

# Table of Contents

**Measure-Valued Markov Processes ..... 1**  
D.A. Dawson

1. Introduction..... 7  
2. From Particle Systems to Measure-valued Processes..... 17  
3. Random Measures and Canonical Measure-valued Processes ..... 40  
4. Measure-valued Branching and Log-Laplace Functionals..... 59  
5. Probability Measure-valued Processes and Martingale Problems..... 78  
6. A Martingale Problem Formulation of Measure-valued Branching..... 105  
7. Stochastic Calculus of Measure-valued Processes ..... 116  
8. Structural Properties of Branching and Sampling Martingale Problems ..... 129  
9. Sample Path Properties of Super-Brownian Motion ..... 146  
10. Building Measure-valued Processes with Interactions. Various Examples ..... 170  
11. Palm Distributions, de Finetti Representation and Poisson Cluster Representation ..... 186  
12. Family Structure and Historical Processes ..... 200  
References..... 239  
Subject Index ..... 257

**Dawson-Watanabe Superprocesses and Measure-valued Diffusions .....261**  
E. Perkins

Introduction..... 269  
Branching Particle Systems and Dawson-Watanabe Superprocesses..... 273  
Sample Path Properties of Superprocesses..... 331  
Interactive Drifts ..... 385  
Spatial Interactions ..... 419  
References..... 457  
Index ..... 464