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Descrizione fisica	1 online resource (398 pages)
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Soggetti	Hypergroups Group theory Discrete mathematics Graph theory Geometry Group Theory and Generalizations Discrete Mathematics Graph Theory Teoria de grafs Geometria Llibres electrònics
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Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	1 Basic Facts -- 2 Closed Subsets -- 3 Elementary Structure Theory -- 4 Subnormality and Thin Residues -- 5 Tight Hypergroups -- 6 Involutions -- 7 Hypergroups with a Small Number of Elements -- 8 Constrained Sets of Involutions -- 9 Coxeter Sets of Involutions -- 10 Regular Actions of (Twin) Coxeter Hypergroups.
Sommario/riassunto	This book provides a comprehensive algebraic treatment of hypergroups, as defined by F. Marty in 1934. It starts with structural results, which are developed along the lines of the structure theory of groups. The focus then turns to a number of concrete classes of hypergroups with small parameters, and continues with a closer look at the role of involutions (modeled after the definition of group-theoretic

involutions) within the theory of hypergroups. Hypergroups generated by involutions lead to the exchange condition (a genuine generalization of the group-theoretic exchange condition), and this condition defines the so-called Coxeter hypergroups. Coxeter hypergroups can be treated in a similar way to Coxeter groups. On the other hand, their regular actions are mathematically equivalent to buildings (in the sense of Jacques Tits). A similar equivalence is discussed for twin buildings. The primary audience for the monograph will be researchers working in Algebra and/or Algebraic Combinatorics, in particular on association schemes.