

# the Survey Statistician

The Newsletter of the International Association of Survey Statisticians

No. 67

January 2013



International Statistical Institute



Institut International de Statistique



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*The Survey Statistician* is published twice a year by the International Association of Survey Statisticians and distributed to all its members. *The Survey Statistician* is also available on the IASS website at <http://isi.cbs.nl/iass/alluk.htm>.

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# Letter from the President

Dear Colleagues,

First, my best wishes to all of you for a peaceful and happy 2013! Second, a reminder to all that 2013 is the International Year of Statistics, and I urge all of you to involve yourselves in whatever way you can in the many activities that have been organised to commemorate this event. The website [www.statistics2013.org](http://www.statistics2013.org) contains a wealth of information that will guide you in finding out more concerning these activities. The SAS video that signals the importance of statistics in all aspects of human welfare (<http://youtu.be/ntbzuqr7drc>) is also well worth watching!

A brief update on progress of the move of the IASS from being an Association incorporated under French law to one under Dutch law. As many of you will be aware, all IASS administration since January 2012 has been handled by the ISI permanent office in The Hague. This is a consequence of the decision, taken at the last General Assembly of the IASS at the 2011 World Statistics Congress in Dublin, that the IASS become an Association of the ISI, and therefore subject to the statutes of the ISI. In particular, this will cause the IASS to move from an association subject to French law to an association that is part of the ISI and therefore subject to Dutch law. At present new IASS statutes that reflect this change of status are being drafted. Over the next couple of months, members of IASS will be informed of the proposed changes and will have an opportunity to comment on them. The next General Assembly of the IASS at the WSC in Hong Kong in August this year will then be the last one for the French version of the Association and the first one for the new Dutch version. This will provide the venue for a final debate on the new statutes. It is very important that as many members of the IASS as possible participate in this important process of change for the Association.

A major driving force for this change was the decision by INSEE that it could no longer afford to maintain the administration of IASS at Cefil in Libourne. As I mentioned in my last contribution to this Newsletter, one consequence of this was a need to relocate the IASS archives from Libourne. To that end, Catherine Meunier and I spent some time last April thinning these archives in order to reduce the space that they took up at Cefil. Unfortunately, subsequent to this consolidation and without any prior notice to either Catherine or the senior administration of Cefil, junior staff there disposed of all remaining IASS archived material during the last half of 2012. This represents a severe blow to the historical integrity of the Association, and means that from now on we will need to approach past members to help source information and documents relating to the past activities of the Association. This is extremely unfortunate, and represents news that I am very sorry to have to pass on to all members of the IASS.

The impact of tough economic conditions on the IASS and its members continued to be felt through the second half of 2012. Two journals of considerable interest to IASS members (Survey Methodology and the Journal of Official Statistics) both changed their publication strategies. In the case of Survey Methodology, this entailed ceasing production of their print version and moving to a 100% online publication from 2013. In the case of the Journal of Official Statistics, this involved increasing their subscription rate for the print version to €70 annually from 2013 and no longer offering a discount to ISI and IASS subscribers from developing countries. One positive signal, however, was that the online versions of both Survey Methodology and the Journal of Official Statistics continue to be freely available for all to download. A further positive signal is that the American Statistical Association, in collaboration with the American Association for Public Opinion Research, has just launched a prestigious new journal specifically aimed at survey methodologists. More details about the new Journal of Survey Statistics and Methodology (or JSSM) are available from its website [http://www.oxfordjournals.org/our\\_journals/jssam/](http://www.oxfordjournals.org/our_journals/jssam/), and I encourage IASS members to support it.

An association like IASS depends hugely on its members for carrying its various activities. I would therefore like to particularly thank Keith Rust, who chairs the IASS Nominations Committee for 2013, and was instrumental in putting together a very strong slate of candidates for the upcoming IASS elections. The elections themselves will be conducted by the ISI permanent office over the next few months and I would strongly urge all members to participate. It is not too much of an exaggeration to state that the future of the Association depends on how many of us vote!

Also, members will have noticed that we are now keenly seeking nominations for the 2013 Cochran-Hansen prize. Yves Tille chairs the judging committee and is (as we all are) very hopeful that the standard and number of nominations that we receive will reflect the importance of the prize to the survey sampling community.

On September 11 and 12 last year, I was privileged to be invited to participate in a Statistics Sweden workshop on Statistical Inference using Registers and Administrative Data Sources. Many of you by now will have been exposed to the rather over-used term "Big Data". As survey statisticians, and particularly for those of you that work on official censuses and surveys, this is not a new concept. However, like it or not, the role of such traditional data gathering exercises in many parts of the world is changing rapidly, and we are now seeing a greater willingness to regard surveys as one among many ways of collecting and analysing data for informing society. In this new, and rapidly developing, world of complementary data sources, our role as survey and census methodologists also needs to change to accommodate the new design and inference problems that inevitably arise. This is particularly the case when traditional surveys and censuses are integrated with external data sources, and the Statistics Sweden workshop represented one acknowledgement of the need for change. Closer to home, I have recently been involved in discussions with methodologists at the Australian Bureau of Statistics on the research that needs to be carried out if they are to meet the 2017 corporate objectives of the Bureau. It will come as no surprise that this leads to issues that are very much the same as those discussed at Statistics Sweden last September, with the common thread being the need to develop design and inference methods for a future where official statistics may well be "assembled to order" from a variety of data sources, with surveys not necessarily constituting one of these sources. Interesting times lie ahead.

Finally, some more sombre news. In the last issue of this Newsletter, I noted the passing away of David Binder. Unfortunately, I now need to inform you that four eminent colleagues - Paul Levy, Gad Nathan, Gérard Théodore and Frank Nolan - all also passed away last year. All four played very significant roles in survey sampling and official statistics, and Danny Pfeffermann has organised a special session at the World Statistics Congress in Hong Kong in August that will commemorate Gad Nathan's contributions to statistics. I knew Gad Nathan and Frank Nolan personally, and often interacted with them while I lived in the United Kingdom and worked with methodologists at the Office for National Statistics. I did not know Paul Levy or Gérard Théodore, but many of us will be very familiar with the text on sampling theory that Paul Levy co-authored with Stanley Lemeshow. Similarly, Jean-Louis Bodin informs me that Gérard Théodore played a prominent role in the creation of the IASS and followed Leslie Kish as IASS President in the early 1980s. On behalf of the Association, I would like to add our condolences and sympathy to those that have already been sent to their families. Perhaps more importantly, however, I would also like to pass on our sincere gratitude for the enormous contributions to our profession that these men made in their lifetimes.

Ray Chambers,  
President, IASS



## Letter from the Editors

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The January 2013 issue of the IASS newsletter *The Survey Statistician* contains articles of interest and important information regarding upcoming conferences, journal contents, updates from the IASS Executive and more.

In the *New and Emerging Methods* section (edited by Ineke Stoop), Henk Fernee and Annette Scherpenzeel have contributed an article on 'The Smartphone in Survey Research: Experiments for Time Use Data'. In the article, they provide an exciting new perspective on data collection for a Time Use survey through an app on the smartphone. In the Ask the Experts Section (edited by Robert Clark), Marco Bee, Roberto Benedetti, Giuseppe Espa and Federica Piersimoni address the problem of cut-off sampling and answer the questions: "Is it acceptable not to cover the smallest businesses in a business survey? How should such a cut-off be chosen?". For the Book and Software Review Section, Natalie Shlomo has contributed a review of the Wiley-Blackwell 2012 book on 'Statistical Disclosure Control' by Anco Hundepool, Josep Domingo-Ferrer, Luisa Franconi, Sarah Giessing, Eric Schulte Nordholt, Keith Spicer and Peter-Paul de Wolf. This book is a result of many years of collaboration between European academics and NSI researchers and provides practical guidelines for the statistical disclosure control of outputs.

We wish to thank all of the authors and editors of these sections for their important contributions on behalf of the IASS membership. Please let Ineke Stoop ([i.stoop@scp.nl](mailto:i.stoop@scp.nl)) know if you would like to contribute to the *New and Emerging Methods* section in the future. If you have any questions which you would like to be answered by an expert, please send them to Robert Clark ([rclark@uow.edu.au](mailto:rclark@uow.edu.au)). If you are interested in writing a book or software review, please get in touch with the editor of the section, Natalie Shlomo ([natalie.shlomo@manchester.ac.uk](mailto:natalie.shlomo@manchester.ac.uk)).

The *Country Report* section has always been a central feature of the IASS *The Survey Statistician* and we thank the editor of the section, Pierre Lavalley ([pierre.lavalley@statcan.gc.ca](mailto:pierre.lavalley@statcan.gc.ca)) for his continuing efforts to obtain timely reports from the different countries. We ask all country representatives to please submit articles and share information on your country's current activities, applications, research and developments in survey methods.

As in the past, this issue of *The Survey Statistician* includes a letter from Ray Chambers, the President of IASS, and updates from Ineke Stoop, the Scientific Secretary. The IASS Vice-president, Denise Silva has taken on the responsibility of updating the list of country representatives. Please get in touch with her at [denisebritz@gmail.com](mailto:denisebritz@gmail.com) if you are currently serving as your country representative or alternatively can suggest a new representative for your country. We have provided a list of the current country representatives and their email addresses.

This issue of *The Survey Statistician* also includes a table of contents from recent issues of relevant journals and advertisements for upcoming conferences and workshops. We thank Marcel Vieira for putting together the list of upcoming conferences to advertise in the newsletter. Please send to Marcel ([marcel.vieira@ice.ufjf.br](mailto:marcel.vieira@ice.ufjf.br)) any conference announcements that you would like advertised in the next newsletter to be issued in July 2013. We also thank Henry Chiem and Yovina Joymungul Poorun for collating the advertisements of upcoming conferences and for preparing the *In Other Journals* section.

In the *News and Announcement* section we have included an announcement for the new Journal of Survey Statistics and Methodology, sponsored by AAPOR and the American Statistical Association, which will begin publishing in 2013. We have also included a notice for the annual Cochran-Hansen prize for the best paper on survey research methods submitted by a young statistician from a developing country and a report from the 2012 Baltic-Nordic-Ukrainian Network on Survey Statistics workshop. We have also included In Memorandums for friends and colleagues that have recently passed away: Paul Levy, Gad Nathan and Frank Nolan.

