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   Note generali   Bibliographic Level Mode of Issuance: Monograph

   Nota di contenuto   to generalized functions and distributions -- Multiplications of
                       distributions in classical physics -- Elementary introduction -- Jump
                       formulas for systems in non-conservative form. New numerical
                       methods -- The case of several constitutive equations -- Linear wave
                       propagation in a medium with piecewise C? characteristics -- The
                       canonical Hamiltonian formalism of interacting quantum fields -- The
                       abstract theory of generalized functions.

   Sommario/riassunto This book presents recent and very elementary developments of a
                       theory of multiplication of distributions in the field of explicit and
                       numerical solutions of systems of PDEs of physics (nonlinear elasticity,
                       elastoplasticity, hydrodynamics, multifluid flows, acoustics). The
                       prerequisites are kept to introductory calculus level so that the book
                       remains accessible at the same time to pure mathematicians (as a
                       smooth and somewhat heuristic introduction to this theory) and to
                       applied mathematicians, numerical engineers and theoretical physicists
                       (as a tool to treat problems involving products of distributions).