1.	Record Nr.	UNISA996199753803316
	Titolo	The social situation in the European Union
	Pubbl/distr/stampa	Luxembourg, : Office for Official Publications of the European Communities, 2000-2009
	Descrizione fisica	1 online resource
	Soggetti	Social conditions Social policy Leefsituatie Arbeidsomstandigheden Periodicals. European Union countries Social conditions Periodicals European Union countries Social policy Periodicals European Union countries Social conditions European Union countries Social policy Pays de l'Union européenne Conditions sociales Périodiques Pays de l'Union européenne Politique sociale Périodiques European Union countries
	Lingua di pubblicazione	Inglese
	Formato	Materiale a stampa
	Livello bibliografico	Periodico

2.	Record Nr.	UNINA9910817355103321
	Autore	Ibe Oliver C (Oliver Chukwudi), <1947->
	Titolo	Elements of random walk and diffusion processes / / Oliver C. Ibe
	Pubbl/distr/stampa	Hoboken, N.J., : John Wiley & Sons, Inc., 2013
	ISBN	9781118617939 1118617932 9781118618059 111861805X 9781118629857 111862985X
	Edizione	[1st ed.]
	Descrizione fisica	1 online resource (278 p.)
	Collana	Wiley series in operations research and management science
	Classificazione	MAT003000
	Disciplina	519.2/82
	Soggetti	Random walks (Mathematics) Diffusion processes
	Lingua di pubblicazione	Inglese
	Formato	Materiale a stampa
	Livello bibliografico	Monografia
	Note generali	Description based upon print version of record.
	Nota di bibliografia	Includes bibliographical references and index.
	Nota di contenuto	Elements of Random Walk and Diffusion Processes; Copyright; Contents; Preface; Acknowledgments; 1 Review of Probability Theory; 1.1 Introduction; 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 Moments of Random Variables and the Variance; 1.3 Transform Methods; 1.3.1 The Characteristic Function; 1.3.2 Moment-Generating Property of the Characteristic Function; 1.3.3 The s-Transform; 1.3.4 Moment-Generating Property of the s-Transform; 1.3.5 The z-Transform 1.3.6 Moment-Generating Property of the z-Transform1.4 Covariance and Correlation Coefficient; 1.5 Sums of Independent Random Variables; 1.6 Some Probability Distributions; 1.6.1 The Bernoulli Distribution; 1.6.2 The Binomial Distribution; 1.6.3 The Geometric Distribution; 1.6.4 The Poisson Distribution; 1.6.5 The Exponential Distribution; 1.6.6 Normal Distribution; 1.7 Limit Theorems; 1.7.1 Markov Inequality; 1.7.2 Chebyshev Inequality; 1.7.3 Laws of Large Numbers; 1.7.4 The Central Limit Theorem; Problems; 2 Overview of Stochastic Processes; 2.1 Introduction

2.2 Classification of Stochastic Processes2.3 Mean and Autocorrelation Function; 2.4 Stationary Processes; 2.4.1 Strict-Sense Stationary Processes; 2.4.2 Wide-Sense Stationary Processes; 2.5 Power Spectral Density; 2.6 Counting Processes; 2.7 Independent Increment Processes; 2.8 Stationary Increment Process; 2.9 Poisson Processes; 2.9.1 Compound Poisson Process; 2.10 Markov Processes; 2.10.1 Discrete-Time Markov Chains; 2.10.2 State Transition Probability Matrix; 2.10.3 The k-Step State Transition Probability; 2.10.4 State Transition Diagrams; 2.10.5 Classification of States
2.10.6 Limiting-State Probabilities2.10.7 Doubly Stochastic Matrix; 2.10.8 Continuous-Time Markov Chains; 2.10.9 Birth and Death Processes; 2.11 Gaussian Processes; 2.12 Martingales; 2.12.1 Stopping Times; Problems; 3 One-Dimensional Random Walk; 3.1 Introduction; 3.2 Occupancy Probability; 3.3 Random Walk as a Markov Chain; 3.4 Symmetric Random Walk as a Martingale; 3.5 Random Walk with Barriers; 3.6 Mean-Square Displacement; 3.7 Gambler's Ruin; 3.7.1 Ruin Probability; 3.7.2 Alternative Derivation of Ruin Probability; 3.7.3 Duration of a Game; 3.8 Random Walk with Stay
3.9 First Return to the Origin3.10 First Passage Times for Symmetric Random Walk; 3.10.1 First Passage Time via the Generating Function; 3.10.2 First Passage Time via the Reflection Principle; 3.10.3 Hitting Time and the Reflection Principle; 3.11 The Ballot Problem and the Reflection Principle; 3.11.1 The Conditional Probability Method; 3.12 Returns to the Origin and the Arc-Sine Law; 3.13 Maximum of a Random Walk; 3.14 Two Symmetric Random Walkers; 3.15 Random Walk on a Graph; 3.15.1 Proximity Measures; 3.15.2 Directed Graphs; 3.15.3 Random Walk on an Undirected Graph
3.15.4 Random Walk on a Weighted Graph

Sommario/riassunto

"Featuring an introduction to stochastic calculus, this book uniquely blends diffusion equations and random walk theory and provides an interdisciplinary approach by including numerous practical examples and exercises with real-world applications in operations research, economics, engineering, and physics. It covers standard methods and applications of Brownian motion and discusses Levy motion; addresses fractional calculus; introduces percolation theory and its relationship to diffusion processes; and more"--