Finally, we wish to send our warmest congratulations to the 2012 Waksberg Award winner, Lars Lyberg, who will publish a paper in Survey Methodology on "The Evolution of the Survey Quality Concept".

As always, we have many thanks for everyone working hard to put The Survey Statistician together, and in particular, Henry Chiem and Yovina Joymungul Poorun of the Australian Bureau of Statistics for their invaluable assistance. We wish to thank the Section Editors, Ray Chambers for his continuing support and the IASS Executive Director, Catherine Meunier. Statistics Canada has recently had to withdraw from the translation of the newsletter into French due to tight budgetary constraints and we would like to acknowledge their effort and contribution through all these years. Unfortunately we have not found an alternative solution for translating the current issue of the newsletter and therefore only the English edition is available.

Please take an active role in supporting the IASS newsletter by volunteering to contribute articles, book/software reviews and country reports. We also ask IASS members to send in notifications about conferences and other important news items about their organizations or individual members.

We hope you enjoy the January 2013 issue of The Survey Statistician and are happy to receive your feedback and comments on how we can make improvements.

*The Survey Statistician* is also available for downloading from the IASS website at <http://isi.cbs.nl/iass/alluk.htm>.

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## Report from the Scientific Secretary

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### **Moving house**

In 2011 the ISI office has been moved from the INSEE office at Libourne in France to the ISI office in The Hague. This move (which is still ongoing) is being coordinated by the Executive Director Catherine Meunier. A major obstacle to a smooth transition is that IASS is registered in France and hence subject to French law. This necessitates that the Association first be dissolved as a French association and then re-established as an association subject to Dutch law.

The first consequence of the move is that the 2012 call for fees was made by the ISI office at the end of December 2011, following transfer of the IASS membership database. All matters regarding IASS membership (including payment of membership fees and maintenance of up to date personal data) are now the responsibility of Margaret de Ruiter-Molloy, the ISI membership officer. Similarly, all emails broadcast to the entire IASS membership (e.g. to distribute information, IASS and ISI newsletters) are now being made by the ISI webmaster, Hans Lucas.

### **Final Selection of IASS Short Course Topics for WSC 2013**

The ISI Short Course Committee, Hong Kong (SCC-HK) has completed its review of short course proposals for the WSC 2013 meetings and has selected 4 top-ranked IASS course proposals (see Table below) to be offered immediately prior to the August start of the meetings. The IASS and the other ISI societies/associations will be partnering with Hong Kong University (HKU) to offer the WSC 2013 Short Course program. HKU will provide the short course venue including classroom space and available computing laboratories. The short courses will be scheduled Thursday, August 22, through Sunday, August 25 with all course activity ending by late afternoon on August 25, well in advance of the evening opening ceremony for WSC 2013.

In late 2011, the Short Course Committee – Hong Kong, assisted by the ISI Central Office, circulated a call for proposals to the ISI membership and to its Sections requesting topics and proposals for WSC 2013 short courses. A total of 44 proposals were received either in direct response to the ISI call for proposals or as nominations from the ISI associations. We wish to thank all IASS members who developed and submitted a course proposal. There were many excellent proposals and the committee was challenged in making the final selection of ten ISI-wide courses that can be accommodated at the available venue in Hong Kong. The four selected courses that will focus specifically on survey statistics and survey methods are listed in the following table. A final schedule for the short courses and online registration for the short course program will be available in January of 2013.

### **Sponsoring of courses and meetings**

The objective of the IASS is to promote the study and development of the theory and practice of statistical censuses and surveys and associated subject throughout the world. To pursue this objective, the IASS is able to provide limited financial support to relevant conferences and workshops. In addition, the IASS is keen to promote such activities and related outputs. In 2012 the following activities have been sponsored:

- The 7th French Speaking Survey Conference ([www.sfds.asso.fr/25-Colloque Francophone sur les Sondages](http://www.sfds.asso.fr/25-Colloque-Francophone-sur-les-Sondages)) in Bruz, France
- The 4th International Conference on Establishment Surveys in Montréal ([www.amstat.org/meetings/ices/2012](http://www.amstat.org/meetings/ices/2012))
- International Conference on Methods for Surveying and Enumerating Hard-to-Reach Populations ([www.amstat.org/meetings/h2r/2012](http://www.amstat.org/meetings/h2r/2012)) in New Orleans
- The Workshop of Baltic-Nordic-Ukrainian Network on Survey Statistics (August 2012)

In 2013 the following activities will be sponsored by the IASS:

- The 2013 meeting on Small Area Estimation that will be held in Bangkok as a satellite to WSC 2013
- The 2013 Multi-level, Multi-source Workshop in Chicago (NORC)
- The 2013 Italian Conference on Survey Methodology ([www.statistica.unimib.it/itacosm13](http://www.statistica.unimib.it/itacosm13)) to be held in Milan

### **Publications**

The Survey Statistician is the bi-annual journal of the IASS. It is freely available online as a PDF in both English <http://isi.cbs.nl/iass/survstatUK.htm> and French <http://isi.cbs.nl/iass/survstatFR.htm>. The French edition currently available is the last one that will be produced, since changed economic conditions have meant that the free translation service previously provided by Statistics Canada is no longer available.

Survey Methodology is published by Statistics Canada in both an English <http://www.statcan.gc.ca/pub/12-001-x/12-001-x2012001-eng.htm> and a French version <http://www5.statcan.gc.ca/bsolc/olc-cel/olc-cel?catno=12-001-x&lang=fra> and is freely available online. The print version of this journal will be discontinued next year, with the last print issue being that for December 2012.

The Journal of Official Statistics [www.jos.nu](http://www.jos.nu) is published by Statistics Sweden. It is freely available online. Subscription rates for the print version of this journal will increase to 70 euros from 2013, and there will be no discount for subscribers from developing countries.

### **Institutional membership and website**

At present the council is discussing ways of making institutional membership more attractive. This is especially necessary because a number of institutions have shown some concerns about the benefits of institutional membership. Incoming President Danny Pfeffermann has suggested that IASS could set up a programme of short courses for member institutions, which could be presented by volunteer IASS members with only travel and accommodation costs charged. This clearly has considerable economic benefits for institutions, but depends on the goodwill and availability of IASS members who would have to present such courses. Several council members have volunteered to teach a course, but at present no concrete proposals have been finalized.

A beta version of the IASS website is available at [www.ihnsn.org/apps/iass](http://www.ihnsn.org/apps/iass).

Ineke Stoop  
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## Contact Information for IASS Country Representatives

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Dear IASS member,  
Attached is a list of country representatives. If your country is not listed and you can contribute to IASS as country representative please contact Denise Silva ([denisebritz@gmail.com](mailto:denisebritz@gmail.com)) or ([denise.silva@ibge.gov.br](mailto:denise.silva@ibge.gov.br)). Also, if you know a colleague in a country not listed who you could suggest as IASS country representative, please let Denise know and she will get in touch with him or her.

The IASS country representative main activities are:

- to provide country reports to our bulletin - The Survey Statistician - in which you can report news related to official statistics, events, methods, projects related to survey methods carried out in statistical offices, university departments and other institutions; and
- to take the IASS message forward and help to promote IASS.

We are looking forward to hearing from you.

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## News and Announcements

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### The Journal of Survey Statistics and Methodology (JSSM)

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The JOURNAL OF SURVEY STATISTICS AND METHODOLOGY, sponsored by the American Association for Public Opinion Research and the American Statistical Association, will begin publishing in 2013. Its objective is to publish cutting edge scholarly articles on statistical and methodological issues for sample surveys, censuses, administrative record systems, and other related data. It aims to be the flagship journal for research on survey statistics and methodology.

Topics of interest include survey sample design, statistical inference, nonresponse, measurement error, the effects of modes of data collection, paradata and responsive survey design, combining data from multiple sources, record linkage, disclosure limitation, and other issues in survey statistics and methodology. The journal will publish both theoretical and applied papers, provided the theory is motivated by an important applied problem and the applied papers report on research that contributes generalizable knowledge to the field. Review papers are also welcomed. Papers on a broad range of surveys are encouraged, including (but not limited to) surveys concerning business, economics, marketing research, social science, environment, epidemiology, biostatistics and official statistics.

The journal will have three sections. The *Survey Statistics* section will present papers on innovative sampling procedures, imputation, weighting, measures of uncertainty, small area inference, new methods of analysis, and other statistical issues related to surveys. The *Survey Methodology* section will present papers that focus on methodological research, including methodological experiments, methods of data collection and use of paradata. The *Applications* section will contain papers involving innovative applications of methods and providing practical contributions and guidance, and/or significant new findings.

Joe Sedransk and Roger Tourangeau will be the editors of the new journal. Sedransk will be responsible for the Survey Statistics section and Tourangeau for the Methodology section; the two will jointly oversee the Applications papers.

Submitted papers will begin to be refereed in 2012, as soon as the editorial office is set up, the manuscript processing system is in place and editorial policies are finalized.

Please visit the JSSM website: [http://www.oxfordjournals.org/our\\_journals/issam/](http://www.oxfordjournals.org/our_journals/issam/).

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**IASS Cochran-Hansen Prize 2013:  
Competition for Young Survey Statisticians from Developing Countries**

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In celebration of its 25th anniversary, the International Association of Survey Statisticians established the Cochran-Hansen Prize to be awarded every two years to the best paper on survey research methods submitted by a young statistician from a developing country. Participation in the competition for the Prize is open to nationals of developing countries who are living in such countries and who were born in 1971 or later. Papers submitted must be unpublished original works. They may include materials from the participant's university thesis. They should be in either English or French. The deadline for paper submissions for the 2013 prize is February 15, 2013. The papers must be sent to the address [corine.diacon@unine.ch](mailto:corine.diacon@unine.ch).

Each submission will need to be accompanied by a cover letter that gives the participant's year of birth, nationality, and country of residence. The cover letter will also need to indicate if the work submitted is the result of a PhD thesis and, in the case of joint papers, the prize candidate will need to state clearly what his/her contribution to the paper is. The papers submitted will be examined by the Cochran-Hansen Prize Committee appointed by the IASS. The decision of the Committee is final.

