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Lingua di pubblicazione	Inglese
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Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	1) complex variables and potential theory -- 2) differential equations: complex and functional analytic methods, applications -- 3) methods for applied sciences -- 4) clifford and quaternion analysis -- 5) spaces of differentiable functions of several real variables and applications -- 6) generalized functions -- 7) qualitative properties of evolution models -- 8) nonlinear infinite dimensional evolutions and control theory with applications -- 9) nonlinear pde and fixed point theory, topological and geometrical methods of analysis -- 10) didactical approaches to mathematical thinking -- 11) integral transforms and reproducing kernels -- 12) pseudo-differential operators -- 13) toeplitz operators and their applications -- 4) approximation theory and fourier analysis -- 15) differential and difference equations with

applications -- 16) analytic methods in complex geometry -- 17) applications of queueing theory in modelling and performance evaluation of computer networks. .

Sommario/riassunto

This book is a collection of papers from the 9th International ISAAC Congress held in 2013 in Kraków, Poland. The papers are devoted to recent results in mathematics, focused on analysis and a wide range of its applications. These include up-to-date findings of the following topics: - Differential Equations: Complex and Functional Analytic Methods - Nonlinear PDE - Qualitative Properties of Evolution Models - Differential and Difference Equations - Toeplitz Operators - Wavelet Theory - Topological and Geometrical Methods of Analysis - Queueing Theory and Performance Evaluation of Computer Networks - Clifford and Quaternion Analysis - Fixed Point Theory - M-Frame Constructions - Spaces of Differentiable Functions of Several Real Variables - Generalized Functions - Analytic Methods in Complex Geometry - Topological and Geometrical Methods of Analysis - Integral Transforms and Reproducing Kernels - Didactical Approaches to Mathematical Thinking Their wide applications in biomathematics, mechanics, queueing models, scattering, geomechanics etc. are presented in a concise, but comprehensible way, such that further ramifications and future directions can be immediately seen. .
