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Nota di contenuto	Preface -- Global Existence and Energy Decay of Solutions for a Nondissipative Wave Equation with a Time-Varying Delay Term -- Non-uniqueness and uniqueness in the Cauchy problem of elliptic and backward-parabolic equations -- On internal regularity of solutions to the initial value problem for the Zakharov–Kuznetsov equation -- Singular semilinear elliptic equations with subquadratic gradient terms -- On the parabolic regime of a hyperbolic equation with weak dissipation: the coercive case -- H¥ well-posedness for degenerate p-evolution models of higher order with time-dependent coefficients -- On the global solvability for semilinear wave equations with smooth time dependent propagation speeds -- Filippov Solutions to Systems of Ordinary Differential Equations with Delta Function Terms as Summands -- Resolvent estimates and scattering problems for

Schr¨odinger, Klein-Gordon and wave equations -- On an Optimal Control Problem for the Wave Equation in One Space Dimension Controlled by Third Type Boundary Data -- Critical exponent for the semilinear wave equation with time or space dependent damping -- A note on a class of conservative, well-posed linear control systems -- Recent progress in smoothing estimates for evolution equations -- Differentiability of Inverse Operators -- Quasi-symmetrizer and hyperbolic equations -- Solution of the Cauchy problem for generalized Euler-Poisson-Darboux equation by the method of fractional integrals -- Global Solutions of Semilinear System of Klein-Gordon Equations in de Sitter Spacetime.

Sommario/riassunto

Progress in Partial Differential Equations is devoted to modern topics in the theory of partial differential equations. It consists of both original articles and survey papers covering a wide scope of research topics in partial differential equations and their applications. The contributors were participants of the 8th ISAAC congress in Moscow in 2011 or are members of the PDE interest group of the ISAAC society. This volume is addressed to graduate students at various levels as well as researchers in partial differential equations and related fields. The reader will find this an excellent resource of both introductory and advanced material. The key topics are: • Linear hyperbolic equations and systems (scattering, symmetrisers) • Non-linear wave models (global existence, decay estimates, blow-up) • Evolution equations (control theory, well-posedness, smoothing) • Elliptic equations (uniqueness, non-uniqueness, positive solutions) • Special models from applications (Kirchhoff equation, Zakharov-Kuznetsov equation, thermoelasticity).