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2.	Record Nr.	UNINA9911015859503321
	Autore	Selvamuthu Dharmaraja
	Titolo	Introduction to Stochastic Processes : Queues, Finance, and Credit Risk // by Dharmaraja Selvamuthu
	Pubbl/distr/stampa	Singapore : , : Springer Nature Singapore : , : Imprint : Springer, , 2025
	ISBN	9789819761524 9789819761517
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Nota di contenuto

Preface -- 1. Introduction to Stochastic Processes -- 2. Discrete Time Markov Chains - Part I -- 3. Discrete Time Markov Chains - Part II -- 4. Continuous Time Markov Chains, Part I -- 5. Continuous Time Markov Chains, Part II -- 6. Continuous Time Markov Chains, Part III -- 7. Simple Markov Queueing Models -- 8. Advanced Markov Queueing Models -- 9. Non-Markov Processes -- 10. Non-Markov Queueing Models -- 11. Diffusion and Jump-diffusion Processes -- 12. Stochastic Calculus -- 13. Stochastic Differential Equations -- 14. Applications to Finance - Option Pricing- 15. Applications to Finance - Credit Risk -- 16. Applications to Finance - Insurance Problems -- Appendix.

Sommario/riassunto

This is an essential textbook for senior undergraduate and graduate students of statistics, stochastic processes, stochastic finance, and probability theory. It covers all the important notations of probability theory and stochastic processes that are crucial for students to overcome their initial challenges during their studies. It thoroughly discusses the concepts of stochastic processes, both Markov and non-Markov processes, as well as stochastic calculus. With a special focus on finance, the book dedicates three chapters to explore the applications of stochastic processes in options, credit risk and insurance. Organized into sixteen chapters and one appendix, the book takes the readers to a well-organized learning. To fully grasp the intricacies of stochastic processes, students are expected to have a solid grounding in real analysis, linear algebra, and differential equations. Practical examples are emphasized throughout the book, carefully selected from various fields. The exercises at the end of each chapter are designed with the same objective in mind. Stochastic processes play a significant role in various scientific disciplines and real-life applications. .