1. Record Nr. UNINA9910817326903321

Autore	Irwin M. C (Michael Charles), <1934->
Titolo	Smooth dynamical systems / / M.C. Irwin
Pubbl/distr/stampa	Singapore ; ; River Edge, N.J., : World Scientific, c2001
ISBN	1-281-95165-X 9786611951658 981-281-012-9
Edizione	[1st ed.]
Descrizione fisica	1 online resource (273 p.)
Collana	Advanced series in nonlinear dynamics ; ; v. 17
Disciplina	515/.352
Soggetti	Differentiable dynamical systems Differential equations
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. 246-252) and index.
Nota di contenuto	Contents ; Foreword ; Preface ; Introduction ; I. The simple pendulum ; II. A dissipative system ; III. The spherical pendulum ; IV. Vector fields and dynamical systems ; Chapter 1. Some Simple Examples ; I. Flows and homeomorphisms ; II. Orbits III. Examples of dynamical systems IV. Constructing systems ; V. Properties of orbits ; Appendix 1 ; I. Group actions ; Chapter 2. Equivalent Systems ; I. Topological conjugacy ; II. Homeomorphisms of the circle ; III. Flow equivalence and topological equivalence IV. Local equivalence V. Limit sets of flows ; VI. Limit sets of homeomorphisms ; VII. Non-wandering sets ; Appendix 2 ; I. Two topological lemmas ; II. Oriented orbits in Hausdorff spaces ; III. Compactification ; Chapter 3. Integration of Vector Fields ; I. Vector fields II. Velocity vector fields and integral flows III. Ordinary differential equations ; IV. Local

integrals ; V. Global integrals ; Appendix 3 ; I. Integrals of perturbed vector fields ; II. First integrals ; Chapter 4. Linear Systems ; I. Linear flows on R"" II. Linear automorphisms of R"" III. The spectrum of a linear endomorphism ; IV. Hyperbolic linear automorphisms ; V. Hyperbolic linear vector fields ; Appendix 4 ; I. Spectral Theory ; Chapter 5. Linearization ; I. Regular points ; II. Hartman's theorem III. Hartman's theorem for flows

Sommario/riassunto

This is a reprint of M C Irwin's beautiful book, first published in 1980. The material covered continues to provide the basis for current research in the mathematics of dynamical systems. The book is essential reading for all who want to master this area. Request Inspection Copy
Contents: Some Simple Examples
Equivalent Systems
Integration of Vector Fields
Linear Systems, Linearization, Stable Manifolds
Stable Systems
Appendices
Readership: Graduate students in mathematics.
