

Contents

Preface to the English Edition	v
Preface	vii
CHAPTER I. The Method of Absolutely Continuous Change of Measure	1
§1. A lemma on the existence of exponential moments	1
§2. An inequality for solutions of stochastic differential equations with zero drift vector	4
§3. Properties of exponential supermartingales	12
§4. Construction of a solution in the case of Conditions (A) and (B)	21
§5. Properties of the solution constructed. Uniqueness	30
§6. A limit theorem	36
§7. Construction of a solution in the general case	39
CHAPTER II. The Analytic Method	49
§1. Two lemmas	49
§2. The fundamental solution	55
§3. Construction of a solution of a stochastic differential equation	73
§4. A limit theorem	83
§5. The homogeneous case	95
§6. The case $m = 1$ and $b(x) \equiv 1$	111
CHAPTER III. Generalized Diffusion Processes	119
§1. Definitions	119
§2. Processes with integrable drift coefficient	122
§3. Processes with generalized drift coefficient	125
§4. Stochastic differential equations with generalized drift vector	148
Comments	163
Bibliography	173
Index	179