Table of Contents

I. General Theory ... 1

1. Transience and Recurrence ... 3

2. Regular Dirichlet Spaces ... 20

3. Some Potential Theory ... 24

4. Construction of Processes ... 39

5. An Approximate Markov Process ... 61

6. Additive Functionals ... 69

7. Balayage ... 78

8. Random Time Change ... 84

II. Decomposition of the Dirichlet Form ... 97

9. Potentials in the Wide Sense ... 98

10. The Lévy Kernel ... 102

11. The Diffusion Form ... 112

12. Characterization of ν and J ... 126

III. Structure Theory ... 130

13. Preliminary Formula ... 133

14. The Reflected Dirichlet Space ... 143

15. First Structure Theorem ... 152

16. The Recurrent Case ... 158

17. Scope of First Structure Theorem ... 165

18. The Enveloping Dirichlet Space ... 173

19. Equivalent Regular Representations ___ 178

20. Second Structure Theorem ___ 183

21. Third Structure Theorem ___ 216

IV. Examples ___ 220

22. Diffusions with Bounded Scale; No Killing ___ 222

23. Diffusions with Bounded Scale; Nontrivial Killing ___ 225

24. Unbounded Scale ___ 237

25. Infinitely Divisible Processes ___ 248

26. Stable Markov Chains ___ 254

27. General Markov Chains ___ 258