The winner of the Prize will be invited to present his/her paper at the International Statistical Institute's (ISI) World Statistics Congress (WSC) in Hong Kong in August 2013. The author of the winning paper will receive the Cochran-Hansen Prize in the form of books and journal subscriptions to the value of about € 500, and will have reasonable travel and living expenses paid in order to present the paper at the ISI WSC in Hong Kong.

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## **Workshop of Baltic-Nordic-Ukrainian Network on Survey Statistics 2012, Valmiera, Latvia, 24-28 August 2012**

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The Workshop of Baltic-Nordic-Ukrainian Network on Survey Statistics 2012 was organised in Valmiera (Latvia) on August 24-28. It was the sixteenth annual event organised by the Baltic-Nordic-Ukrainian Network on Survey Statistics (<https://wiki.helsinki.fi/display/bnu/home>). The main objectives of the workshop were:

- To present scientific achievements, own experience and the results of research in survey statistics;
- To learn from teachers and colleagues;
- To discuss practical and theoretical topics of survey statistics;
- To share opinions on teaching and studies in the field of survey statistics;
- To strengthen contacts between the survey statisticians from Baltic and Nordic countries, Ukraine and Belarus.

There were 62 participants from 12 countries – Belarus, Estonia, Finland, Germany, Hungary, Italy, Latvia, Lithuania, Norway, Sweden, Ukraine and United Kingdom. This was a highest number of participants in the workshops organised by the Baltic-Nordic-Ukrainian Network on Survey Statistics. The audience of the workshop was diverse – consisting of undergraduate students, research students, university teachers and practising statisticians.

The keynote speakers were Prof. Carl-Erik Särndal (Sweden) and Prof. Monica Pratesi (Università di Pisa, Italy). Keynote speakers gave series of three lectures each. There were six lectures by invited speakers – Dr. Doc. Danutė Krapavickaitė (Vilnius Gediminas Technical University, Statistics Lithuania), Prof. Gunnar Kulldorff (Umeå University, Sweden), Dr. Pauli Ollila (Statistics Finland), Prof. Dr. Ulrich Rendtel (Freie Universität Berlin, Germany), Anders Wallgren (Sweden) and Dr. Scient. Li-Chun Zhang (Statistics Norway). There were 31 presentations of contributed papers discussed by invited discussants. A poster session was organised with seven posters presented. Three topics were discussed in the round table discussions by the participants of the workshop. Most of the materials presented during the workshop are available at the workshop website (<http://home.lu.lv/~pm90015/workshop2012/>).

The sponsors of the workshop were the Nordplus Programme of the Nordic Council of Ministers, the International Association of Survey Statisticians (IASS) and the Central Statistical Bureau of Latvia. More information about the workshop is available at the workshop website.

The next annual event organised by the network will be the Summer School on Survey Statistics Theory and Methodology in Minsk (Belarus) in June 2013.

Mārtiņš Liberts

The chair of the workshop organising committee

(The Central Statistical Bureau of Latvia, University of Latvia)



# Ask the Experts

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## **“Is it acceptable not to cover the smallest businesses in a business survey? How should such a cutoff be chosen?”**

### **Discussion**

Marco Bee<sup>1</sup>, Roberto Benedetti<sup>2</sup>, Giuseppe Espa<sup>3</sup>, Federica Piersimoni<sup>4</sup>

### **1 Introduction**

Cut-off sampling is commonly used by National Statistical Institutes to select samples, but it is not easy to give a precise definition. In general, the population is partitioned in two or three strata such that the units in each stratum are treated differently. A distinctive feature is that it is known in advance that part of the target population is excluded from sample selection.

The basic formulation (Hansen et al. 1953, pp. 486-490, Särndal et al. 1992, pp. 531-533) is as follows. There is a threshold such that the units above the threshold are always included in the sample, whereas the other units are always discarded, namely their probability of being included in the sample is equal to zero. In this case the sampling variance is equal to zero as well. It is well known (see, for example, Särndal et al., 1992, p. 531) that cut-off sampling produces biased estimators. Therefore, the error is typically measured by means of the Mean Squared Error, and cut-off sampling may be the preferred choice when the variance reduction more than offsets the introduction of a small bias (Knaub, 2007).

An alternative approach is proposed by Hidiroglou (1986), who still considers two strata. In the first one the observations are included in the sample with probability one, whereas in the second one the units are not discarded but sampled. Hidiroglou (1986) also gives a satisfactory solution to the problem of determining the optimal take-all threshold, i.e. the partition of the population in strata entirely surveyed and sampled. For the setup where the survey variable and the stratification variable are different, Rivest (2002) proposes a generalization taking into account the differences between the survey and the stratification variable and allowing to find the optimal sample size and the optimal stratum boundaries for a take-all/take-some design.

Finally, the most general definition refers to a framework where the population is divided in three strata whose units are respectively enumerated completely, sampled and discarded. As pointed out by Sigman and Monsour (1995), this type of stratification is particularly appropriate in business surveys, because businesses

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distributions are mostly skewed. Thus, size has a considerable impact on the precision of survey estimates, and failure to notice that such populations should be stratified in the aforementioned manner may cause an underestimation of the population characteristics.

When the distribution of the selection variable is concentrated in few large establishments, cut-off sampling usually provides a sample with rather small size but high degree of coverage. If the objective of the survey is estimating the total of the population, a considerable percentage of observations gives a negligible contribution to the total; on the other hand, the inclusion in the sample of the largest observations is essentially mandatory.

From the methodological point of view, the goal is finding the optimal partition of the population in three sets: a take-all stratum whose units are surveyed entirely ( $U_C$ ), a take-some stratum from which a simple random sample is drawn ( $U_S$ ) and a take-nothing stratum whose units are discarded ( $U_E$ ). The population size is denoted by  $N$ , the sizes of  $U_C$  and  $U_E$  are denoted respectively by  $N_C$  and  $N_E$ , and the size  $N_S$  of the take-some stratum is given by  $N_S = N - N_C - N_E$ .

Roughly speaking, it is decided in advance to exclude from the analysis part of the population (for example, firms with less than five employees). In practical applications, this choice is often motivated by the desire to match administrative rules: in this case, the partition of firms in small, medium and large is usually based on predefined classes of employees. This strategy is employed so commonly in business surveys that its use is “implicit”, so that the statistical consequences of the restrictions caused to the archive by this procedure have long been ignored.

Finding a criterion that assigns each unit to exactly one of the three strata has often been considered a priori as a non-viable alternative, mainly because some inclusion probabilities are set equal to zero. This means that cut-off sampling is, in some sense, in an intermediate position between probabilistic and non-probabilistic sampling schemes, a feature that is not appreciated by survey methodologists. As a result, in the literature there are very few papers concerning its theoretical foundations.

## 2 Some Examples

Applications of cut-off sampling are numerous and relevant. It is the case, for example, of the monthly survey of manufacturing performed by Statistics Canada (see, for example, Statistics Canada 2001), that implicitly uses cut-off sampling, without paying too much attention to theoretical implications: “The sampling frame for the Canadian Monthly Survey of Manufacturing (MSM) is determined from the target population after subtracting establishments that represent the bottom 2% of the total manufacturing shipments estimate for each province. These establishments were excluded from the frame so that the sample size could be reduced without significantly affecting quality”. Similar procedures are also employed in surveys performed by other National Statistical Offices (for a thorough review see Knaub, 2007, sect. II), although methodological aspects are sometimes poorly documented. Two important exceptions are the book by Särndal et al. (1992, pp. 531-533), who are mostly negative, and the paper by de Haan et al. (1999), who present successful applications of cut-off sampling in the field of consumer price indexes. As pointed out by Knaub (2007, p. 2), cut-off sampling for estimation of unit prices may be useful: “If

a cut-off sample is used for revenues and another is used for sales volume, then the ratio will tend to be more accurate than either the numerator or the denominator”.

Finally, Elisson and Elvers (2001) compare cut-off sampling with simple stratified sampling. They conclude that cut-off sampling deserves more consideration; however, they point out that the dimensional variable that determines the cut-off threshold has a significant impact on the results, so that they stress that the choice of this variable requires some care. Moreover, they emphasize the need for an appropriate model for the estimation of the fraction of population excluded from the sample.

It is worth mentioning at least four practical advantages of cut-off sampling as concerns the costs of a survey (Benedetti et al. 2010, Sect. 1):

1. Building and updating a sampling frame for small business units could be too costly, considering that the gain in efficiency of the estimators would probably be small;
2. Excluding the units of the population that give little contribution to the aggregates to be estimated usually implies a large decrease of the number of units that have to be surveyed in order to get a predefined accuracy level of the estimates;
3. Constraining the frame population and, as a consequence, the sample, reduces the problem of strata containing no respondents. This mainly affects the smallest firms. Several empirical analyses showed that some undesirable features, such as the non-response rate, the turnover rate of economic units and the errors of under- or over-coverage of the frame, become more relevant as the size of the units gets small;
4. Cut-off sampling may be demonstrably preferable in terms of accuracy when total survey error is taken into account. Knaub (2004) shows a way that total survey error may be considered in the context of nonsampling errors, such as measurement error.

Given that practitioners are in favour of such partitions of the population and there are technical reasons that justify their use, we wonder whether it is possible to consider cut-off sampling as a valid sampling scheme.

### 3 Estimation and Sample Design

Assume that we are interested in estimating the total of a population. Benedetti et al. (2010) develop a computationally feasible solution to the problem of the construction of the three strata  $U_C$ ,  $U_S$  and  $U_E$  in a multipurpose and multivariate setup. Similarly to what happens in practical applications, they assume to be interested in surveys with more than one target variable, using auxiliary information contained in multiple variables. Benedetti et al. (2010) write the estimator of the total as

$$\hat{t}_y = t_C + \hat{t}_S + \hat{t}_E = (1 + \hat{\delta})(t_C + \hat{t}_S) = (1 + \tilde{\delta}) \left( \sum_{k \in U_C} y_k + \sum_{k \in S} d_k y_k \right),$$

where  $\tilde{\delta}$  is given by  $\tilde{\delta} = \sum_{k \in U_E} x_k / \left( \sum_{k \in U_C} x_k + \sum_{k \in U_S} x_k \right)$  and  $x_k$  is the  $k$ -th auxiliary variable. The optimal sample size  $n$  is given by

$$n = N - N_E - \frac{1}{\frac{1}{N_S} + \frac{S^2}{\psi}}, \quad (1)$$

where  $S^2$  is the sample variance in  $U_s$ ,  $\psi = (c^2 t_y^2 - b^2(\hat{t}_y)) / (1 + \tilde{\delta})^2$ ,  $b(\hat{t}_y)$  is the bias of  $\hat{t}_y$  and  $c$  is the desired level of precision.

