Record Nr. UNISA996466624103316 Autore Hayashi Nakao Titolo Asymptotics for dissipative nonlinear equations / / N. Hayashi [and three others] Pubbl/distr/stampa Berlin; Heidelberg:,: Springer,, [2006] ©2006 **ISBN** 1-280-61516-8 9786610615162 3-540-32060-1 Edizione [1st ed. 2006.] Descrizione fisica 1 online resource (569 p.) Collana Lecture notes in mathematics; ; 1884 Altri autori (Persone) HayashiNakao 515.35 Disciplina Soggetti Differential equations, Nonlinear - Asymptotic theory Differential equations, Partial - Asymptotic theory Lingua di pubblicazione Inglese Materiale a stampa **Formato** Livello bibliografico Monografia Note generali Description based upon print version of record. Nota di bibliografia Includes bibliographical references (pages [541]-553) and index. Nota di contenuto Preliminary results -- Weak Nonlinearity -- Critical Nonconvective Equations -- Critical Convective Equations -- Subcritical Nonconvective Equations -- Subcritical Convective Equations. Sommario/riassunto Many of problems of the natural sciences lead to nonlinear partial differential equations. However, only a few of them have succeeded in being solved explicitly. Therefore different methods of qualitative analysis such as the asymptotic methods play a very important role. This is the first book in the world literature giving a systematic development of a general asymptotic theory for nonlinear partial differential equations with dissipation. Many typical well-known equations are considered as examples, such as: nonlinear heat equation, KdVB equation, nonlinear damped wave equation, Landau-

Ginzburg equation, Sobolev type equations, systems of equations of

Boussinesq, Navier-Stokes and others.