

Zeitschrift: Helvetica Physica Acta
Band: 71 (1998)
Heft: 1

Buchbesprechung: Iterated maps on the interval as dynamical systems [P. Collet; J.-P. Eckmann]
Autor: [s.n.]

Nutzungsbedingungen

Die ETH-Bibliothek ist die Anbieterin der digitalisierten Zeitschriften. Sie besitzt keine Urheberrechte an den Zeitschriften und ist nicht verantwortlich für deren Inhalte. Die Rechte liegen in der Regel bei den Herausgebern beziehungsweise den externen Rechteinhabern. Siehe Rechtliche Hinweise.

Conditions d'utilisation

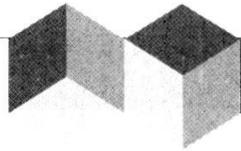
L'ETH Library est le fournisseur des revues numérisées. Elle ne détient aucun droit d'auteur sur les revues et n'est pas responsable de leur contenu. En règle générale, les droits sont détenus par les éditeurs ou les détenteurs de droits externes. Voir Informations légales.

Terms of use

The ETH Library is the provider of the digitised journals. It does not own any copyrights to the journals and is not responsible for their content. The rights usually lie with the publishers or the external rights holders. See Legal notice.

Download PDF: 21.05.2025

ETH-Bibliothek Zürich, E-Periodica, <https://www.e-periodica.ch>



P. Collet, Ecole Polytechnique, Palaiseau, France /
J.-P. Eckmann, Université de Genève, Switzerland

Iterated Maps on the Interval as Dynamical Systems

1993. 258 pages. Hardcover.

2nd printing 1997

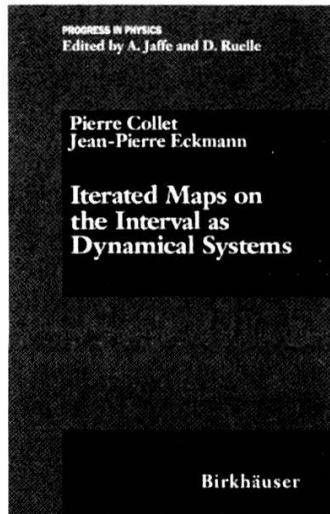
DM 99.-/öS 723.-/sFr. 98.-

ISBN 3-7643-3026-0

PPh 1 · Progress in Physics

This monograph explores a simple model of a dynamical system, the continuous maps of an interval into itself. Such systems appear in many investigations in mathematics, physics, biology, and even economics.

The book has been used widely by researchers and graduate students in these fields and has become a classic reference.



Contents

Introduction

Part I. Motivation and Interpretation

1. One-parameter families of maps
2. Typical behavior for one map
3. Parameter dependence
4. Systematics of the stable periods
5. On the relative frequency of periodic and aperiodic behavior
6. Scaling and related predictions
7. Multidimensional systems

Mathematical Aspects and Proofs

Part II. Properties of Individual Maps

1. Unimodal maps and their itineraries
2. The calculus of Itineraries
3. Itineraries and orbits
4. Negative Schwarzian derivative
5. Homtervals
6. Topological conjugacy
7. Sensitive dependence on initial conditions
8. Ergodic Properties, Entropy

Part III. Properties of One-parameter Families of Maps

1. Occurrence of itineraries
2. Abundance of aperiodic behavior
3. Universal scaling
4. Extension to higher dimensional maps

For orders originating from all over the world except USA and Canada:
Birkhäuser Verlag AG
P.O. Box 133
CH-4010 Basel/Switzerland
Fax: +41/61/205 07 92
e-mail: farnik@birkhauser.ch

For orders originating in the USA and Canada:
Birkhäuser
333 Meadowland Parkway
USA-Secaucus, NJ 07094-2491
Fax: +1 201 348 4033
e-mail: orders@birkhauser.com

Birkhäuser
Birkhäuser Verlag AG
Basel · Boston · Berlin

