

1. Record Nr.	UNINA9910819097903321
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Titolo	Shock Waves and Reaction—Diffusion Equations // by Joel Smoller
Pubbl/distr/stampa	New York, NY : , : Springer New York : , : Imprint : Springer, , 1994
ISBN	1-4612-0873-4
Edizione	[2nd ed. 1994.]
Descrizione fisica	1 online resource (XXIII, 634 p.)
Collana	Grundlehren der mathematischen Wissenschaften, A Series of Comprehensive Studies in Mathematics, , 0072-7830 ; ; 258
Disciplina	515
Soggetti	Mathematical analysis Analysis (Mathematics) Analysis
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Bibliographic Level Mode of Issuance: Monograph
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	1 Ill-Posed Problems -- 2 Characteristics and Initial-Value Problems -- 3 The One-Dimensional Wave Equation -- 4 Uniqueness and Energy Integrals -- 5 Holmgren's Uniqueness Theorem -- 6 An Initial-Value Problem for a Hyperbolic Equation -- 7 Distribution Theory -- 8 Second-Order Linear Elliptic Equations -- 9 Second-Order Linear Parabolic Equations -- 10 Comparison Theorems and Monotonicity Methods -- 11 Linearization -- 12 Topological Methods -- 13 Bifurcation Theory -- 14 Systems of Reaction-Diffusion Equations -- 15 Discontinuous Solutions of Conservation Laws -- 16 The Single Conservation Law -- 17 The Riemann Problem for Systems of Conservation Laws -- 18 Applications to Gas Dynamics -- 19 The Glimm Difference Scheme -- 20 Riemann Invariants, Entropy, and Uniqueness -- 21 Quasi-Linear Parabolic Systems -- 22 The Conley Index -- 23 Index Pairs and the Continuation Theorem -- 24 Travelling Waves -- 25 Recent Results -- Author Index.
Sommario/riassunto	For this edition, a number of typographical errors and minor slip-ups have been corrected. In addition, following the persistent encouragement of Olga Oleinik, I have added a new chapter, Chapter 25, which I titled "Recent Results." This chapter is divided into four sections, and in these I have discussed what I consider to be some of the important developments which have come about since the writing of the first edition. Section I deals with reaction-diffusion equations,

and in it are described both the work of C. Jones, on the stability of the travelling wave for the Fitz-Hugh-Nagumo equations, and symmetry-breaking bifurcations. Section II deals with some recent results in shock-wave theory. The main topics considered are L. Tartar's notion of compensated compactness, together with its application to pairs of conservation laws, and T.-P. Liu's work on the stability of viscous profiles for shock waves. In the next section, Conley's connection index and connection matrix are described; these general notions are useful in constructing travelling waves for systems of nonlinear equations. The final section, Section IV, is devoted to the very recent results of C. Jones and R. Gardner, whereby they construct a general theory enabling them to locate the point spectrum of a wide class of linear operators which arise in stability problems for travelling waves. Their theory is general enough to be applicable to many interesting reaction-diffusion systems.
