

Contents

Preface	ix
0. Introduction: Gradient Systems	1
1. Closed Relations and Their Dynamic Extensions	5
2. Invariant Sets and Lyapunov Functions	25
3. Attractors and Basic Sets	41
4. Mappings—Invariant Subsets and Transitivity Concepts	59
5. Computation of the Chain Recurrent Set	79
6. Chain Recurrence and Lyapunov Functions for Flows	103
7. Topologically Robust Properties of Dynamical Systems	123
8. Invariant Measures for Mappings	153
9. Examples—Circles, Simplex, and Symbols	179
10. Fixed Points	199
11. Hyperbolic Sets and Axiom A Homeomorphisms	221
Historical Remarks	253
References	255
Subject Index	259