The Simulated Annealing algorithm is used to find the optimal partition, i.e. the partition that minimizes the number of sampling units necessary to satisfy the required level of precision. This is expressed in terms of MSE of the estimates of the population total. The results obtained by Benedetti et al. (2010) are encouraging: for example, for  $c=1\%$ , the sample size obtained using the present approach is approximately 50 to 60% less than its direct competitors.

The case when a single measure of size is available is, however, quite important. For example, in business surveys, the only auxiliary information is often the number of employees or sales. Furthermore, when the surveys are voluntary, the rate of participation of small firms is mostly very low. In this instance a cut-off sampling procedure based on a dimensional variable (Bailar et al., 1983, Sect. 5.1) is undoubtedly convenient.

Bee et al. (2011) consider first the problem of estimating a ratio of two unknown totals, which is very common in conjunctural business surveys aiming at estimating variations. The optimal sample size is still given by (1), but now  $\psi$  is defined as

$$\psi = (c^2 R^2 - b^2(\hat{R})) (t_{C,t-1} + t_{S,t-1})^2 / (1 + R^2 - 2R\rho_{\hat{t}_{S,t}\hat{t}_{S,t-1}}), \quad (2)$$

where  $R$  is the ratio of the same totals at times  $t$  and  $t-1$ , and  $\rho_{\hat{t}_{S,t}\hat{t}_{S,t-1}}$  is the linear correlation coefficient of  $\hat{t}_{S,t}$  and  $\hat{t}_{S,t-1}$ .

Finally, Bee et al. (2011) also deal with non-sampling errors due to total nonresponse in a multipurpose and univariate approach. Interestingly enough, the optimal sample size is again given by (1), but  $\psi$  is given by (2) minus a quantity that depends on the nonresponse probability. Thus, in both cases the sample sizes are functionally identical to the one found by Benedetti et al. (2010), which turns out to be a general setup for these kinds of analyses.

In both univariate cases, the optimization can be carried out by means of any algorithm for univariate optimal stratification: the best suited one is probably the extension of the Kozak (2004) algorithm proposed by Baillargeon and Rivest (2009).

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Ask the Experts - Call for Questions

If you'd like to ask the experts a question, please contact Robert Clark at [rclark@uow.edu.au](mailto:rclark@uow.edu.au).

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## New and Emerging Methods

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### The smartphone in survey research: experiments for time use data

Henk Fernee<sup>5</sup> and Annette C. Scherpenzeel<sup>6</sup>

#### Abstract

*New technologies such as smartphones and 'apps' make it possible to collect data for survey research in a different way. People usually carry their smartphone with them throughout the day, using it regularly. This implies that researchers can easily reach people, and in addition to asking survey questions can also collect other information about the respondent. In this research, a collaborative venture between The Netherlands institute for Social Research | SCP and CentERdata (Tilburg University, the Netherlands), data are collected about the time use of participants using smartphones. The data are collected from the LISS panel, an online panel operated by CentERdata, which is based on a probability sample. Panel members who do not own a smartphone are able to borrow one from CentERdata. Before the actual time use survey began, experiments were conducted involving both smartphone users and non-users, and produced promising results. The possibilities and difficulties of smartphone data collection for this type of survey research are discussed in this paper.*

#### Introduction

More and more people today have their own smartphone, a mobile device with Internet access. Almost half the Internet users in the Netherlands use a mobile device to access to the Web, and the number of users is still growing (Statistics Netherlands, 2012). Smartphones are changing the way people communicate and the way in which they obtain information. People increasingly send e-mails, follow the news, chat with friends, check train timetables and the weather, etc. using their smartphone. These devices are clearly becoming an important part of people's everyday lives. This new way of using telephones can open the way to a new method of data collection, in a way which is comparable to the development of the Internet as a new means of data collection during the last two decades. It will create opportunities for survey research on new domains and topics, and at the same time will usher in induce changes in the implementation of online surveys.

Smartphones offer new ways of collecting data, besides surveys. It is possible to collect data that do not require the intervention of the respondent at all, for example by using GPS location tracking (e.g. Bohte, 2010) for mobility research, or by collecting data about the use of the mobile telephone itself to study how individuals use smartphones. This method of 'passive' data collection is sometimes called

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'reality mining'. In addition, pop-up screens can be used to reach respondents several times a day and ask short questions. This 'beeper' method (Gershuny and Sullivan, 1998) can be used to instantly measure the emotions of the respondent (the 'experience sampling' method developed by Larson and Csikszentmihalyi, 1983) or to ask which media respondents have used during the last hour. Other options are to ask respondents to take photos or videos and to scan the barcodes of items they have bought for use in budget research. Finally, all these kinds of data can be combined to provide a full overview of the respondent's behaviour and well-being. In this study we tested the suitability of smartphones as a means of data collection for time use research. In time use research, respondents are usually asked to fill in a paper diary for several days, indicating the activities they have carried out in set time intervals of ten minutes. In addition, respondents are asked to report which other persons were present during each activity. One disadvantage of this traditional method is that people tend to fill in this paper diary retrospectively, only a few times a day. Generally, the longer the period that elapses between the activities and the moment when people fill in their diary, the higher the probability of recall problems which affect the quality of the answers. By using a smartphone, it is possible to remind people to fill in their diary during the day, which may generate higher frequencies of reported activities and result in greater accuracy. In addition to collecting time use data, smartphones make it possible to collect the supplementary data described above: the location of the respondents (using GPS data); their communication pattern (by recording the number of calls and text messages on their smartphone); and their mood or emotions during the day (by using the beeper method). Combining the information about the respondent's time use, location and mood can give a more accurate picture of what respondents did during the day and how they felt.

### **Design and experiments**

Smartphone data collection could be implemented generally by giving respondents access to a website where they can complete a survey adapted for smartphone access. The disadvantage of this approach is that the website with the questions would need to be loaded onto the telephone, and different mobile devices or operating systems will lead to differences in the layout of the questionnaire, resulting in 'mode' effects (Buskirk & Andrus 2011; Callegaro 2010; Couper 2010; Peytchev & Hill 2010). Another disadvantage is that many of the supplementary data described above cannot be automatically registered and collected through a website survey. We therefore opted to develop an application ('app') specifically for the time use study. The app can be downloaded to the respondent's mobile phone, something needs to be done only once. The advantages of using an app are firstly that respondents can fill in their time use even when they are offline, wherever they are and at any time. Secondly, using an app makes it possible to send reminders to respondents to complete their diary, and allows the beeper method and pop-up screens to be used to obtain people's responses at predetermined moments during the day. Thirdly, the respondent's location can be followed by tracking the GPS signals.

Most smartphone users in the Netherlands have an iPhone, a Blackberry or an Android-based device. Blackberries were excluded from the time use study reported in this paper because they operate in a very different way from most other smartphones, and usually have a much smaller screen. The Android app was built and tested first, following which the iPhone app was developed with a comparable layout and functionality. The app was designed to be as similar as possible to the traditional time use study in the Netherlands, following the guidelines of the Harmonized European Time Use Survey (HETUS, Eurostat, 2009). These guidelines



are used in many European countries, and in the Netherlands are applied by SCP and Statistics Netherlands.

The main study is implemented in the LISS panel. This is an online panel, representative for the Dutch-speaking population of the Netherlands, and consists of approximately 8,000 individuals who participate in monthly Internet surveys. The panel is based on a true probability sample of households drawn from the population register. Persons not included in the original sample cannot participate, so there can be no self-selection. Households that would not otherwise be able to participate are provided with a computer and Internet connection, to prevent the undercoverage and selection bias which would result from excluding people without Internet access from the surveys. In a similar way, smartphones are lent to people who do not have one themselves to enable them to participate in the time use survey, thus preserving the representativeness of the sample of participants. The smartphones which were lent to non-users for this study were Android-based devices (Samsung Galaxy Gio). The selection bias in smartphone data collection would be rather large if non-users were excluded: less than 25% of the LISS panel members in 2011 reported having a mobile device with Internet access. The smartphone time use data collection will take one year. Each month, a different batch of about 170 respondents will participate, resulting in a total net sample of approximately 2,000 participants after 12 months. The data will be published on the website [www.lissdata.nl](http://www.lissdata.nl) and are freely available for academic researchers.

Preceding the main study involving the LISS panel, a series of four pilot experiments were conducted to test the possibilities of smartphone data collection. These experiments were carried out between November 2011 and May 2012, using a different panel from the LISS panel. The aim was to ascertain whether inexperienced respondents are willing and able to complete a time use diary on a smartphone, to optimise the app for inexperienced users, and to test the resultant data quality. The sample was drawn from the TNS-NIPO panel<sup>7</sup> and consisted of a selection of 50 panel members who owned an Android smartphone, 50 panel members without a smartphone and, in a later phase, 50 panel members who owned an iPhone. All three groups had comparable distributions of background variables such as age, gender and education. The respondents were asked to complete the time use app during two days, one weekday and one weekend day. Each day started at 4.00 a.m., and respondents had to complete 24 hours in ten-minute time slots, thus following the HETUS guidelines. Respondents could complete the last hours of the 24 hour period until noon the next day, thus allowing them to fill in time spent sleeping retrospectively. When the day was completely filled in, a few questions were asked about the specific characteristics of the day, for example whether it was a normal working day, whether the respondent was ill, on vacation, etc. Participants received an introductory letter about the study, a paper manual describing how the app worked, and a paper list of all the activity categories. In addition, a YouTube introduction film was available, which demonstrated the use of the app and, for the inexperienced users, the operation of the lent smartphone. If respondents experienced any problems, they could call the helpdesk.

