Record Nr. UNINA9910820965403321 Autore Greenspan Donald Titolo Molecular and particle modelling of laminar and turbulent flows / / by **Donald Greenspan** Hackensack, N.J., : World Scientific, 2005 Pubbl/distr/stampa **ISBN** 1-281-88102-3 9786611881023 981-256-935-9 Edizione [1st ed.] Descrizione fisica 1 online resource (179 p.) Disciplina 532/.052/015118 Turbulence - Mathematical models Soggetti Laminar flow - Mathematical models Water vapor transport - Mathematical models Vapors - Mathematical models Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia Note generali Description based upon print version of record. Nota di bibliografia Includes bibliographical references and index. Nota di contenuto Preface: Contents: 1. Mathematical, Physical, and Computational Preliminaries: 2. Molecular Cavity Flow of Argon Vapor in Two Dimensions; 3. Molecular Cavity Flow of Air Vapor in Two Dimensions; 4. Molecular Cavity Flow of Water Vapor in Two Dimensions: 5. Molecular Cavity Flow of Water Vapor in Three Dimensions; 6. Particle Models of Flow in Two Dimensions; 7. The Flow of Water Vapor Around a Flat Plate; 8. Extant Problems with Continuum Models; References and Additional Sources: Index Sommario/riassunto Turbulence is the most fundamental and, simultaneously, the mostcomplex form of fluid flow. However, because an understanding ofturbulence requires an understanding of laminar flow, both are explored in this book. Groundwork is laid by careful delineation of the necessary physical, mathematical, and numerical requirements for the studies which follow, and include discussions of N-body problems, classical molecularmechanics, dynamical equations, and the leap frog formulas for verylarge systems of second order ordinary differential equations.