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Altri autori (Persone)	MolahajlooShahla
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Nota di contenuto	Preface -- Elliptic Theory for Operators Associated with Diffeomorphisms of Smooth Manifolds -- The Singular Functions of Branching Edge Asymptotics -- The Heat Kernel and Green Function of the Sub-Laplacian on the Heisenberg Group -- Metaplectic Equivalence of the Hierarchical Twisted Laplacian -- The Heat Kernel and Green Function of a Sub-Laplacian on the Hierarchical Heisenberg Group -- Lp-Bounds for Pseudo-Differential Operators on the Torus -- Multiplication Properties in Gelfand-Shilov Pseudo-Differential Calculus -- Operator Invariance -- Initial Value Problems in the Time-Frequency Domain -- Polycaloric Distributions and the Generalized Iterated Heat Operator -- Smoothing Effect and Fredholm Property for First-Order Hyperbolic PDEs -- A Note on Wave-Front Sets of Roumieu Type Ultradistributions -- Ordinary Differential Equations in Algebras of Generalized Functions -- Asymptotically Almost Periodic Generalized Functions -- Wave Equations and Symmetric First-Order Systems in Case of Low Regularity -- Concept of Delta-Shock Type Solutions to Systems of Conservation Laws and the Rankine-Hugoniot Conditions -- Classes of Generalized Functions with Finite Type Regularities -- The Wave Equation with a Discontinuous Coefficient Depending on Time

Only: Generalized Solutions and Propagation of Singularities -- Gerenalized Solutions of Abstract Stochastic Problems -- Nonhomogeneous First-Order Linear Malliavin Type Differential Equation. .

Sommario/riassunto	This volume consists of twenty peer-reviewed papers from the special sessions on pseudodifferential operators and on generalized functions and asymptotics at the Eighth Congress of ISAAC held at the Peoples' Friendship University of Russia in Moscow on August 2227, 2011. The category of papers on pseudo-differential operators contains such topics as elliptic operators assigned to diffeomorphisms of smooth manifolds, analysis on singular manifolds with edges, heat kernels and Green functions of sub-Laplacians on the Heisenberg group and Lie groups with more complexities than but closely related to the Heisenberg group, L^p-boundedness of pseudo-differential operators on the torus, and pseudo-differential operators related to time-frequency analysis. The second group of papers contains various classes of distributions and algebras of generalized functions with applications in linear and nonlinear differential equations, initial value problems and boundary value problems, stochastic and Malliavin-type differential equations. This second group of papers is related to the third collection of papers via the setting of Colombeau-type spaces and algebras in which microlocal analysis is developed by means of techniques in asymptotics. The volume contains the synergies of the three areas treated and is a useful complement to its predecessors published in the same series.