### **First results**

In the first experiment, only the time use app was tested. In subsequent experiments, the beeper method was added to the time use app to collect experience sampling data about people's mood, and in addition the number of telephone calls, text and Internet messages were recorded. In all experiments, the app registered GPS data for those respondents who had given consent for this. Participants could indicate

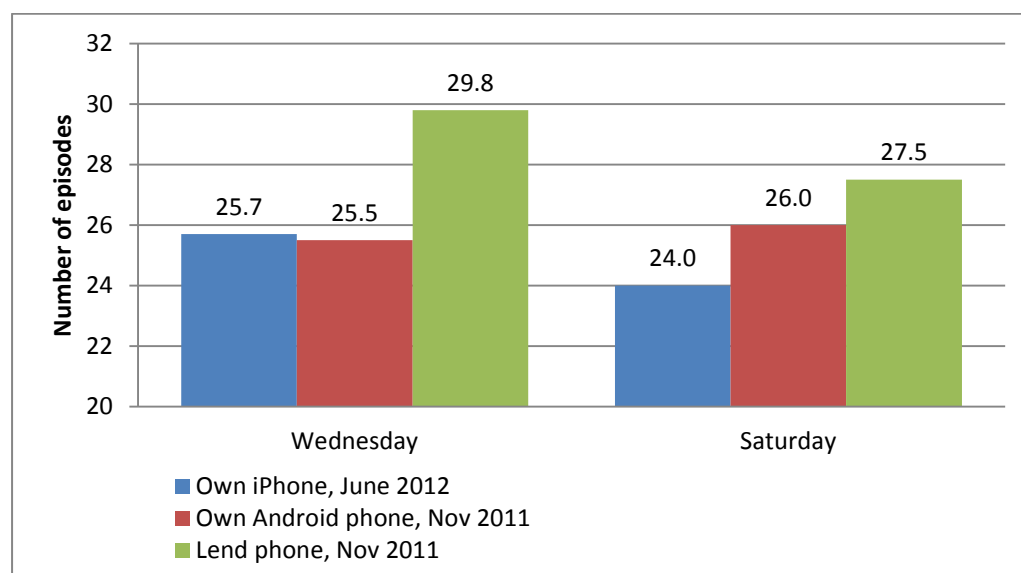
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<sup>7</sup> A market research company which has an online access panel

whether or not they would allow the app to track their GPS location. During the diary completion day, they could turn off the tracking system at any time. The GPS location was stored at ten-minute intervals, and also whenever the respondent moved more than ten metres. When no GPS coverage was available, the location was determined by telephone location tracking. At the end of the first experiment, participants completed an evaluation questionnaire about their experiences with the app and the study. In-depth interviews were also held with ten respondents in order to gather more details about the experiences of the participants. In general, the evaluation was positive; both smartphone users and inexperienced respondents understood how the app worked and found it quite easy to use. Reported problems mostly concerned the time interval of ten minutes, which some respondents considered to be too short, and the categories of activities presented, which did not always cover everything<sup>8</sup>. In addition, the inexperienced respondents reported that they found it rather difficult to find the day overview screen in the app, or to switch from this screen to the activity questions. Finally, many respondents mentioned the technical problems that arose in the first experiment.

The quality of the data resulting from the time use app was evaluated by looking at the number of different episodes participants reported. An episode is defined as a continuous time period in which a respondent performs the same activity (and side-activity) with the same person(s) or alone (e.g. 'partner leaves room while watching TV' is a new episode). The general assumption is that the more episodes people report, the higher the data quality, in terms of a higher level of accuracy of the reported time use. The number of episodes was somewhat higher among the inexperienced respondents using the borrowed smartphone than among the experienced respondents using their own smartphones (Figure 1). It may be that respondents using a borrowed smartphone felt more obliged to complete their diary accurately than participants who used their own smartphones. In conclusion, the experiments showed that both the experienced and inexperienced users are able to use the app as an instrument to accurately measure their time use.

**Figure 1. Number of episodes for days and user group.**



<sup>8</sup> It was always possible to describe an activity in ones one words, in an open field, instead of choosing a category from the list.

## **General discussion**

Smartphones are a new technology which is likely become a new method of data collection in survey research, and which presents several opportunities as well as difficulties. In the experiments conducted in this study, time use data were collected using an app developed for smartphones. In addition, 'passive' data were also collected using the same app, such as GPS location and usage of the mobile telephone. The time use data were also supplemented with experience sampling by presenting pop-up questions about the respondent's mood during the day. Particularly interesting in these experiments were the inexperienced respondents who did not have a smartphone of their own but were lent one for the purposes of the study. The experiments, the evaluation questionnaire and the in-depth interviews demonstrated the feasibility of loaning people smartphones to participate in smartphone surveys, and showed that high-quality time use data can be collected using a smartphone app.

The next step is to implement the smartphone data collection in a larger, representative sample from the LISS panel, during a one-year period, and to follow the HETUS design more closely. This design will allow a more detailed study of the differences compared with traditionally collected time use data.

Some general issues should be kept in mind when conducting research with smartphones. Firstly, in every study involving the use of smartphone data collection, a choice has to be made between developing a specific app or using a web-based questionnaire adapted for smartphones. One of the major disadvantages of using apps is that a different app has to be built for each different device (Android, iPhone, Blackberry, etc.). For an online questionnaire, by contrast, only a website that is compatible for smartphones is needed. In addition, the technical problems encountered in the first experiments showed that apps need to be extensively tested for technical issues and usability for the respondent before the main research is conducted. The main advantages of using an app are the new opportunities for collecting 'passive' data as a source of other relevant information about respondents' behaviour (Raenato et al. 2009), and the ability to send notifications at pre-determined time intervals, to collect experience sampling data, for example, and to remind respondents about the completion of questions and diaries. In addition, an app can be used anywhere and at any time, including offline. The data are then stored and sent to the central system when the device is online again. This feature is especially important for time use research, experience sampling and mobility research.

Secondly, the penetration of mobile Internet access in the Netherlands is currently too low to cover the population fully; the same is true for many other European countries, at least in 2008 (Fuchs and Busse 2009). Although the coverage will probably increase in the coming years, it is not expected that the entire population will have mobile Internet access. This means that large coverage and selection biases could occur in studies which are conducted entirely on smartphones and which are intended to be representative for the general population. At the same time, measurement errors could occur if researchers do not take into account the fact that many respondents do use their smartphones to fill in online questionnaires, and fail to adapt the design of such questionnaires to this. In the end, all web surveys should be designed to be accurate both on computers and smartphones (Callegaro 2010). Moreover, smartphones offer new, promising ways to reach specific groups of respondents that are hard to reach in regular surveys, for example young people, where smartphone penetration is relatively high (Millar and Dillman 2012, Fuchs and Busse 2009).

To prevent undercoverage and selection bias in surveys that are intended to cover the general population, smartphones could be included in mixed-mode designs or in (online) panels. The advantage of a panel is the possibility to loan a smartphone to people who do not own one. In the case of the LISS panel, this means that a representative sample of the Dutch population can be included in a smartphone study, and a wide range of different topics can be studied. The experiments reported here show that with sufficient help and instruction, inexperienced respondents can also participate in smartphone research. The one-year main study involving the LISS panel, as well as other research with smartphones, will reveal other possibilities and limits of this new method of data collection. The first experiments with both smartphone owners and non-owners appear to be promising.

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### **New and Emerging Methods – Call for Volunteers**

If you're interested in contributing an article to the "New and Emerging Methods" section of a future edition of *The Survey Statistician*, please contact Ineke Stoop at [i.stoop@scp.nl](mailto:i.stoop@scp.nl).

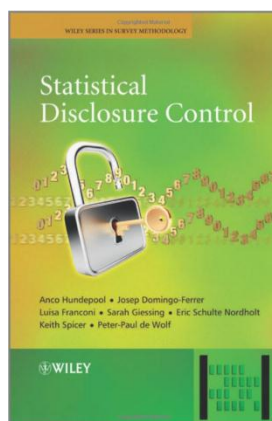
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## Book and Software Review

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### Statistical Disclosure Control

by Anco Hundepool, Josep Domingo-Ferrer, Luisa Franconi, Sarah Giessing, Eric Schulte Nordholt, Keith Spicer, Peter-Paul de Wolf

Book Review by Natalie Shlomo

Stemming from the long-term collaboration of European academics and National Statistical Institute (NSI) researchers on the topic of statistical disclosure control, the book 'Statistical Disclosure Control' published by Wiley in 2012, brings together the extensive work by the authors that originally started with the EU funded 4th Framework SDC project (1996-1998), continuing with the 5th Framework CASC project (2000-2003) and subsequently followed by the Eurostat sponsored CENEX project in 2006 and the ESSnet Project in 2008-2009. The book has six chapters covering the most current research and common practices up to the time of publication for the mainstay traditional statistical outputs disseminated by NSIs: microdata and tabular data. Because of this, the book is an excellent reference book for NSIs and other organizations that produce and disseminate statistical outputs.

The first chapter is an introduction to the statistical disclosure control problem and provides the motivation for the rest of the book. It describes the disclosure risk-data utility trade-off in terms of an optimization problem. Depending on the type of data and how it is disseminated, the disclosure risk needs to be evaluated and statistical disclosure control methods applied. These methods may alter or limit the information content in the data thereby reducing the utility of the data. Assuming that disclosure risk and data utility can be quantified, an optimal disclosure control method can be determined which will have the highest utility for a given maximal tolerable risk threshold set by the data custodians. Other important concepts are defined in the chapter, the types of statistical data covered in the book and some definitions of disclosure risk. There is brief mention of the more formal approach to privacy issues developed in the Computer Science literature, termed differential privacy, which typically refers to the protection of outputs from query-based data mining techniques.

Chapter 2 provides general background particularly relevant for NSIs on the ethical, professional and legal motivation for statistical disclosure control with an overview of the different codes of practice and standards across countries.

