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Nota di contenuto	Preface; Contents; 0. Introduction; 1. The Main Equations and Approaches to Solutions of the Problems in Rarefied Gas Dynamics; 2. Development of the Numerical Methods of Solution of the Linear Kinetic Equations; 3. Methods of Solution of the Nonlinear Problems in Rarefied Gas Dynamics; 4. Modeling of the Flow of Continuous Media; 5. Solution of the Navier-Stokes Equations (Petrov133-139); 6. Studies of the Weakly Perturbed Flows of Rarefied Gas; 7. Study of the Flows About Different Bodies in Transitional Regime 8. Determination of the Aerodynamical Characteristics of the Returnable Space Systems (RSS) 9. The Flow About Blunted Bodies with the Addition of Heat (see Vorovich, Moiseev); 10. The General Models of Description of the Turbulent Flows; 11. Studies of the Turbulent Flow of Fluid and Gas; 12. The Possible Directions of Development of the Methods of Statistical Study; Conclusions; References
Sommario/riassunto	This book is devoted to analysis of Monte Carlo methods developed in rarefied gas dynamics. Presented is the short history of the development of such methods, described are their main properties, their advantages and deficiencies. It is shown that the contemporary

stage in the progress of computational methods cannot be regarded without a complex approach to the preparation of algorithms taking into account all the peculiarities of the problem under consideration, that is, of the physical nature of a process, the mathematical model and the theoretical aspects of computational mathematics and s
