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Autore	Guo Boling
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Nota di contenuto	Frontmatter -- Preface -- Contents -- 1. Sobolev Space and Preliminaries -- 2. The Vanishing Viscosity Method of Some Nonlinear Evolution System -- 3. The Vanishing Viscosity Method of Quasilinear Hyperbolic System -- 4. Physical Viscosity and Viscosity of Difference Scheme -- 5. Convergence of Lax-Friedrichs Scheme, Godunov Scheme and Glimm Scheme -- 6. Electric-Magnetohydrodynamic Equations -- References
Sommario/riassunto	The book summarizes several mathematical aspects of the vanishing viscosity method and considers its applications in studying dynamical systems such as dissipative systems, hyperbolic conservation systems and nonlinear dispersion systems. Including original research results, the book demonstrates how to use such methods to solve PDEs and is an essential reference for mathematicians, physicists and engineers working in nonlinear science. Contents:PrefaceSobolev Space and PreliminariesThe Vanishing Viscosity Method of Some Nonlinear Evolution SystemThe Vanishing Viscosity Method of Quasilinear Hyperbolic SystemPhysical Viscosity and Viscosity of Difference SchemeConvergence of Lax-Friedrichs Scheme, Godunov Scheme and Glimm SchemeElectric-Magnetohydrodynamic EquationsReferences