1. Record Nr. UNINA9910969531003321

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Titolo	Semi-Markov Chains and Hidden Semi-Markov Models toward Applications : Their Use in Reliability and DNA Analysis / / by Vlad Stefan Barbu, Nikolaos Limnios
Pubbl/distr/stampa	New York, NY : , : Springer New York : , : Imprint : Springer, , 2008
ISBN	1-281-96006-3 9786611960063 0-387-73173-3
Edizione	[1st ed. 2008.]
Descrizione fisica	1 online resource (232 p.)
Collana	Lecture Notes in Statistics, , 2197-7186 ; ; 191
Altri autori (Persone)	LimniosN (Nikolaos)
Disciplina	519.233
Soggetti	Probabilities Statistics Security systems Operations research Management science Bioinformatics Probability Theory Statistical Theory and Methods Statistics in Engineering, Physics, Computer Science, Chemistry and Earth Sciences Security Science and Technology Operations Research, Management Science
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Description based upon print version of record.
Nota di bibliografia	Includes bibliographical references (p. [211]-220) and index.
Nota di contenuto	Discrete-Time Renewal Processes -- Semi-Markov Chains -- Non parametric Estimation for Semi-Markov Chains -- Reliability Theory for Discrete-Time Semi-Markov Systems -- Hidden Semi-Markov Model and Estimation.
Sommario/riassunto	This book is concerned with the estimation of discrete-time semi-Markov and hidden semi-Markov processes. Semi-Markov processes are much more general and better adapted to applications than the Markov ones because sojourn times in any state can be arbitrarily

distributed, as opposed to the geometrically distributed sojourn time in the Markov case. Another unique feature of the book is the use of discrete time, especially useful in some specific applications where the time scale is intrinsically discrete. The models presented in the book are specifically adapted to reliability studies and DNA analysis. The book is mainly intended for applied probabilists and statisticians interested in semi-Markov chains theory, reliability and DNA analysis, and for theoretical oriented reliability and bioinformatics engineers. It can also serve as a text for a six month research-oriented course at a Master or PhD level. The prerequisites are a background in probability theory and finite state space Markov chains. Vlad Stefan Barbu is associate professor in statistics at the University of Rouen, France, Laboratory of Mathematics ‘Raphaël Salem.’ His research focuses basically on stochastic processes and associated statistical problems, with a particular interest in reliability and DNA analysis. He has published several papers in the field. Nikolaos Limnios is a professor in Applied Mathematics at the University of Technology of Compiègne. His research interest concerns stochastic processes and statistics with application to reliability. He is the co-author of the books: Semi-Markov Processes and Reliability (Birkhäuser, 2001 with G. Oprisan) and Stochastic Systems in Merging Phase Space (World Scientific, 2005, with V.S. Koroliuk).