

| | |
|-------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1. Record Nr. | UNINA9910299974503321 |
| Autore | Resnick Sidney I |
| Titolo | A Probability Path // by Sidney I. Resnick |
| Pubbl/distr/stampa | Boston, MA : , : Birkhäuser Boston : , : Imprint : Birkhäuser, , 2014 |
| ISBN | 0-8176-8409-3 |
| Edizione | [1st ed. 2014.] |
| Descrizione fisica | 1 online resource (XIV, 453 p. 11 illus.) : online resource |
| Collana | Modern Birkhäuser Classics, , 2197-1803 |
| Disciplina | 519.2 |
| Soggetti | Probabilities Applied mathematics Engineering mathematics Operations research Management science Statistics Probability Theory and Stochastic Processes Applications of Mathematics Operations Research, Management Science Statistical Theory and Methods |
| Lingua di pubblicazione | Inglese |
| Formato | Materiale a stampa |
| Livello bibliografico | Monografia |
| Note generali | Originally published 1999, reprint of 5th printing. Reprint of the 2005 edition. |
| Nota di bibliografia | Includes bibliographical references and index. |
| Nota di contenuto | Sets and events -- Probability spaces -- Random variables, elements, and measurable maps -- Independence -- Integration and expectation -- Convergence concepts -- Laws of large numbers and sums of independent random variables -- Convergence in distribution -- Characteristic functions and the central limit theorem -- Martingales. |
| Sommario/riassunto | Many probability books are written by mathematicians and have the built-in bias that the reader is assumed to be a mathematician coming to the material for its beauty. This textbook is geared towards beginning graduate students from a variety of disciplines whose primary focus is not necessarily mathematics for its own sake. Instead, A Probability Path is designed for those requiring a deep understanding of advanced probability for their research in statistics, applied probability, biology, operations research, mathematical finance, and |

engineering. A one-semester course is laid out in an efficient and readable manner covering the core material. The first three chapters provide a functioning knowledge of measure theory. Chapter 4 discusses independence, with expectation and integration covered in Chapter 5, followed by topics on different modes of convergence, laws of large numbers with applications to statistics (quantile and distribution function estimation), and applied probability. Two subsequent chapters offer a careful treatment of convergence in distribution and the central limit theorem. The final chapter treats conditional expectation and martingales, closing with a discussion of two fundamental theorems of mathematical finance. Like *Adventures in Stochastic Processes*, Resnick's related and very successful textbook, *A Probability Path* is rich in appropriate examples, illustrations, and problems, and is suitable for classroom use or self-study. The present uncorrected, softcover reprint is designed to make this classic textbook available to a wider

audience. This book is different from the classical textbooks on probability theory in that it treats the measure theoretic background not as a prerequisite but as an integral part of probability theory. The result is that the reader gets a thorough and well-structured framework needed to understand the deeper concepts of current day advanced probability as it is used in statistics, engineering, biology and finance.... The pace of the book is quick and disciplined. Yet there are ample examples sprinkled over the entire book and each chapter finishes with a wealthy section of inspiring problems. —Publications of the International Statistical

Institute This textbook offers material for a one-semester course in probability, addressed to students whose primary focus is not necessarily mathematics.... Each chapter is completed by an exercises section. Carefully selected examples enlighten the reader in many situations. The book is an excellent introduction to probability and its applications. —Revue Roumaine de Mathématiques Pures et Appliquées.
