

1. Record Nr.	UNINA9910783220803321
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Titolo	N-body problems and models [[electronic resource] /] / Donald Greenspan
Pubbl/distr/stampa	Singapore ; ; Hong Kong, : World Scientific, c2004
ISBN	1-281-87704-2 9786611877040 981-256-549-3
Descrizione fisica	1 online resource (193 p.)
Disciplina	530.14/4
Soggetti	Many-body problem - Computer simulation Many-body problem - Mathematical models Molecules - Computer simulation
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 (p. 175-177) and index.
Nota di contenuto	Preface; Contents; Problem Statement; 1. The 1-Body Problem; 2. N-Body Problems with 2 10000. The Cavity Problem; 5. N(Number of Molecules) > 10000. Crack and Fracture Development; 6. N(Molecules) > 10000. Contact Angle of Adhesion; 7. A Particle Model of Carbon Dioxide Bubbles in Water; 8. A Particle Model a Dodecahedral Rotating Top; 9. A Particle Model of Self Reorganization; 10. Particle Model of a Bouncing Elastic Ball; 11. Particle Model of String Solitons 12. Particle Models of Minimal Surfaces and Saddle Surfaces Appendix I A Generic Program for Kutta's Fourth Order Formulas for Second Order Initial Value Problems; Appendix II Newton's Iteration Formulas for Systems of Algebraic and Transcendental Equations; Appendix III The Leap Frog Formulas; References and Additional Sources; Index
Sommario/riassunto	The study and application of N-body problems has had an important role in the history of mathematics. In recent years, the availability of modern computer technology has added to their significance, since computers can now be used to model material bodies as atomic and molecular configurations, i.e. as N-body configurations.