yet it reaches a major result in representation theory: the highest-weight classification of irreducible modules of the general linear Lie algebra. The author's exposition is focused on this goal rather than aiming at the widest

generality and emphasis is placed on explicit calculations with bases and matrices. The book begins with a motivating chapter explaining the context and relevance of Lie algebras and their representations and concludes with a guide to further reading. Numerous examples and exercises with full solutions are included. Based on the author's own introductory course on Lie algebras, this book has been thoroughly road-tested by advanced undergraduate and beginning graduate students and it is also suited to individual readers wanting an introduction to this important area of mathematics.
