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Altri autori (Persone)	FlorianHelmut
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Nota di contenuto	CONTENTS ; Preface ; 1 Boundary value problems and initial value problems for partial differential equations ; Hyperbolic equations, waves and the singularity theory; On the regularity of solutions of the first boundary problem for higher order hyperbolic differential equations ; Zeilon's operator and lacunae Representation of the Stokes potential in divergence form On spectra of the operator rotor ; Algebraic properties of potential differential and pseudodifferential operators ; The method of weighted function spaces for solving initial value and boundary value problems The optimization of fixed-point methods Principle of Telethoscope ; Isometric mappings and the problem of A. D. Aleksandrov for conservative distances ; Natural metrics of differential equations (abstract) ; Embedding theorems in anisotropic functional spaces (abstract) Distributional analysis of boundary value problems in half-spaces-exemplified by Melan's problem of elastostatics (abstract)

Backlund transformations and nonlinear evolution equations (ABSTRACT); Nonlinear perturbations of systems of partial differential equations (ABSTRACT)

Partial differential equations and cubature formulas (ABSTRACT)

2 Applications of functional-analytic and complex methods to mathematical physics

; Conservation laws for differential equations

; Applied quaternionic analysis. Maxwell's system and Dirac's equation

Integral transforms method in the conjugation problems of electromagnetic fields

Sommario/riassunto

Functional analysis is not only a tool for unifying mathematical analysis, but it also provides the background for today's rapid development of the theory of partial differential equations. Using concepts of functional analysis, the field of complex analysis has developed methods (such as the theory of generalized analytic functions) for solving very general classes of partial differential equations. This book is aimed at promoting further interactions of functional analysis, partial differential equations, and complex analysis including its generalizations such as Clifford analysis. New int
