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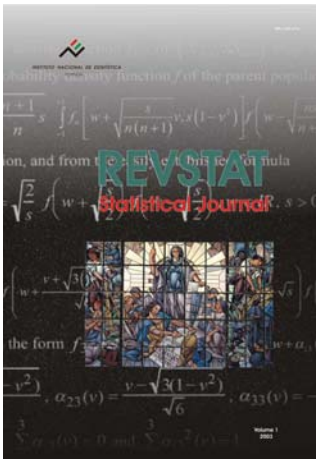

In 2003 the National Statistical Institute launched the scientific statistical journal **REVSTAT-STATISTICAL JOURNAL**, published in English two times a year, with a prestigious international Editorial Board, which came to substitute the *Revista de Estatística* [Statistical Review], published in Portuguese between 1996 and 2002.

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REVSTAT hopes to become a place where scientists may feel proud of publishing their research results changing the character of the previous *Revista de Estatística* from a national to an international scientific journal.

This Volume of **REVSTAT: Volume 5, No. 2 - June 2007** includes four articles. Their abstracts are presented below:

ON THE EXCESS DISTRIBUTION OF SUMS OF RANDOM VARIABLES IN BIVARIATE EV MODELS

Author: *Michael Falk*

Let (U,V) be a random vector following a bivariate extreme value distribution (EVD) with reverse exponential margins. It is known that the excess distribution $F_c(t)=P(U+V>ct \mid U+V>c)$ of $U+V$ converges to $F(t)=t^2$ as the threshold c increases if U,V are independent, and to $F(t)=t$, $t\in[0,1]$, elsewhere. We investigate the limit of the excess distribution of $aU+bV$ in case of an EVD with arbitrary margins and with arbitrary scale parameters $a,b>0$. It turns out that the limiting excess df may have a different behavior. For Fréchet margins, independence of U,V does not affect the limit excess distribution, whereas for Gumbel and reverse Weibull margins it does. Unless for Gumbel margins, the limit excess distribution is independent of a,b.

Interpreting a,b as weights and U,V as risks, $aU+bV$ can be viewed as a (short) linear portfolio. The fact that the limiting excess distribution of $aU+bV$ does not depend on a,b, unless for Gumbel margins, implies that risk measures such as the expected shortfall $E(aU+bV \mid aU+bV<c)$ might fail for multivariate extreme value models.

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DECOMPOSITIONS OF MARGINAL HOMOGENEITY MODEL USING CUMULATIVE LOGISTIC MODELS FOR MULTI-WAY CONTINGENCY TABLES

Authors: *Kouji Tahata, Shingo Katakura* and *Sadao Tomizawa*

For square contingency tables with ordered categories, Agresti (1984, 2002) considered the marginal cumulative logistic (ML) model, which is an extension of the marginal homogeneity (MH) model. Miyamoto, Niibe and Tomizawa (2005) proposed the conditional marginal cumulative logistic (CML) model which is defined off the main diagonal cells, and gave the decompositions of the MH model using the ML (CML) model. This paper, Agresti (1984), considers the ML and CML models for multi-way tables, and Agresti (2002) gives the decompositions of the MH model into the ML (CML) model and the model of the equality of marginal means for multi-way tables. An example is given.

IMPROVING SECOND ORDER RECUCED BIAS EXTREME VALUE INDEX ESTIMATION

Authors: *M. Ivette Gomes, M. João Martins* and *Manuela Neves*

Classical extreme value index estimators are known to be quite sensitive to the number k of top order statistics used in the estimation. The recently developed second order reduced-bias estimators show much less sensitivity to changes in k. Here, we are interested in the improvement of the performance of reduced-bias extreme value index estimators based on an exponential second order regression model applied to the scaled log-spacings of the top k order statistics. In order to achieve that improvement, the estimation of a "scale" and a "shape" second order parameters in the bias is performed at a level k_1 of a larger order than that of the level k at which we compute the extreme value index estimators. This enables us to keep the asymptotic variance of the new estimators of a positive extreme value index γ equal to the asymptotic variance of the Hill estimator, the maximum likelihood estimator of γ, under a strict Pareto model. These new estimators are then alternatives to the classical estimators, not only around optimal and/or large levels k, but for other levels too. To enhance the interesting performance of this type of estimators, we also consider the estimation of the "scale" second order parameter only, at the same level k used for the extreme value index estimation. The asymptotic distributional properties of the proposed class of γ-estimators are derived and the estimators are compared with other similar alternative estimators of γ recently introduced in the literature, not only asymptotically, but also for finite samples through Monte Carlo techniques. Case-studies in the fields of finance and insurance will illustrate the performance of the new second order reduced-bias extreme value index estimators.

INTERFAILURE DATA WITH CONSTANT HAZARD FUNCTION IN THE PRESENCE OF CHANGE-POINTS

Authors: *Jorge Alberto Achcar, Selene Loibel* and *Marinho G. Andrade*

Markov Chain Monte Carlo (MCMC) methods are used to perform a Bayesian analysis for interfailure data with constant hazard function in the presence of one or more change-points. We also present some Bayesian criteria to discriminate different models. The methodology is illustrated with a data set originally reported in Maguire, Pearson and Wynn, A.H.A. (1952).