THE CANADIAN JOURNAL OF STATISTICS

CJS: Coming Attractions

Douglas P. Wiens Editor, CJS

For those readers who did not receive the news from me via the SSC email list, I am pleased to announce that The Canadian Journal of Statistics/ La revue canadienne de statistique is now being archived on JSTOR. All issues with the exception of those from the previous three years are available. Within this moving 3vear window, we continue to be archived by Ingenta. Details regarding online access to the titles on Ingenta were given in the MARCH 2006 issue of the Journal.

The titles included in JSTOR are selected based on the number of institutional subscribers a journal has, on citation analysis, on recommendations from experts in the field and on the length of time that the journal has been published. Other titles in the list are Annals of Statistics. Biometrics, Biometrika, Journal of the American Statistical Association, Journal of the Royal Statistical Society (Series A and B), and Technometrics.

The September 2006 issue of the Journal is. I feel, notable for the breadth and variety of the topics which are covered. In the opening paper 'Pseudo empirical likelihood ratio confidence intervals for complex surveys', Changbao Wu (U. Waterloo) and J.N.K. Rao (Carleton U.) construct confidence intervals for a finite population mean or a finite population distribution function, using an adjusted pseudo empirical likelihood ratio statistic. The adjustment takes into account the design effects, while maintaining the advantage of the likelihood-based interval of having a data-driven shape. Exhaustive simulation studies demonstrate the superiority of these intervals over the normal theory intervals, in terms of coverage probability, tail error rates and average length.

Paul Gustafson, Shahadut Hossain and Ying MacNab (all U. British Columbia) discuss various proposals for the specification of prior distributions on random-effects variance components in linear models. In 'Conservative prior distributions for vari-



ance parameters in hierarchical models', they suggest conservative priors, which deliberately give more weight to smaller values of the variance components. The adaptability of the suggested priors to various hierarchical modelling settings, such as modelling data from multiple sites, fitting smooth curves, and modelling spatial variation, is illustrated in several examples with spatial data.

The third paper of this issue is 'Corrected' local polynomial estimation in varyingcoefficient models with measurement errors', by Jinhong You (U. North Carolina, Chapel Hill), Yong Zhou (Chinese Academy of Science, Beijing) and Gemai Chen (U. Calgary). These authors study a varying-coefficient regression model in which some of the covariates are measured with additive errors. The usual estimator of the coefficient functions is biased in this framework, and a new method of bias correction is proposed. The asymptotic properties of the corrected estimator are obtained, and a goodness-of-fit test is derived and applied to the Framingham Heart Study data.

In the paper which follows, José Ferreira (Endeavour Capital Management, London, U.K.) and Mark Steel (U. Warwick) introduce new measures of skewness for multivariate distributions. In contrast to the usual measures of overall skewness.

those proposed in 'On describing multivariate skewed distributions: A directional approach' measure skewness in particular directions. In a biomedical data set from the Australian Institute of Sport, to which Bayesian linear regression is applied in the presence of skewed error, they use the concept of directional skewness twice - once in the elicitation of a prior on the parameters of the error distribution, and again in the analysis of the skewness of the posterior distribution of the regression residuals.

Authors Fabienne Comte, Yves Rozenholc (both U. René Descartes - Paris) and Marie-Luce Taupin (U. Paris-Sud) consider the problem of estimating the density of random variables for which only noisy observations, with additive error, are available. In 'Penalized contrast estimation for adaptive density deconvolution', an estimator is constructed using wavelets. The adaptivity of the method is guaranteed by an appropriate selection of a penalty function.

Jonathan Hill (Florida International U.), in 'Strong orthogonal decompositions and nonlinear impulse response functions for infinite variance processes', obtains a necessary and sufficient condition for the existence of Wold-type decompositions, with strong-orthogonal innovations, in certain spaces of discrete time processes. Among other things, this is important in modelling heavy-tailed processes as moving averages. The techniques derived are illustrated in the construction of a nonlinear impulse response function for currency exchange rate data.

