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ISBN	3-662-54323-0
Edizione	[1st ed. 2017.]
Descrizione fisica	1 online resource (XVIII, 204 p.)
Collana	Probability Theory and Stochastic Modelling, , 2199-3130 ; ; 80
Disciplina	519.6
Soggetti	Probabilities Dynamics Ergodic theory Game theory Probability Theory and Stochastic Processes Dynamical Systems and Ergodic Theory Game Theory, Economics, Social and Behav. Sciences
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	Introduction -- Variance of partial sums -- Algebraic moments. Elementary exponential inequalities -- Maximal inequalities and strong laws -- Central limit theorems -- Coupling and mixing -- Fuk-Nagaev inequalities, applications -- Empirical distribution functions -- Empirical processes indexed by classes of functions -- Irreducible Markov chains -- Appendices -- References -- Index.
Sommario/riassunto	Presenting tools to aid understanding of asymptotic theory and weakly dependent processes, this book is devoted to inequalities and limit theorems for sequences of random variables that are strongly mixing in the sense of Rosenblatt, or absolutely regular. The first chapter introduces covariance inequalities under strong mixing or absolute regularity. These covariance inequalities are applied in Chapters 2, 3 and 4 to moment inequalities, rates of convergence in the strong law, and central limit theorems. Chapter 5 concerns coupling. In Chapter 6 new deviation inequalities and new moment inequalities for partial sums via the coupling lemmas of Chapter 5 are derived and applied to

the bounded law of the iterated logarithm. Chapters 7 and 8 deal with the theory of empirical processes under weak dependence. Lastly, Chapter 9 describes links between ergodicity, return times and rates of mixing in the case of irreducible Markov chains. Each chapter ends with a set of exercises. The book is an updated and extended translation of the French edition entitled "Théorie asymptotique des processus aléatoires faiblement dépendants" (Springer, 2000). It will be useful for students and researchers in mathematical statistics, econometrics, probability theory and dynamical systems who are interested in weakly dependent processes.