

1. Record Nr.	UNINA9910303446603321
Autore	Akram Muhammad
Titolo	Fuzzy Lie Algebras // by Muhammad Akram
Pubbl/distr/stampa	Singapore : , : Springer Nature Singapore : , : Imprint : Springer, , 2018
ISBN	981-13-3221-5
Edizione	[1st ed. 2018.]
Descrizione fisica	1 online resource (XIX, 302 p. 14 illus., 4 illus. in color.)
Collana	Infosys Science Foundation Series in Mathematical Sciences, , 2364-4044
Disciplina	512
Soggetti	Algebra, Universal Logic, Symbolic and mathematical General Algebraic Systems Mathematical Logic and Foundations
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di contenuto	Chapter 1. Fuzzy Lie Structures -- Chapter 2. Interval-valued Fuzzy Lie Structures -- Chapter 3. Intuitionistic Fuzzy Lie Ideals -- Chapter 4. Generalized Fuzzy Lie Subalgebras -- Chapter 5. Fuzzy Lie Structures over a Fuzzy Field -- Chapter 6. Bipolar Fuzzy Lie Structures -- Chapter 7. mPolar Fuzzy Lie Ideals of Lie Algebras -- Chapter 8. Fuzzy Soft Lie algebras -- Chapter 9. Rough Fuzzy Lie Ideals -- Chapter 10. Fuzzy n-Lie Algebras.
Sommario/riassunto	This book explores certain structures of fuzzy Lie algebras, fuzzy Lie superalgebras and fuzzy n-Lie algebras. In addition, it applies various concepts to Lie algebras and Lie superalgebras, including type-1 fuzzy sets, interval-valued fuzzy sets, intuitionistic fuzzy sets, interval-valued intuitionistic fuzzy sets, vague sets and bipolar fuzzy sets. The book offers a valuable resource for students and researchers in mathematics, especially those interested in fuzzy Lie algebraic structures, as well as for other scientists. Divided into 10 chapters, the book begins with a concise review of fuzzy set theory, Lie algebras and Lie superalgebras. In turn, Chap. 2 discusses several properties of concepts like interval-valued fuzzy Lie ideals, characterizations of Noetherian Lie algebras, quotient Lie algebras via interval-valued fuzzy Lie ideals, and interval-valued fuzzy Lie superalgebras. Chaps. 3 and 4

focus on various concepts of fuzzy Lie algebras, while Chap. 5 presents the concept of fuzzy Lie ideals of a Lie algebra over a fuzzy field. Chapter 6 is devoted to the properties of bipolar fuzzy Lie ideals, bipolar fuzzy Lie subalgebras, bipolar fuzzy bracket product, solvable bipolar fuzzy Lie ideals and nilpotent bipolar fuzzy Lie ideals. Chap. 7 deals with the properties of m -polar fuzzy Lie subalgebras and m -polar fuzzy Lie ideals, while Chap. 8 addresses concepts like soft intersection Lie algebras and fuzzy soft Lie algebras. Chap. 9 deals with rough fuzzy Lie subalgebras and rough fuzzy Lie ideals, and lastly, Chap. 10 investigates certain properties of fuzzy subalgebras and ideals of n -ary Lie algebras.
