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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 conversion 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