

Contents

Chapter 1. Background and Basics	1
§ 1.1 Subshifts of Finite Type	2
§ 1.2 Examples	4
§ 1.3 Perron-Frobenius Theory	16
§ 1.4 Basic Dynamics	21
Notes	28
References	31
Chapter 2. Topological Conjugacy	33
§ 2.1 Decomposition of Topological Conjugacies	33
§ 2.2 Algebraic Consequences of Topological Conjugacy	47
Notes	59
References	61
Chapter 3. Automorphisms	63
§ 3.1 Automorphisms	64
§ 3.2 Automorphisms as Conjugacies	66
§ 3.3 Subgroups of the Automorphism Group	74
§ 3.4 Actions of Automorphisms	88
§ 3.5 Summary	91
Notes	91
References	93
Chapter 4. Embeddings and Factor Maps	95
§ 4.1 Factor Maps	95
§ 4.2 Finite-to-one Factor Maps	101
§ 4.3 Special Constructions Involving Factor Maps	113
§ 4.4 Subsystems and Infinite-to-One Factor Maps	120
Notes	130
References	132

Chapter 5. Almost-Topological Conjugacy	135
§ 5.1 Reducible Subshifts of Finite Type	135
§ 5.2 Almost-Topological Conjugacy	138
Notes	145
References	146
Chapter 6. Further Topics	147
§ 6.1 Sofic Systems	147
§ 6.2 Markov Measures and the Maximal Measure	159
§ 6.3 Markov Subgroups	177
§ 6.4 Cellular Automata	181
§ 6.5 Channnel Codes	182
Notes	188
References	191
Chapter 7. Countable State Markov Shifts	195
§ 7.1 Perron-Frobenius Theory	195
§ 7.2 Basic Symbolic Dynamics	226
Notes	238
References	239
Bibliography	241
Name Index	247
Subject Index	249