

1. Record Nr.	UNINA9910830587903321
Autore	Arnold Barry C.
Titolo	Records / / Barry C. Arnold, N. Balakrishnan, H.N. Nagaraja
Pubbl/distr/stampa	New York : , : John Wiley & Sons, Inc., , 1998 ©1998
ISBN	1-283-28125-2 9786613281258 1-118-15041-4 1-118-15040-6
Descrizione fisica	1 online resource (342 p.)
Collana	Wiley Series in Probability and Statistics. Probability and Statistics Section
Disciplina	519.5
Soggetti	Order statistics World records
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	"A Wiley-Interscience Publication."
Nota di bibliografia	Includes bibliographical references and indexes.
Nota di contenuto	Records; Contents; Notations and Abbreviations; Preface; 1. Introduction; 1.1 Who Cares?; 1.2 A Road Map; 2. Basic Distributional Results; 2.1 Introduction; 2.2 Standard Record Values Processes; 2.3 Record Values From the Classical Model; 2.4 Record Values From Specific Distributions; 2.4.1 Weibull Records; 2.4.2 Power Function Distribution Records; 2.4.3 Pareto Records; 2.4.4 Extreme Value Records; 2.5 Record Times and Related Statistics; 2.6 Markov Chains; 2.7 Moments of Record Values; 2.7.1 Weibull Distribution; 2.7.2 Power Function Distribution; 2.7.3 Pareto Distribution 2.7.4 Extreme Value Distribution2.7.5 Normal Distribution; 2.7.6 Covariance and Correlations; 2.8 A Discrete Interlude; 2.9 Geometric Results; 2.10 Counting Process and k-Records; 2.10.1 A Point Process View; 2.10.2 k-Record Statistics; Exercises; 3. Moment Relations Bounds and Approximations; 3.1 Introduction; 3.2 Exponential Distribution; 3.3 Weibull Distribution; 3.4 Gumbel Distribution; 3.5 Lomax Distribution; 3.6 Normal Distribution; 3.7 Logistic Distribution; 3.8 Bounds and Approximations; 3.9 Results for k-Records; Exercises; 4. Characterizations; 4.1 Introduction

4.2 Characterizing Properties of Record Values 4.2.1 The Moment Sequence; 4.2.2 Regression of Adjacent Record Values; 4.3 Families of Distributions; 4.3.1 Families Defined by Reliability Properties; 4.3.2 Linear Regressions of Adjacent Record Values; 4.4 The Exponential Distribution; 4.4.1 The Incomplete Catalog; 4.4.2 Integrated Cauchy Functional Equation; 4.4.3 Characterizations Based on the ICFE and Other Functional Equations; 4.4.4 Lower Record Statistics; 4.5 Other Continuous Distributions; 4.6 Geometric-Tail Distributions; 4.7 Dependence Structures of Record Values and Order Statistics Exercises 5. Inference; 5.1 Introduction; 5.2 Maximum Likelihood Estimation; 5.3 Best Linear Unbiased Estimation; 5.4 Best Linear Invariant Estimation; 5.5 Interval Estimation and Tests of Hypotheses; 5.6 Point Prediction; 5.6.1 Best Linear Unbiased Prediction; 5.6.2 Best Linear Invariant Prediction; 5.6.3 Asymptotic Linear Prediction; 5.7 Interval Prediction; 5.7.1 Prediction Intervals Based on BLUE's; 5.7.2 Conditional Prediction Intervals; 5.7.3 Tolerance Region Prediction; 5.7.4 Bayesian Prediction Intervals; 5.8 Illustrative Examples; 5.9 Inference with Records and Inter-Record Times 5.10 Distribution-Free Tests in Time-Series Using Records Exercises; 6. General Record Models; 6.1 Introduction; 6.2 Geometrically Increasing Populations; 6.3 The F Record Model; 6.3.1 Finite-sample Properties; 6.3.2 Asymptotic Properties; 6.4 Linear Drift Record Model; 6.5 The Pfeifer Model; 6.6 Characterizations; 6.6.1 F and Linear Drift Record Models; 6.6.2 The Pfeifer Model; 6.7 Records From Dependent Sequences; 6.7.1 Markov Sequences; 6.7.2 Exchangeable Observations; 6.7.3 Dependent Models Based on Archimedean Copula; 6.7.4 A Random Power Record Model; Exercises 7. Random and Point Process Record Models

Sommario/riassunto

The first and only comprehensive guide to modern record theory and its applications Although it is often thought of as a special topic in order statistics, records form a unique area, independent of the study of sample extremes. Interest in records has increased steadily over the years since Chandler formulated the theory of records in 1952. Numerous applications of them have been developed in such far-flung fields as meteorology, sports analysis, hydrology, and stock market analysis, to name just a few. And the literature on the subject currently comprises papers and journal articles n