

1. Record Nr.	UNINA9910788633103321
Titolo	Nonlinear partial differential equations and hyperbolic wave phenomena : the 2008-2009 Research Program on Nonlinear Partial Differential Equations, Centre for Advanced Study of the Norwegian Academy of Sciences and Letters, Oslo, Norway // Helge Holden, Kenneth H. Karlsen, editors
Pubbl/distr/stampa	Providence, Rhode Island : , : American Mathematical Society, , [2010] ©2010
ISBN	0-8218-8205-8
Descrizione fisica	1 online resource (402 p.)
Collana	Contemporary mathematics, ; 526 , 0271-4132
Disciplina	515/.353
Soggetti	Differential equations, Nonlinear Differential equations, Hyperbolic Differential equations, Partial
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Description based upon print version of record.
Nota di bibliografia	Includes bibliographical references.
Nota di contenuto	Contents -- Preface -- A hyperbolic model of granular flow -- 1. The model of granular flow -- 2. Global smooth solutions -- 3. Global existence of large BV solutions -- 4. Global BV solutions of an initial boundary value problem -- 5. Slow erosion limit -- References -- Hilbertian approaches to some non-linear conservation laws -- On the asymptotic behavior of the gradient flow of a polyconvex functional -- On degenerate partial differential equations -- Symmetric solutions to multi-dimensional conservation laws -- Product estimates for wave-Sobolev spaces in $2 + 1$ and $1 + 1$ dimensions -- 1. Introduction -- 2. Notation and preliminaries -- 3. The case $b_0 = b_1 = 0 < b_2$ -- 4. The case $b_0 = 0 < b_1, b_2$ in $2d$ -- 5. The case $0 < b_0, b_1, b_2$ in $2d$ -- 6. The case $b_0 < 0 < b_1, b_2$ in $2d$ -- 7. The product law in $1d$ -- References -- On the Cauchy problem for the modified Korteweg-de Vries equation with steplike finite-gap initial data -- Asymptotic analysis in thermodynamics of viscous fluids -- 1. Introduction -- 2. Mathematical theory of fluid dynamics -- 3. Long-time behavior -- 4. Scale analysis -- References -- Well-posedness and blow-up phenomena for a modified two-component Camassa-Holm equation --

Instability of solitary waves for a nonlinearly dispersive equation -- Kinetic relations for under-compressive shock waves. Physical, mathematical, and numerical issues -- Global regularity, and wave breaking phenomena in a class of non-local-dispersive equations -- Potential based, constraint preserving, genuinely multi-dimensional schemes for systems of conservation laws -- A local and low-order Navier-Stokes-Korteweg system -- Local existence for viscous system of conservation laws: H^s -data with $s > 1 + d/2$ -- Finite difference methods for discretizing singular source terms in a Poisson interface problem.