Another novel application is given in 'Road trafficking description and short term travel forecasting, with a classification method', by Jean-Michel Loubes (U. Montpellier), Elie Maza (U. Toulouse), Marc Lavielle (U. Paris-Sud), and Luis Rodriguez (U. de Carabobo, Venezuela). They propose two methodologies for forecasting road trafficking, and future

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traffic events, on highway networks. One is based on modelling the traffic with a mixture model, and then estimating the proportions assigned to each of the traffic patterns in the mixture. The other is based on a classification scheme, utilizing the tools of functional data analysis.

The issue concludes with 'Case Study in Data Analysis: Variables related to codling moth abundance and the efficacy of the Okanagan Sterile Insect Release Program'. Compiled by our former Case Studies Associate Editor Sylvia Esterby, this is a collection of four papers. The authors/analysts study the effect of orchard attributes and landscape, in a heterogeneous region of British Columbia, of a program to control codling moths in

apple and pear orchards. The first paper - 'A GIS application to improve codling moth management in the Okanagan Valley in British Columbia', by Bob Vernon, Howard Thistlewood and Scott Smith (all from the Pacific Agri-Food Research Centre of Agriculture and Agri-Food Canada) - outlines the severe problems caused by the codling moth, and the rationale behind the proposed solution of releasing certain numbers of sterile moths into the population. There follow two independent analyses of the data - 'Codling moth incidence in Okanagan orchards' by Farouk Nathoo, Laurie Ainsworth (both Simon Fraser U.), Paramjit Gill (Okanagan University College, Kelowna) and Charmaine Dean (SFU), and 'Variables liées à l'abondance du carpocapse de la pomme et efficacité du programme d'épandage d'insectes stériles de l'Okanagan' by Gaétan Daigle, Thierry Duchesne, Emmanuelle Reny-Nolin and Louis-Paul Rivest (all U. Laval). The study concludes with 'Discussion of the analysis of codling moth data from the Okanagan Sterile Insect Release Program' by Sylvia Esterby (U. of British Columbia Okanagan) together with Vernon, Thistlewood and Smith.

Readers may note that we have published few Case Studies of late; please feel free to convey any suggestions along these lines to me or to Gemai Chen, the current Associate Editor for Case Studies. Similarly, submissions with the depth, novelty and innovation to become discussed papers are always being sought.

NEWS

British Columbia

University of British Columbia-Vancouver

Harry Joe has been awarded an Achievement Award for Service by the Faculty of Science at the University of British Columbia - Vancouver. This award recognizes Harry's major and continuing role in the development of the Department of Statistics. The citation reads: "For sustained, diverse and outstanding contributions to the Department of Statistics, including one term as its Head, that have been instrumental in making it a leading centre for statistical science."

Contributed by John Petkau

<u>Québec</u>

Concordia University

Cody Hyndman has been appointed at the rank of Assistant Professor effective July

2006. Cody worked under Prof. Robert Elliot for his Masters thesis at the University of Alberta (2000). His PhD research, at the University of Waterloo (2005), was also in Mathematical Finance under the supervision of Prof. Andrew Heunis. Subsequently, he spent a year as a Post-doctoral Fellow at the Mathematical and Computational Finance Laboratory in the Department of Mathematics and Statistics of the University of Calgary.

Contributed by Jose Garrido

Laval University

Nadia Ghazzali, professor of statistics with the Department of Mathematics and Statistics, has been awarded the NSERC/Industrial Alliance Chair for Women in Sciences and Engineering.

The workshop Capture 2006, lead by Jean-Dominique Lebreton, Roger Pradel and their collaborators, was held at Laval from May 1 to May 5. The 18 participants,

coming from several countries, thoroughly enjoyed the training offered.

The graduate students studying in the mathematical sciences at Québec universities held their annual conference at Laval University from May 23 to May 25. Some sessions were dedicated to talks on statistics. Two statistics students from Laval have received prizes for the quality of their presentations; Valérie Jomphe got a prize sponsored by the Canada Research Chair on Statistical Sampling and Data Analysis (CRC-SSDA) while Nathalie Vandal received a prize sponsored by the ASSQ.

Contributed by Thierry Duchesne, Université Laval