

Dirichlet Forms and Symmetric Markov Processes

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This book contains an introductory and comprehensive account of the theory of (symmetric) Dirichlet forms. Moreover this analytic theory is unified with the probabilistic potential theory based on symmetric Markov processes and developed further in conjunction with the stochastic analysis based on additive functional.

Since the publication of the first edition in 1994, this book has attracted constant interests from readers and is by now regarded as a standard reference for the theory of Dirichlet forms. For the present second edition, the authors not only revised the existing text, but also added sections on capacities and Sobolev type inequalities, irreducible recurrence and ergodicity, recurrence and Poincaré type inequalities, the Donsker–Varadhan type large deviation principle, as well as several new exercises with solutions.

The book addresses to researchers and graduate students who wish to comprehend the area of Dirichlet forms and symmetric Markov processes.

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- › The scope of Dirichlet forms
- › Analysis by symmetric Hunt processes
- › Stochastic analysis by additive functionals
- › Transformations of forms and processes
- › Construction of symmetric Markov processes



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