

Table of Contents

<i>Gunter Ochs</i>	1
Random Attractors: Robustness, Numerics and Chaotic Dynamics	
<i>Christoph Bandt</i>	31
Self-Similar Measures	
<i>Wolf-Jürgen Beyn, Winfried Kleß, and Vera Thümmler</i>	47
Continuation of Low-Dimensional Invariant Subspaces in Dynamical Systems of Large Dimension	
<i>Klaus Böhmer</i>	73
On Hybrid Methods for Bifurcation and Center Manifolds for General Operators	
<i>Jörg Schmeling</i>	109
Dimension Theory of Smooth Dynamical Systems	
<i>Fritz Colonius and Wolfgang Kliemann</i>	131
Collision of Control Sets	
<i>Michael Dellnitz, Gary Froyland, and Oliver Junge</i>	145
The Algorithms Behind GAIO - Set Oriented Numerical Methods for Dynamical Systems	
<i>Manfred Denker and Stefan-M. Heinemann</i>	175
Polynomial Skew Products	
<i>Ch. Schütte, W. Huisinga, and P. Deuffhard</i>	191
Transfer Operator Approach to Conformational Dynamics in Biomolecular Systems	
<i>Michael Fried and Andreas Veiser</i>	225
Simulation and Numerical Analysis of Dendritic Growth	
<i>F. Feudel, S. Rüdiger, and N. Seehafer</i>	253
Bifurcation Phenomena and Dynamo Effect in Electrically Conducting Fluids	
<i>Ale Jan Homburg</i>	271
Cascades of Homoclinic Doubling Bifurcations	

<i>Heinrich Freistühler, Christian Fries, and Christian Rohde</i>	287
Existence, Bifurcation, and Stability of Profiles for Classical and Non-Classical Shock Waves	
<i>K.P. Hadeler and Johannes Müller</i>	311
Dynamical Systems of Population Dynamics	
<i>Gerhard Keller and Matthias St.Pierre</i>	333
Topological and Measurable Dynamics of Lorenz Maps	
<i>Mariana Hărăguș-Courcelle and Klaus Kirchgässner</i>	363
Three-Dimensional Steady Capillary-Gravity Waves	
<i>L. Grüne and P.E. Kloeden</i>	399
Discretization, Inflation and Perturbation of Attractors	
<i>J. Becker, D. Bürkle, R.-T. Happe, T. Preußner, M. Rumpf, M. Spielberg, and R. Strzodka</i>	417
Aspects on Data Analysis and Visualization for Complicated Dynamical Systems	
<i>Markus Kunze and Tassilo Küpper</i>	431
Non-Smooth Dynamical Systems: An Overview	
<i>Frédéric Guyard and Reiner Lauterbach</i>	453
Forced Symmetry Breaking and Relative Periodic Orbits	
<i>Christian Lubich</i>	469
On Dynamics and Bifurcations of Nonlinear Evolution Equations Under Numerical Discretization	
<i>Felix Otto</i>	501
Evolution of Microstructure: an Example	
<i>Cheng-Hung Chang and Dieter Mayer</i>	523
An Extension of the Thermodynamic Formalism Approach to Selberg's Zeta Function for General Modular Groups	
<i>Alexander Mielke, Guido Schneider, and Hannes Uecker</i>	563
Stability and Diffusive Dynamics on Extended Domains	
<i>Volker Reitmann</i>	585
Dimension Estimates for Invariant Sets of Dynamical Systems	
<i>Hannes Hartenstein, Matthias Ruhl, Dietmar Saupe, and Edward R. Vrscay</i>	617
On the Inverse Problem of Fractal Compression	
<i>Matthias Rumberger and Jürgen Scheurle</i>	649
The Orbit Space Method: Theory and Application	

<i>Dmitry Turaev</i>	691
Multi-Pulse Homoclinic Loops in Systems with a Smooth First Integral	
<i>A. Bäcker and F. Steiner</i>	717
Quantum Chaos and Quantum Ergodicity	
<i>Matthias Büger</i>	753
Periodic Orbits and Attractors for Autonomous Reaction- Diffusion Systems	
<i>Christiane Helzel and Gerald Warnecke</i>	775
Unconditionally Stable Explicit Schemes for the Approximation of Conservation Laws	
Color Plates	805
Author Index	819