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DISTRIBUTED ALGORITHMS WITH DYNAMICAL RANDOM TRANSITIONS Colliding stacks; The banker algorithm; DATA STRUCTURES WITH DYNAMICAL RANDOM TRANSITIONS; Introduction; Preliminaries; Dynamic linear lists; Dynamic priority queues; Dynamic dictionaries; An example: Linear lists and rotation on the torus; TRANSIENT RANDOM WALKS ON DYNAMICALLY ORIENTED LATTICES; Introduction; Model and results; Proofs; Examples; ASSET PRICING IN DYNAMIC (B,S)-MARKETS; Introduction; Absence of Arbitrage of Dynamic (B,S)-Markets; Completeness of Dynamic (B,S)-Markets Fair Pricing and Hedging Strategies in Complete Dynamic Markets Gamma-Pricing and Gamma-Hedging; Asymptotic Behavior of Binary (B,S)-markets; back matter; Appendices; A Ergodic theory; Some definitions and basic theorems; Examples of dynamical systems; B Some Results on Diophantine Approximations; C Skorohod metric; D Fourier series; E Hilbert spaces, representations, *-algebras, von Neumann algebras; Hilbert spaces; Lie algebras and representations; *-algebras and von Neumann algebras; References; Index

Sommario/riassunto

The aim of this book is to report on the progress realized in probability theory in the field of dynamic random walks and to present applications in computer science, mathematical physics and finance. Each chapter contains didactical material as well as more advanced technical sections. Few appendices will help refreshing memories (if necessary!).
· New probabilistic model, new results in probability theory.
· Original applications in computer science.
· Applications in mathematical physics.
· Applications in finance
