

1. Record Nr.	UNINA9910686792703321
Autore	Melnikov Alexander
Titolo	A Course of Stochastic Analysis / / by Alexander Melnikov
Pubbl/distr/stampa	Cham : , : Springer Nature Switzerland : , : Imprint : Springer, , 2023
ISBN	9783031253263 9783031253256
Edizione	[1st ed. 2023.]
Descrizione fisica	1 online resource (214 pages)
Collana	CMS/CAIMS Books in Mathematics, , 2730-6518 ; ; 6
Disciplina	519.2 519.22
Soggetti	Stochastic processes Probabilities Stochastic Processes Probability Theory
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	1 Probabilistic Foundations -- 2 Random variables and their quantitative characteristics -- 3 Expectations and convergence of sequences of random variables -- 4 Weak convergence of sequences of random variables -- 5 Absolute continuity of probability measures and conditional expectations -- 6 Discrete time stochastic analysis: basic results -- 7 Discrete time stochastic analysis: further results and applications -- 8 Elements of classical theory of stochastic processes -- 9 Stochastic differential equations, diffusion processes and their applications -- 10 General theory of stochastic processes under "usual conditions" -- 11 General theory of stochastic processes in applications -- 12 Supplementary problems -- References -- Index.
Sommario/riassunto	The main subject of the book is stochastic analysis and its various applications to mathematical finance and statistics of random processes. The main purpose of the book is to present, in a short and sufficiently self-contained form, the methods and results of the contemporary theory of stochastic analysis and to show how these methods and results work in mathematical finance and statistics of random processes. The book can be considered as a textbook for both senior undergraduate and graduate courses on this subject. The book

can be helpful for undergraduate and graduate students, instructors and specialists on stochastic analysis and its applications.
