Jordan theory has developed rapidly in the last three decades, but very few books describe its diverse applications. Here, the author discusses some recent advances of Jordan theory in differential geometry, complex and functional analysis, with the aid of numerous examples and concise historical notes. These include: the connection between Jordan and Lie theory via the Tits-Kantor-Koecher construction of Lie algebras; a Jordan algebraic approach to infinite dimensional symmetric manifolds including Riemannian symmetric spaces; the one-to-one correspondence between bounded symmetric domains and JB*-triples; and applications of Jordan methods in complex function theory. The basic structures and some functional analytic properties of JB*-triples are also discussed

The book is a convenient reference for experts in complex geometry or functional analysis, as well as an introduction to these areas for beginning researchers. The recent applications of Jordan theory discussed in the book should also appeal to algebraists.

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