1. Record Nr. UNINA990002901630403321

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| Autore | Moore, James C. |
| Titolo | Mathematical methods for economic theory 2 / James C. Moore |
| Pubbl/distr/stampa | Berlin : Springer, c1999 |
| ISBN | 3-540-66242-1 |
| Descrizione fisica | x, 339 p. ; 24 cm |
| Collana | Studies in economic theory ; 10 |
| Disciplina | 332.601 |
| Locazione | MAS |
| Collocazione | MXX-A-197 |
| Lingua di pubblicazione | Inglese |
| Formato | Materiale a stampa |
| Livello bibliografico | Monografia |
| Note generali | Vol. 2 |

2. Record Nr. UNINA9910437869203321

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|---|---|
| Autore | Cordani Bruno |
| Titolo | Geography of order and chaos in mechanics : investigations of quasi-integrable systems with analytical, numerical, and graphical tools / / Bruno Cordani |
| Pubbl/distr/stampa | New York, : Birkhauser, 2013 |
| ISBN | 1-283-90992-8<br>0-8176-8370-4 |
| Edizione | [1st ed. 2013.] |
| Descrizione fisica | 1 online resource (346 p.) |
| Collana | Progress in mathematical physics ; ; v. 64 |
| Disciplina | 515.39<br>530.15 |
| Soggetti | Statistical mechanics<br>Mechanics - Mathematical models<br>Mathematical analysis |
| 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 -- List of Figures -- 1 Introductory Survey -- 2 Analytical Mechanics and Integrable Systems -- 3 Perturbation Theory -- 4 Numerical Tools I: ODE Integration -- 5 Numerical Tools II: Detecting Order, Chaos, and Resonances -- 6 The Kepler Problem -- 7 The KEPLER Program -- 8 Some Perturbed Keplerian Systems -- 9 The Multi-Body Gravitational Problem -- Bibliography -- Index. |
| Sommario/riassunto | This original monograph aims to explore the dynamics in the particular but very important and significant case of quasi-integrable Hamiltonian systems, or integrable systems slightly perturbed by other forces. With both analytic and numerical methods, the book studies several of these systems—including for example the hydrogen atom or the solar system, with the associated Arnold web—through modern tools such as the frequency-modified fourier transform, wavelets, and the frequency-modulation indicator. Meanwhile, it draws heavily on the more standard KAM and Nekhoroshev theorems. Geography of Order and Chaos in Mechanics contains many figures that illuminate its concepts in novel ways, but perhaps its most useful feature is its inclusion of software to reproduce the various numerical experiments. The graphical user |

interfaces of five supplied MATLAB programs allows readers without any knowledge of computer programming to visualize and experiment with the distribution of order, chaos and resonances in various Hamiltonian systems. This monograph will be a valuable resource for professional researchers and certain advanced undergraduate students in mathematics and physics, but mostly will be an exceptional reference for Ph.D. students with an interest in perturbation theory.