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Nota di contenuto	3.3 Uniqueness of Entropy Solutions3.4 The Ansatz due to Kruzkov; 4 The Riemann Problem; 4.1 Numerical Importance of the Riemann Problem; 4.2 The Riemann Problem in the Case of Linear Systems; 5 Real Fluids; 5.1 The Navier-Stokes Equations Model; 5.2 Drag Force and the Hagen-Poiseuille Law; 5.3 Stokes Approximation and Artificial Time; 5.4 Foundations of the Boundary Layer Theory; Flow Separation; 5.5 Stability of Laminar Flows; 6 Existence Proof for Entropy Solutions by Means of Discretization Procedures; 6.1 Some Historical Remarks; 6.2 Reduction to Properties of Operator Sequences 6.3 Convergence Theorems6.4 Example; 7 Types of Discretization Principles; 7.1 Some General Remarks; 7.2 The Finite Difference Calculus; 7.3 The CFL Condition; 7.4 Lax-Richtmyer Theory; 7.5 The von Neumann Stability Criterion; 7.6 The Modified Equation; 7.7 Difference Schemes in Conservation Form; 7.8 The Finite Volume Method on Unstructured Grids; Some Extensive Monographs; Index
Sommario/riassunto	This introduction to the field contains a careful selection of topics and examples without sacrificing scientific strictness. The author guides

readers through mathematical modelling, the theoretical treatment of the underlying physical laws and the construction and effective use of numerical procedures to describe the behaviour of the dynamics of physical flow. Both students and experts intending to control or predict the behavior of fluid flows by theoretical and computational fluid dynamics will benefit from the combination of all relevant aspects in one handy volume.The book consists o