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Sommario/riassunto	This book is a collection of 12 innovative research papers in the field of hypercompositional algebra, 7 of them being more theoretically oriented, with the other 5 presenting strong applicative aspects in engineering, control theory, artificial intelligence, and graph theory. Hypercompositional algebra is now a well-established branch of abstract algebra dealing with structures endowed with multi-valued operations, also called hyperoperations, having a set as the result of the interrelation between two elements of the support set. The theoretical papers in this book are principally related to three main topics: (semi)hypergroups, hyperfields, and BCK-algebra. Heidari and Cristea present a natural generalization of breakable semigroups, defining the breakable semihypergroups where every non-empty subset is a subsemihypergroup. Using the fundamental relation ? on a hypergroup, some new properties of the