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Nota di contenuto	Contents ; Preface ; 1. Transition Functions and Markov Processes ; 1.1 Introduction ; 1.1.1 Notation ; 1.1.2 Elements of Probability Theory ; 1.1.3 Locally Compact Spaces ; 1.1.4 Stochastic Processes ; 1.1.5 Filtrations ; 1.2 Markov Property 1.3 Transition Functions and Backward Transition Functions 1.4 Markov Processes Associated with Transition Functions ; 1.5 Space-Time Processes ; 1.6 Classes of Stochastic Processes ; 1.7 Completions of o-Algebras 1.8 Path Properties of Stochastic Processes: Separability and Progressive Measurability 1.9 Path Properties of Stochastic Processes: One-Sided Continuity and Continuity ; 1.10 Reciprocal Transition Functions and Reciprocal Processes ; 1.11 Path Properties of Reciprocal Processes 1.12 Examples of Transition Functions and Markov Processes 1.12.1 Brownian motion and Brownian bridge ; 1.12.2 Cauchy process and Cauchy bridge

; 1.12.3 Forward Kolmogorov representation of Brownian bridges
; 1.13 Notes and Comments ; 2. Propagators: General Theory
2.1 Propagators and Backward Propagators on Banach Spaces
2.2 Free Propagators and Free Backward Propagators
; 2.3 Generators of Propagators and Kolmogorov's Forward and Backward Equations
; 2.4 Howland Semigroups
2.5 Feller-Dynkin Propagators and the Continuity Properties of Markov Processes

Sommario/riassunto

This book provides an introduction to propagator theory. Propagators, or evolution families, are two-parameter analogues of semigroups of operators. Propagators are encountered in analysis, mathematical physics, partial differential equations, and probability theory. They are often used as mathematical models of systems evolving in a changing environment. A unifying theme of the book is the theory of Feynman-Kac propagators associated with time-dependent measures from non-autonomous Kato classes. In applications, a Feynman-Kac propagator describes the evolution of a physical system in the pre