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Collana	La Matematica per il 3+2, , 2038-5757 ; ; 165
Disciplina	519.2
Soggetti	Stochastic processes Mathematical physics Probabilities Econometrics Mathematics Stochastic Processes Theoretical, Mathematical and Computational Physics Probability Theory Quantitative Economics Probabilitats Processos estocàstics Xarxes neuronals (Informàtica) Llibres electrònics
Lingua di pubblicazione	Inglese
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Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	1 Measures and probability spaces -- 2 Random variables -- 3 Sequences of random variables -- 4 Conditional probability -- 5 Summary exercises -- Appendix A: Dynkin’s theorems -- Appencix B: Absolute continuity -- Appendix C: Uniform integrability.
Sommario/riassunto	This book provides a concise yet rigorous introduction to probability theory. Among the possible approaches to the subject, the most modern approach based on measure theory has been chosen: although it requires a higher degree of mathematical abstraction and sophistication, it is essential to provide the foundations for the study of

more advanced topics such as stochastic processes, stochastic differential calculus and statistical inference. The text originated from the teaching experience in probability and applied mathematics courses within the mathematics degree program at the University of Bologna; it is suitable for second- or third-year students in mathematics, physics, or other natural sciences, assuming multidimensional differential and integral calculus as a prerequisite. The four chapters cover the following topics: measures and probability spaces; random variables; sequences of random variables and limit theorems; and expectation and conditional distribution. The text includes a collection of solved exercises.