

1. Record Nr.	UNISALENTO991001036869707536
Autore	Arveson, William
Titolo	An invitation to C*-algebras / W. Arveson
Pubbl/distr/stampa	Berlin : Springer, 1976
Descrizione fisica	x, 106 p. ; 24 cm.
Classificazione	510.46 512'.55 QA326
Soggetti	C*-algebras Hilbert space Representations of algebras
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia

2. Record Nr.	UNINA9910815457703321
Autore	Ibe Oliver C
Titolo	Markov processes for stochastic modeling // Oliver C. Ibe, University of Massachusetts, Lowell, MA, USA
Pubbl/distr/stampa	Amsterdam, Netherlands, : Elsevier, c2013 London : , : Elsevier, , 2013
ISBN	0-12-407839-7
Edizione	[2nd ed.]
Descrizione fisica	1 online resource (xviii, 494 pages) : illustrations
Collana	Elsevier insights Markov processes for stochastic modeling
Disciplina	519.233
Soggetti	Markov processes Stochastic processes
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Previous edition: Amsterdam; London: Academic, 2009.
Nota di bibliografia	Includes bibliographical references.
Nota di contenuto	Front Cover; Markov Processes for Stochastic Modeling; Copyright page; Contents; Acknowledgments; Preface to the Second Edition; Preface to the First Edition; 1 Basic Concepts in Probability; 1.1 Introduction; 1.1.1 Conditional Probability; 1.1.2 Independence; 1.1.3 Total Probability and the Bayes' Theorem; 1.2 Random Variables; 1.2.1 Distribution Functions; 1.2.2 Discrete Random Variables; 1.2.3 Continuous Random Variables; 1.2.4 Expectations; 1.2.5 Expectation of Nonnegative Random Variables; 1.2.6 Moments of Random Variables and the Variance; 1.3 Transform Methods; 1.3.1 The s-Transform 1.3.2 The z-Transform 1.4 Bivariate Random Variables; 1.4.1 Discrete Bivariate Random Variables; 1.4.2 Continuous Bivariate Random Variables; 1.4.3 Covariance and Correlation Coefficient; 1.5 Many Random Variables; 1.6 Fubini's Theorem; 1.7 Sums of Independent Random Variables; 1.8 Some Probability Distributions; 1.8.1 The Bernoulli Distribution; 1.8.2 The Binomial Distribution; 1.8.3 The Geometric Distribution; 1.8.4 The Pascal Distribution; 1.8.5 The Poisson Distribution; 1.8.6 The Exponential Distribution; 1.8.7 The Erlang Distribution; 1.8.8 Normal Distribution; 1.9 Limit Theorems 1.9.1 Markov Inequality 1.9.2 Chebyshev Inequality; 1.9.3 Laws of Large Numbers; 1.9.4 The Central Limit Theorem; 1.10 Problems; 2 Basic Concepts in Stochastic Processes; 2.1 Introduction; 2.2 Classification of Stochastic Processes; 2.3 Characterizing a Stochastic Process; 2.4 Mean

and Autocorrelation Function of a Stochastic Process; 2.5 Stationary Stochastic Processes; 2.5.1 Strict-Sense Stationary Processes; 2.5.2 Wide-Sense Stationary Processes; 2.6 Ergodic Stochastic Processes; 2.7 Some Models of Stochastic Processes; 2.7.1 Martingales; Stopping Times; 2.7.2 Counting Processes
2.7.3 Independent Increment Processes
2.7.4 Stationary Increment Process; 2.7.5 Poisson Processes; Interarrival Times for the Poisson Process; Compound Poisson Process; Combinations of Independent Poisson Processes; Competing Independent Poisson Processes; Subdivision of a Poisson Process; 2.8 Problems; 3 Introduction to Markov Processes; 3.1 Introduction; 3.2 Structure of Markov Processes; 3.3 Strong Markov Property; 3.4 Applications of Discrete-Time Markov Processes; 3.4.1 Branching Processes; 3.4.2 Social Mobility; 3.4.3 Markov Decision Processes
3.5 Applications of Continuous-Time Markov Processes
3.5.1 Queueing Systems; 3.5.2 Continuous-Time Markov Decision Processes; 3.5.3 Stochastic Storage Systems; 3.6 Applications of Continuous-State Markov Processes; 3.6.1 Application of Diffusion Processes to Financial Options; 3.6.2 Applications of Brownian Motion; 3.7 Summary; 4 Discrete-Time Markov Chains; 4.1 Introduction; 4.2 State-Transition Probability Matrix; 4.2.1 The n-Step State-Transition Probability; 4.3 State-Transition Diagrams; 4.4 Classification of States; 4.5 Limiting-State Probabilities; 4.5.1 Doubly Stochastic Matrix
4.6 Sojourn Time

Sommario/riassunto

Markov processes are processes that have limited memory. In particular, their dependence on the past is only through the previous state. They are used to model the behavior of many systems including communications systems, transportation networks, image segmentation and analysis, biological systems and DNA sequence analysis, random atomic motion and diffusion in physics, social mobility, population studies, epidemiology, animal and insect migration, queueing systems, resource management, dams, financial engineering, actuarial science, and decision systems. Covering a wide range of
