

1. Record Nr.	UNINA9910714174803321
Autore	Galambos Janos
Titolo	Extreme value theory and applications : proceedings of the Conference on Extreme Value Theory and Applications, Gaithersburg, Maryland, 1993 / / edited by Janos Galambos, James Lechner, and Emil Simiu
Pubbl/distr/stampa	Dordrecht, Netherlands ; ; Boston, Massachusetts : , : Kluwer Academic Publishers, , [1994] Â©1994
ISBN	1-4613-3638-4
Edizione	[1st ed. 1994.]
Descrizione fisica	1 online resource (XIV, 520 p.)
Collana	NIST special publication ; ; 866
Disciplina	519.24
Soggetti	Extreme value theory
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Bibliographic Level Mode of Issuance: Monograph
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	Inaugural Address -- Extreme Value Theory for Applications -- I: Engineering Applications -- Extremes in engineering applications -- The Poisson-Weibull flaw model for brittle fiber strength -- Extreme value distributions for linear and non-linear systems and applications to marine structures -- Extreme value theory for fibre bundles -- II: Univariate Statistical Inference -- Extreme value statistics -- Bayes quantile estimation and threshold selection for the Generalized Pareto family -- Novel extreme value estimation procedures: Application to extreme wind data -- On testing the exponential and Gumbel distribution -- III: Computer Programs, Computations -- XTREMES: Extreme value analysis and robustness -- Simulations for the extreme statistics -- Analytical and empirical study of the tails of probability distributions -- IV: Multivariate Theory and Applications -- Concomitants of extreme order statistics -- Multivariate threshold methods -- Applications of multivariate extremes -- Some aspects of spatial extremes -- V: Nonclassical Models -- Extremes: Limit results for univariate and multivariate nonstationary sequences -- Extreme value limit theory with nonlinear normalization -- VI: Point Processes and Extremes -- Extreme values and choice theory -- Functional laws for small numbers -- Record statistics from point process models -- VII: Continuous Time -- Extremes and exceedance measures for

continuous parameter stationary processes -- A new class of random fields and their extreme values -- VIII: Special Topics for the Classical Model -- Penultimate behaviour of the extremes -- Weak convergence of the Hill estimator process -- On the limiting distribution of fractional parts of extreme order statistics -- IX: Probabilistic Number Theory -- On the largest prime divisors of an integer -- X: Astronomy -- Probing the nature of the brightest galaxies using extreme value theory -- XI: Business -- Safety first portfolio selection, extreme value theory and long run asset risks -- Extremes in non-life insurance.

---

#### Sommario/riassunto

It appears that we live in an age of disasters: the mighty Mississippi and Missouri flood millions of acres, earthquakes hit Tokyo and California, airplanes crash due to mechanical failure and the seemingly ever increasing wind speeds make the storms more and more frightening. While all these may seem to be unexpected phenomena to the man on the street, they are actually happening according to well defined rules of science known as extreme value theory. We know that records must be broken in the future, so if a flood design is based on the worst case of the past then we are not really prepared against floods. Materials will fail due to fatigue, so if the body of an aircraft looks fine to the naked eye, it might still suddenly fail if the aircraft has been in operation over an extended period of time. Our theory has by now penetrated the social sciences, the medical profession, economics and even astronomy. We believe that our field has come of age. In order to fully utilize the great progress in the theory of extremes and its ever increasing acceptance in practice, an international conference was organized in which equal weight was given to theory and practice. This book is Volume I of the Proceedings of this conference. In selecting the papers for Volume I our guide was to have authoritative works with a large variety of coverage of both theory and practice.

---