Chapter 3 focuses on microdata, and specifically microdata arising from surveys,



which are typically released by NSIs. The beginning of the chapter presents a methodological approach to the process of releasing microdata, starting with the motivation for protecting respondents in microdata, the types of microdata, the level of protection needed according to the mode of release, the disclosure risk assessment, an overview of disclosure control methods and implementation. The chapter then goes into more details on the definitions of disclosure risk and the type of identifiers that can be found in microdata. Section 3.5 is devoted specifically to estimating the risk of identification based on a set of identifying variables when the underlying population counts are unknown. Several methods of probabilistic modelling for estimating the population parameters and disclosure risk measures are presented, including some heuristics. Also included are record linkage methods for assessing disclosure risk where it is proposed to link the protected data back to the original data to determine the number of correct matches without taking into account the sampling from the population. This section would have benefitted from a few examples to demonstrate the advantages and disadvantages of the methods reviewed or which method would have the highest accuracy. The remaining sections of Chapter 3 provide an overview of statistical disclosure control techniques, dividing them into two main classes: non-perturbative versus perturbative methods. The authors provide a comprehensive list of methods and also provide examples on implementation. Section 3.9 introduces information loss measures, in the first instance by comparing sufficient statistics before and after the application of disclosure control techniques, and in the second instance by attempting to bound the information loss measures through a definition of a probability under a Normal assumption of the maximal discrepancy between the perturbed and original parameter of interest. These latter information loss measures would also have benefitted from some examples as it is not clear how deviations from the Normal assumption as well as other assumptions made, e.g. that the masked dataset is a simple random sample of the original population, impacts on the quality of these measures. The chapter concludes with software and some case studies.

Next, chapter 4 discusses magnitude tables typically arising from business surveys. The chapter opens with a description of their complex data structures and disclosure risk concepts which are quite different from those defined in the previous chapter on microdata. Here, the disclosure risk measures are called sensitivity rules. The main disclosure control method for protecting these tables is through cell suppression but other methods are mentioned, particularly the perturbative method of controlled tabular adjustment (CTA). Utility measures are described as outcomes of the objective function of the linear programming that is used for finding optimal suppression patterns. Assessing the utility for CTA however is not straight-forward and leads to very large measures of information loss. The authors propose a per-cell level utility measure. The chapter concludes with software and case studies.

The final traditional output examined by the authors in Chapter 5 is frequency tables where the main focus is on tables of whole population counts arising from registers or censuses. The main disclosure risks in these tables are individual and group attribute disclosure and in particular, when many tables are released from one dataset and tables can be differenced and linked to produce new tables. The disclosure control methods outlined for these tables are divided into two classes: pre-tabular methods (mainly based on forms of swapping) and post-tabular methods (mainly based on forms of rounding). Utility measures assess the impact on statistical analysis and inference by comparing original and protected tables. These utility measures would also be relevant for assessing utility in microdata. The chapter concludes with software and case studies.

Chapter 6 addresses dissemination strategies for statistical disclosure control based on restricted access. More and more NSIs are attempting to meet researchers' needs

by providing on-site research data centres (RDCs) where researchers can access confidential datasets in a controlled setting. Outputs are manually checked by the staff in the RDC before they are released to the researchers. Remote access is similar to the RDC but researchers can remotely connect to the RDC network and work from an office PC. Outputs still need to be manually checked and these are returned to the researcher via email. Remote execution relates to researchers providing code to be run on confidential data in the organization and similar to remote access, outputs are manually checked and returned via email. The chapter concludes with rules for output checking of various types of statistical analysis followed by case studies.

The final chapter of the book is a comprehensive glossary.

Since the publication of the book, there has been new research through the EU funded 7th framework project 'Data without Boundaries' on flexible table generators and remote analysis servers where outputs are automatically protected. New technologies of dissemination bridge the gap between the statistical literature and the computer science literature on differential privacy. In addition, there is greater pressure now for 'open data' and how these demands can be met will drive future research in this area.

There has clearly been much work over the years in developing statistical disclosure control concepts, theory and application, and the book is a reflection of these research outputs. This is a very good reference book for NSIs and data custodians, especially for those NSIs recently joining the European Union and having to face obligations for statistical information to Eurostat. The harmonization of statistical disclosure control practices across member states of the European Union is important for cross-country analysis and this book provides an important step towards identifying best practices and facilitating discussion among the NSIs. I would have liked to have seen a bit more cohesion with more examples on what disclosure risk and data utility measures and statistical disclosure control methods work best for a given situation. At times, measures and methods are listed without an indication of their accuracy and reliability. In addition, several software packages were described and some examples of outputs would have been welcome. I personally found this book to be comprehensive and useful for all practical purposes. I congratulate the authors on their accomplishment which culminated from many years of productive collaborations together.

*Statistical Disclosure Control was published by Wiley-Blackwell, 2012. It is part of the Wiley Series in Survey Methodology.*

*Natalie Shlomo is a professor in Social Statistics at the University of Manchester, United Kingdom.*

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We are interested in fostering review of books and software in the area of survey methods. This would include standard review of individual books or software packages. This may also include broader reviews of groups of text and monographs in specific sub-areas; or similarly broad reviews of available software. Of particular interest are some of the new R libraries that have been developed recently for survey methods. If you are able to write a review for this section, please contact Natalie Shlomo ([natalie.shlomo@manchester.ac.uk](mailto:natalie.shlomo@manchester.ac.uk)).

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## **ARGENTINA**

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*Veronica Beritich*

### **Latin-American Congress of Statistical Societies**

The X Latin-American Congress of Statistical Societies (CLATSE) took place at the Campus of the National University of Cordoba (UNC), in Cordoba, from 16 to 19 October 2012. The origin of these Congresses comes from the last part of the 80's, when the Argentine Statistical Society (Sociedad Argentina de Estadística - SAE), founded in July 1952, and the Chilean Statistical Society (Sociedad Chilena de Estadística - SOCHE), founded in November 1978, decided to foster their national annual meetings by the joint organization of these congresses every two or three years. The I CLATSE was held in Valparaiso, Chile, in November 1991 and the II CLATSE in Buenos Aires, Argentina, in November 1993. The Uruguayan Statistical Society (Sociedad Uruguaya de Estadística - SUE) also started participating in these Congresses from 2002. These Congresses aim to:

- Disseminate the most recent methodological developments and practices on Statistics.
- Show results of applied statistical analysis and of the teaching of this discipline.
- Promote the development of Statistics.

In the occasion of the X CLATSE about 400 students and researchers from both official statistical offices and universities attended the meeting, 180 posters and 176 articles were presented, 13 of them about survey sampling. The event congregated 11 national and international invited speakers, from the United Kingdom, Germany, Spain, Brazil, Uruguay, and Chile. The Congress program contained 5 short courses, one of which was related to the survey sampling methodology: "Sampling Hidden Populations" (Dr. Juan José Goyeneche, UDELAR, Uruguay). A special round table was organized to pay tribute to Martha Aliaga, ASA Director of Education, who passed away on October 15<sup>th</sup>, 2011.

General information on the meeting can be found at [www.clatse.org](http://www.clatse.org). For further information, please contact [secretaria@s-a-e.org.ar](mailto:secretaria@s-a-e.org.ar).

### **National Survey on Life Quality of Elder People**

The 2010 National Census of Population, Households and Dwellings revealed that the population aged 60 or more, amounts to 14.3% and that Argentina is, along with Uruguay and Cuba, one of the three most aging countries in the region. The National Institute of Statistics and Censuses (Instituto Nacional de Estadística y Censos- INDEC) conducted, in November 2012, the fieldwork of the first National Survey on

Life Quality of Elder People (Encuesta Nacional sobre Calidad de Vida de Adultos Mayores). This survey was jointly organized by the Ministry of Social Development, through the National Directorate of Policies for Elder People from the National Secretariat of Childhood, Adolescence and Family; the National Institute of Social Services for Retirees and Pensioners (PAMI), and INDEC. This study is the first of its kind in Latin America and intends to generate information about the social, economic and health situation of the elderly in Argentina. Its objectives were to:

- Characterize the self-perception of their memory and health, access to health services and medicines, the identification of population with some deficiencies, and the level of life satisfaction.
- Characterize the population with limitations for basic and functional activities of daily living and identify people who help their performance.
- Describe the types of aid (materials, care, etc.) that older adults give and receive from people who do not live with them.
- Describe the level of participation in social, cultural, artistic, sporting, recreational activities in work in community activities, the use of free time and the management of ICT.
- Provide information on the perception of elder people in relation to situations of abuse.

The survey visited households located in private dwellings in urban areas which participated in the Permanent Household Survey, Annual Survey of Urban Households (Encuesta Permanente de Hogares, Encuesta Anual de Hogares Urbanos – EPH-EAHU) in the third quarter of 2012 and where people aged 60 years or over were residing. The survey method was direct interview of 6,000 people throughout the country and the questionnaire had to be answered by the respondent himself/herself.

General information on the survey can be found at [www.indec.gov.ar](http://www.indec.gov.ar). For further information, please contact [ces@indec.mecon.gov.ar](mailto:ces@indec.mecon.gov.ar).

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## **AUSTRALIA**

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*Paul Sutcliffe*

### **Inclusion of mobile phone numbers into New South Wales Population Health Surveys**

Landline random digit dialling (RDD) sampling have been the method of choice for telephone based population health survey conducted by the NSW Ministry of Health and other Australian States and Territories over the last decade. However because of the increase in mobile phone ownership and mobile-only phone users (estimated to be 19% in 2011) the frame coverage and impact on the prevalence estimates was being compromised. So at the beginning of 2012 the methodology was modified to include mobile phone numbers using an overlapping dual-frame design, in which both landline and mobile phone numbers are sampled.

To facilitate this change the NSW Ministry of Health and the Centre for Statistical and Survey Methodology at the University of Wollongong developed methods that would include mobile phone numbers with minimal impact on the existing data collection methodology.

As part of this process an evaluation of the design change is being conducted using data collected in February and March 2012 from over 3000 respondents. The evaluation includes comparisons of call outcomes, interviewer and respondent acceptance, sample representativeness and costing between the previous landline frame design and the overlapping dual-frame design. The evaluation also includes an examination of possible weighting strategies for the overlapping design and how these are likely to impact on the time series.

Further information about the NSW Population Health Surveys and the evaluation of the design change is available from the NSW Ministry of Health's and the Centre for Statistical and Survey Methodology at the University of Wollongong websites at <http://www.health.nsw.gov.au/publichealth/surveys/index.asp> and <http://cssm.uow.edu.au/publications/index.html> respectively.

