

1. Record Nr.	UNINA9910830869303321
Autore	Balakrishnan N. <1956->
Titolo	Runs and scans with applications / / N. Balakrishnan, Markos V. Koutras
Pubbl/distr/stampa	New York : , : John Wiley & Sons, Inc., , 2002 ©2002
ISBN	1-283-28127-9 9786613281272 1-118-15046-5 1-118-15045-7
Descrizione fisica	1 online resource (484 p.)
Collana	Wiley Series in Probability and Statistics
Disciplina	519.2
Soggetti	Probabilities Sequences (Mathematics) Pattern perception Combinatorial analysis Reliability (Engineering)
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 and indexes.
Nota di contenuto	Runs and Scans with Applications; Contents; List of Tables; List of Figures; Preface; 1 Introduction and Historical Remarks; 1.1 WHAT ARE RUNS?; 1.2 WHY RUNS?; 1.3 WHAT USE ARE RUNS?; 1.4 FROM RUNS TO SCANS; 1.5 WHAT TO EXPECT; 2 Waiting for the First Run Occurrence; 2.1 INTRODUCTION; 2.2 I.I.D. TRIALS - GEOMETRIC DISTRIBUTION OF ORDER k; 2.2.1 Distribution Function; 2.2.2 Generating Functions and Moments; 2.2.3 Bounds and Approximations; 2.2.4 Properties; 2.2.5 Asymptotics; 2.2.6 Estimation; 2.3 MARKOV-DEPENDENT TRIALS - MARKOV-GEOMETRIC DISTRIBUTION OF ORDER k; 2.4 NONIDENTICAL TRIALS - INTERVENED GEOMETRIC DISTRIBUTION OF ORDER k; 2.5 BINARY SEQUENCE OF ORDER I - EXTENDED GEOMETRIC DISTRIBUTION OF ORDER k; 2.6 CONDITIONAL DISTRIBUTIONS; 2.7 OTHER RELATED DISTRIBUTIONS; 2.8 MISCELLANEA; 3 Applications; 3.1 INTRODUCTION; 3.2 RELIABILITY THEORY; 3.3 PSYCHOLOGY, ECOLOGY AND METEOROLOGY; 3.4 RANDOMNESS TESTS; 3.5 START-UP

DEMONSTRATION TESTS; 3.6 STATISTICAL QUALITY CONTROL; 3.7 MISCELLANEOUS APPLICATIONS; 4 Waiting for Multiple Run Occurrences; 4.1 INTRODUCTION; 4.2 I.I.D. TRIALS-NEGATIVE BINOMIAL DISTRIBUTIONS OF ORDERS k ; 4.2.1 Distribution Function 4.2.2 Generating Functions and Moments 4.2.3 Properties; 4.2.4 Asymptotics; 4.2.5 Estimation; 4.3 MARKOV-DEPENDENT TRIALS-MARKOV-NEGATIVE BINOMIAL DISTRIBUTIONS OF ORDER k ; 4.4 MISCELLANEA; 5 Number of Run Occurrences; 5.1 INTRODUCTION; 5.2 I.I.D. TRIALS-BINOMIAL DISTRIBUTIONS OF ORDER k ; 5.2.1 Distribution Function; 5.2.2 Generating Functions and Moments; 5.2.3 Bounds and Approximations; 5.2.4 Asymptotics; 5.2.5 Estimation; 5.3 MARKOV-DEPENDENT TRIALS-MARKOV-BINOMIAL DISTRIBUTIONS OF ORDER k ; 5.4 CONDITIONAL DISTRIBUTIONS; 5.5 OTHER RELATED DISTRIBUTIONS; 6 Sooner/Later Run Occurrences 6.1 INTRODUCTION 6.2 I.I.D. TRIALS - SOONER/LATER GEOMETRIC DISTRIBUTIONS OF ORDER (k_1, k_2) ; 6.2.1 Distribution Function; 6.2.2 Generating Functions and Moments; 6.2.3 Bounds and Asymptotics; 6.3 MARKOV-DEPENDENT TRIALS - SOONER/LATER MARKOV-GEOMETRIC DISTRIBUTION OF ORDER $\{k_1, k_2\}$; 6.4 BINARY SEQUENCE OF ORDER I - EXTENDED SOONER/LATER GEOMETRIC DISTRIBUTION OF ORDER (k_1, k_2) ; 6.5 CONDITIONAL DISTRIBUTION; 6.6 OTHER RELATED DISTRIBUTIONS; 6.7 MISCELLANEA; 7 Multivariate Run-Related Distributions; 7.1 INTRODUCTION; 7.2 I.I.D. TRIALS-TRINOMIAL DISTRIBUTIONS OF ORDER (k_1, k_2) 7.2.1 Distribution Function 7.2.2 Generating Functions and Moments; 7.3 MARKOV-DEPENDENT TRIALS- MARKOV-TRINOMIAL DISTRIBUTIONS OF ORDER (k_1, k_2) ; 7.4 MISCELLANEA; 8 Applications; 8.1 INTRODUCTION; 8.2 MACHINE MAINTENANCE; 8.3 LEARNING MODELS; 8.4 BRAND SWITCHING MODELS; 8.5 CLIMATOLOGY; 8.6 START-UP DEMONSTRATION TESTS WITH REJECTION OF UNITS UPON OBSERVING I FAILURES; 8.7 TWO-STAGE START-UP DEMONSTRATION TESTING; 8.8 VOLLEYBALL SCORES ANALYSIS; 8.9 NON-PARAMETRIC TESTS FOR RANDOMNESS; 8.10 MISCELLANEOUS APPLICATIONS; 9 Waiting for the First Scan; 9.1 INTRODUCTION; 9.2 I.I.D. TRIALS 9.2.1 Distribution Function

Sommario/riassunto

Expert practical and theoretical coverage of runs and scans This volume presents both theoretical and applied aspects of runs and scans, and illustrates their important role in reliability analysis through various applications from science and engineering. Runs and Scans with Applications presents new and exciting content in a systematic and cohesive way in a single comprehensive volume, complete with relevant approximations and explanations of some limit theorems. The authors provide detailed discussions of both classical and current problems, such as:

- * Sooner and later waiting time