Contents

Preface		vii
Pa	rt I Basic material	
1	Equilibrium concepts; notation	3
2	Markov processes: standard material	26
3	Markov processes: supplementary material	56
4	Reversibility	77
Pa	rt II Abundance and transfer models	
5	Markov models and statistical mechanics: basic	107
6	Markov models and statistical mechanics: variations	138
7	Chemical kinetics and equilibrium	149
8	Resource-induced ecological competition	164
Pai	t III Network models	
9	Jackson networks	185
10	Jackson networks with structured nodes	220
11	Weak coupling	257
12	Insensitivity	264
Par	t IV Bonding models; polymerization and random graphs	
13	Polymerization; the simplest models	281
14	Polymer and unit statistics	303

vi CONTENTS

15	Compartmental statistics	334
16	Multi-type models	353
17	Role-adaptation; new critical effects	371
Pa	rt V Spatial models; random fields	
18	Random fields	387
19	Gaussian random fields	406
20	Random fields generated by dynamic models	424
Apį	pendices	
1	Stochastic invariance and equivalence	439
2	Hamiltonian structure	442
3	Constrained maximization	444
References		449
Index		455