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## **BOSNIA AND HERZEGOVINA**

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*Edin Šabanović*

### **Household Budget Survey 2011**

Household Budget Survey (HBS) in Bosnia and Herzegovina is a cross-sectional household sample survey that aims to provide information on the spending habits of the households, including data on their consumption expenditures, income and investments. The overall objective of the HBS is to collect, produce and disseminate information on consumption level and structure as well as on poverty and living standard in the country. In particular, consumer expenditure data supplied by HBS are used for weights estimation for the calculation of the national Consumer Price Index and as inputs for National Accounts statistics.

In the post-war period, Bosnia and Herzegovina has conducted HBS only three times in an irregular periodicity: 2004, 2007 and 2011. Data were collected by using two self-completion questionnaires (Diary of Purchase and Self-Consumption Diary) and in the face-to-face interview (Final Interview questionnaire). Compared to previous surveys, the HBS 2011 was extended by two ad hoc modules on social inclusion and health needed for calculation of basic social indicators. Further, the income module was redesigned in order to provide reliable income data on both, household and individual level.

First HBS 2011 data were disseminated in July 2012, while detailed publication with final results will be prepared by the end of 2012.

For more information, contact Edin Šabanović ([edin.sabanovic@bhas.ba](mailto:edin.sabanovic@bhas.ba)), Sector for Statistical Methodology, Standard, Planning, Quality and Coordination, Agency for Statistics of Bosnia and Herzegovina.

### **Pilot Population Census 2012**

Bosnia and Herzegovina has not conducted Population Census since 1991. After much political wrangling, it was finally agreed that the next Census on Population, Households and Dwellings would be conducted in the period of 1-15 April 2013, which is regulated by the Law on Census on Population, Households and Dwellings from February 2012.

In order to test census methodology and organization, Pilot Census on Population, Households and Dwellings will be conducted in the period of 15-29 October 2012 on the sample of 60 enumeration areas containing about 6000 households. For the purpose of the coverage and content control, the Pilot Post Enumeration Survey (PES) will be also conducted within the Pilot census. The field work for Pilot PES is scheduled for the period of 5-19 November 2012.

For additional information, contact Edin Šabanović ([edin.sabanovic@bhas.ba](mailto:edin.sabanovic@bhas.ba)), Sector for Statistical Methodology, Standard, Planning, Quality and Coordination, Agency for Statistics of Bosnia and Herzegovina.

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## **BRAZIL**

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*Cristiano Ferraz*

The Brazilian Institute of Geography and Statistics (IBGE) and the Inter-American Statistical Institute (IASI) jointly organised the **1st IBGE Methodology Seminar** and the **XI Meeting of IASI on Public Statistics**, in Rio de Janeiro, from 5 to 9 November 2012. The theme of the meeting was "**Data Preservation, Dissemination and Confidentiality**".

The event was a forum for discussion on the progress, challenges and prospects about statistical methodology required for the preservation and dissemination of information and public statistics. It brought together researchers and professionals from public and private organizations, representatives of national statistics institutes and members of the national and international academic community.

The seminar agenda comprised invited conferences, short courses and presentation of contributed papers. The conferences and short courses covered a variety of topics such as: statistical disclosure control, data visualisation, use of administrative registers for statistical purposes, infrastructure for producing and analysing spatial data, data archiving, dissemination of Census and survey data, experiences and challenges in data preservation and dissemination, and discussions related to the difficult balance between demand of data and confidentiality.

The website of the event is still available on <http://www.smi2012.ibge.gov.br>. For further information and enquires about the conference materials please write to [smi2012@ibge.gov.br](mailto:smi2012@ibge.gov.br).

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## **CANADA**

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*Pierre Lavallée*

### **Migration of the Agriculture Statistics Program to the Business Register**

The Agriculture Statistics program has traditionally maintained its own Farm Register (FR) in order to carry out its mandate. This list of all farms with the intention to sell agricultural products has been used as the frame for the surveys conducted by the program as well as the basis for the Census of Agriculture (CeAg) mailout. In addition to contact information on the farm, it also retained information about the activities carried out on the farm. The primary updates to the FR were made following the



quinquennial Census of Agriculture. Less complete updates would be made during the inter-censal period through survey feedback and occasional initiatives to identify new possible farms through administrative or other external sources.

In 2009 a project was launched to migrate the program's frame from the FR to Statistics Canada's centrally maintained Business Register (BR). Since the agriculture population on the BR at that time had been rarely used, the coverage of this sector was less complete than that of other industries. The goal of the migration was to ensure that all of the units enumerated in the CeAg were migrated to the BR. Units were linked between the FR and BR via both automated and manual processes involving the use of tax, personal and other information. A question was added to the 2011 CeAg to collect the Canada Revenue Agency's Business Number to facilitate this linkage. Census farms which were not found on the BR were added. The BR was also enhanced to allow the information on the activities to be stored centrally.

The use of the BR will allow for more dynamic survey frames, resulting in more timely information on changes in the agricultural population. Linkages to admin data sources such as tax data will be easier and potentially allow these sources to be used for survey replacement. It will also be easier to control survey burden between the surveys conducted by the agriculture program and those carried out by other programs within Statistics Canada. The first survey to use the BR as its frame was conducted in November 2012. By the spring of 2013 all surveys should have transitioned to the BR as their survey frame and the FR will be retired.

For more information, contact Paul Young (613-951-6368 or [paul.young@statcan.gc.ca](mailto:paul.young@statcan.gc.ca)), Agriculture Division or Chris Mohl (613-951-6966 or [chris.mohl@statcan.gc.ca](mailto:chris.mohl@statcan.gc.ca)), Business Survey Methods Division, Statistics Canada, Ottawa, Ontario, K1A 0T6.

### **Projet PIGOS**

Statistics Canada and the Canadian International Development Agency (CIDA) signed an international cooperation agreement to share knowledge and practices with colleagues from national statistical offices of some African countries, Latin America and the Caribbean. The International Statistical Fellowship Program (ISFP) is one of the elements of the agreement signed by the International Cooperation Division (ICD) in February 2011.

The goal of the ISFP is to fill in the gaps in the management of offices and systems of national statistics in more than 40 participating countries of Africa, Latin America and the Caribbean. In addition to the development of knowledge in management by more than 150 managers of statistical offices or upper level managers, there is also the continuous development and responsibility at the local level. After a two-week visit in Ottawa, the participants to the program and their statistical office will establish an organisational action plan to implement what they have acquired during the training project. During the six to 24 months following the seminar, these national action plans will need to be put in place. Statistics Canada will monitor closely these implementations in order to help the participating countries during this process.

Four ISFP seminars have been given up to now: October 2011, March 2012, October 2012 and November 2012. More than 30 delegates from French Africa, English Africa and the Caribbean were present. These delegates have committed themselves to develop and implement action plans that will allow them to practice the knowledge acquired during the seminar and to improve the aspect of governance and planning within their organisation. Four seminars are planned before the end of 2013. We also plan an increase of the collaboration between Statistics Canada and the past

participants in order to support the development and implementation of their action plan.

For more information, please contact Valérie Bizier ([valerie.bizier@statcan.gc.ca](mailto:valerie.bizier@statcan.gc.ca)), Social Survey Methods Division, or Éric Rancourt ([eric.rancourt@statcan.gc.ca](mailto:eric.rancourt@statcan.gc.ca)), International Cooperation Division, Statistics Canada, Ottawa, Ontario, K1A 0T6.

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## **COLOMBIA**

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*Leonardo Trujillo*

### **The III National Agricultural Census 2013**

Colombia is preparing for its first National Agricultural Census in more than forty years. Currently, there is a lack of agricultural information since the last census was carried out on 1970. Although a continuous biannual National Agricultural Survey have taken part during this time, the efforts to generate updated data had not been able to satisfy the current demand for agricultural and environmental information. Two agricultural censuses have taken place so far: one in 1960 and the other one in 1970. This means a gap of more than forty years due to past financial restrictions. Next year, the Ministry of Agriculture and DANE (Colombian National Statistical Office) are making joint efforts to design a National Agricultural Census that can provide periodic information every ten years, at all the different administrative divisions of the country (municipal, departmental and national). The Census is a complete count of the Colombian farms and agricultural exploitation units. The aim is to gather data about land use, size of the units, operator characteristics, income variables, expenditure and production practices in order to monitor rural development policies. More information about the Colombian National Agricultural Census is available at [http://www.dane.gov.co/index.php?option=com\\_content&view=article&id=1331&Itemid=73](http://www.dane.gov.co/index.php?option=com_content&view=article&id=1331&Itemid=73) or with Sergio Acosta ([seacostam@dane.gov.co](mailto:seacostam@dane.gov.co)), National Administrative Department of Statistics (DANE).

### **CLAPEM - XIII Latin American Congress of Probability and Mathematical Statistics, Cartagena, Colombia, September 2014.**

For 2014, CLAPEM will be held for the first time in Colombia at the city of Cartagena. It is held with the Latin American Chapter of the Bernoulli Society. CLAPEM is the largest conference gathering scientists in the particular areas of Probability and Mathematical Statistics in the region and takes place every two/three years. It has already been organized in Argentina, Brazil, Chile, Cuba, Mexico, Peru, Uruguay and Venezuela. The CLAPEM activities include lectures held by invited researchers, satellite meetings, sessions of oral and poster contributions, short courses, and thematic sessions. The XIII CLAPEM is organized by the Universidad Nacional de Colombia, Universidad del Rosario, Universidad de los Andes y Universidad de Cartagena. The Scientific Committee is as follow: Alejandro Jara (Chile), Antonio Galves (Brazil), Graciela Boente (Argentina), José Rafael Leon (Venezuela), Karine Bertin (Chile), Leonardo Trujillo (Colombia), Pablo Ferrari (Argentina), Paola Belmolen (Uruguay), Ramón Giraldo (Colombia), Serguei Popov (Brazil), Victor Perez Abreu (Mexico). The Local and Scientific Committees have started to work and further information will be available soon. Also with Ricardo Fraiman (president of the XIII CLAPEM, [fraimanricardo@gmail.com](mailto:fraimanricardo@gmail.com)) or Leonardo Trujillo ([ltrujiillo@unal.edu.co](mailto:ltrujiillo@unal.edu.co)).

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## **ESTONIA**

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*Ene-Margit Tiit*

### **66% of population participated in census by internet.**

The population and household census 2011 started in Estonia on 31.12.2011 at 00.00. The census extended at all 3 months. From 31.12—1.02. transpired self-enumeration by internet, 2.02.—19.02 was time for updating working-lists and 20.02—31.03 census continued with help of enumerators who used laptops and GPS's to carry on interviews and fix the space coordinates of dwellings.

The population of Estonia is about 1.3 Millions and the census was the 11<sup>th</sup> carried out in Estonia during its history. Each person had to fill a questionnaire of up to 40 questions, by internet it needed about 15 minutes. Otherwise, each household had to fill household questionnaire, putting down all household members and all relations between them. Also it was asked to list all close relatives of the household members who have emigrated during the last twelve years. As usually, each household had to write their address and fill in the living quarter's questionnaire, too. The people and households having more than one dwelling were asked to give information about all of them. For an average household (2.3 people) the enumeration by internet took more than 50 minutes.

However, the e-enumeration was a big success in Estonia. During the whole e-enumeration time the current data, demonstrating the absolute and relative number of people, already enumerated by internet, was available on a special web-page and it was updated every hour. As a result, the rate of e-enumeration was taken as a sport between counties and also compared with other countries. As a result, the rate of people enumerated by internet formed 66% of the all population. Also, due to big number of logical controls, the quality of data was very good – the item nonresponse was less than 0.5%.

Nevertheless, there occurred some undercoverage. When the census time was closed some people informed that they have not been enumerated. The census team decided to use the administrative registers to check the number of enumerated people. Classical discriminant analysis was used for clarifying, which people from these who belonged to population register and were not enumerated, are residents of Estonia and which had emigrated. As a result, undercoverage rate of about 2% was detected.

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## **ETHIOPIA**

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*Gayatri Vishwakarma*

Ethiopia is the second-most populous country in Sub-Saharan Africa and its population size is about 84 million (2012). One of the world's oldest civilizations, Ethiopia is also one of the world's poorest countries and ranked as the sixth poorest country in the world (GNI, Atlas Method). At US Dollar 390, Ethiopia's per capita income is much lower than the Sub-Saharan African average of US Dollar 1,165 in FY 2010.

In Ethiopia, the Central Statistical Agency (CSA) is responsible for the statistical data generation related to the socio-economic condition of the country. It is established in 1960 by the Government of the Federal Democratic Republic of Ethiopia. The CSA has 25 branch offices across the country.

In Ethiopia the CSA is expected to play a proactive role in generating Official Statistical information on all socio-economic sectors and design new directions in the development of Official Statistics that goes in line with the country's economic development programs and policies. In this respect, the CSA of Ethiopia is committed to play a crucial role in coordinating and delivering effective and demand driven National Statistical System and service which are central to formulating and monitoring the development initiatives of the country.

The CSA produces the dynamic consumer price database, the Ethiopian National Data Archive (ENADA), the Indicator database called *Ethioinfo* in addition to the overall functions and objectives, responsibilities and organizational structure.

Recently, CSA officially launched the 3rd Ethiopian Demographic and Health Survey, which is one of the huge and very important data source for the country health endeavor to design policy planning, monitoring and decision making. The primary objectives of the 2011 Ethiopian Demographic and Health Survey (EDHS) are to provide up-to-date information for planning, policy formulation, monitoring and evaluation of population and health programs in the country. EDHS data contains the level of the fertility as well as the fertility preferences of women and men. This data will provide about knowledge and use of family planning in Ethiopia. The survey also provides an in-depth look at the health of mother and children.

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## **FRANCE**

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*Benoît Riandey*

### **The socio-epidemiologic cohort ELFE (Enquête Longitudinale Française depuis l'Enfance)**

ELFE (in English, French Longitudinal Survey from the Childhood) is a socio-epidemiologic cohort that aims to follow during 20 years 18,300 children born in 2011.

Of course, the collected information will be large and confidential, in terms of medical and social questionnaires, and biological and environmental measurements.

The accumulation of data and information from the cohort ELFE requires taking all measures to insure the anonymous aspect of the surveyed children and to best inform the families of the objectives of the study. In other countries, this type of studies is generally under the umbrella of some ethics committee, with university members or others. In France, it needs to be approved by different organisations: the Conseil national de l'Information statistique, the Commission nationale de l'informatique et des libertés, and committees on biological samples and health examinations.

A very important emphasis has been put on the protection and anonymisation of the files. By nature, following a cohort assumes that identifiers, addresses and telephone numbers of the sampled families be kept. Therefore, we cannot proceed by completely anonymising the data after each survey wave. Two principles have been

stated. On one hand, there is the physical separation between the file monitoring the identifiers and identities and the file(s) with the collected data. On the other hand, there is the non-existence of a unique data base containing all the collected information. The retained solution is a “volatile” computer platform that can be activated and deactivated through a Data Access Committee (DAC) in order to make the links between the ELFE individuals, the data and the identifiers. No memory of the links will be kept after completing the request. This action is possible because of a new technique insuring the complete “atomisation” of the files with the collected data, which makes almost impossible their illicit merging, and insuring the tracking of all operations: any data access will be recorded, even from the members of the project team. This new technique is probably implemented for the first time within this type of project. This atomisation means that when a survey wave of 1,500 variables will be integrated to the data base, 27,450,000 identifiers (1,500 x 18,300) corresponding to each data item will be created, and that these data will be dispersed. The pertinent data will be put together only under the approval of the DAC, by resurrecting the short-lived links.

This technique for securing the data has been developed by Ando Rakotonirina ([ando.rakotonirina@ined.fr](mailto:ando.rakotonirina@ined.fr)).

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## **INDIA**

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*Gayatri Vishwakarma*

The employment and unemployment surveys undertaken by the National Sample Survey Office (NSSO) are the prime source of statistics on labour force, activity participation of the population and structure of employment and unemployment in the country. The Phase I Report on Periodic Labour Force Survey (Pilot) has recently presented by NSSO, Ministry of Statistics & Programme Implementation, Government of India which is now available under the links **'National Sample Survey Office>>Survey Design and Research Div.>>PLFS Report'**.

Ministry of Statistics & Programme Implementation (MOSPL), Government of India is going to organize the forthcoming 4th OECD World Forum which is going to be held in New Delhi during 16-19 Oct 2012 under the theme ***“Measuring Well-Being for Development and Policy Making”*** to all Indian Statistical Services (ISS) Officers of the rank of DDG and Director & above. These types of events help to develop a shared sense of common purpose and direction among the many agencies active in developing more relevant statistics on well-being and progress. The four-day Forum will gather around 1,000 participants from all over the world, including policy-makers as well as representatives from international organizations, national statistical offices, government agencies, academia and civil society.

MOSPL also presented a new report on “Children in India 2012 – A Statistical Appraisal”, which analyses the conditions of children in the fields of child survival, child development and child protection. The results revealed that while an absolute increase of 181 million in the country’s population has been recorded during the decade 2001-2011, there is a reduction of 5.05 million in the population of children aged 0-6 years during this period. The decline in male children is 2.06 million and in female children is 2.99 million. The more details can be seen in the link [http://mospi.nic.in/Mospi\\_New/upload/Children\\_in\\_India\\_2012.pdf](http://mospi.nic.in/Mospi_New/upload/Children_in_India_2012.pdf).

The Indian Statistical Institute (ISI), Delhi, is going to organize **8<sup>th</sup> Annual Conference on Economic Growth and Development** during December 17-19, 2012. The Conference provides a forum for dissemination of modern research in economic growth and development economics, both theoretical and empirical.

The Indian Statistical Institute, Kolkata, is going to conduct a 4-day workshop which will be held in ISI Kolkata during 14-17 January, 2013 on **Heavy-tailed Distributions and Extreme Value Theory**.

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## **MALAYSIA**

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*Aziz Mohammad*

### **Data Sharing, Dissemination and Communication of Statistics**

*Enhancing ASEAN Community Progress Monitoring System* is a one year project which commenced in Mei 2012. The project is funded by the AADCPII (ASEAN - Australia Development Cooperation Programme II) and has been endorsed by the ASEANCommunity Statistical System (ACSS) Committee as *part of the ACSS 2011-2015 action plan and ACSS 2012 work plan*. The *Working Group on Data Sharing, Analysis, Dissemination and Communication of Statistics* (WGDSA) and the ASEANSecretariat are jointly responsible for the coordination in the development of data sharing and dissemination system, confidentiality policy, as well as in the promotion and dissemination of statistics. The *ASEAN Community Progress Monitoring System* (ACPMS) is an important mechanism for the coordination of data collection and harmonisation.

The Second Workshop of Enhancing the ASEAN Community Progress Monitoring System (ACPMS) and First Meeting of the Working Group on Data Sharing Analysis, Dissemination and Communication of Statistics (WGDSA) was held in Malaysia on 13 - 15 August 2012. It was attended by representatives of all ASEAN countries, namely, Malaysia, Brunei, Indonesia, Singapore, Thailand, Myanmar, Cambodia, Philippines, Laos and Vietnam.

The objectives of the workshop are to discuss:

- a) data requirements, definition and rationale for enhancement of the ACPMS;
- b) data collection plans and related issues; and
- c) draft of the *ASEANBrief*

The objectives of the WGDSA meeting are to:

- a) discuss validation mechanism and strategy in ensuring involvement of main users and stakeholders;
- b) develop draft document of policy and framework for data sharing and confidentiality, including the policy for data verification, estimation and usage of data by a third party, for endorsement by the ACSS Committee; and
- c) develop and integrate the ACPMS work plan with the overall work plan of the WGDSA to ensure sustainable enhancement of ACPMS and improved data sharing, dissemination and communication by ASEAN Statistics in general.

For more information, please contact Nazaria Baharudin at [nazaria@stats.gov.my](mailto:nazaria@stats.gov.my).

### **Mirror Analysis on International Merchandise Trade Statistics**

EU-ASEAN Statistical Capacity Building Programme (EASCAB) is a project under the ASEAN Secretariat which began in February 2009. EASCAB was allocated with some fund for this project to develop statistics in ASEAN. Under this project, four areas are involved namely, the Foreign Direct Investment Statistics (FDIS), Statistics on International Trade in Services (SITS), the International Merchandise Trade Statistics (IMTS) and Millennium Development Goals (MDG). Mirror Analysis is a part of IMTS. The Department of Statistics Malaysia (DOSM) had proposed to the EASCAB to have further discussions on Mirror Analysis about a year ago, and it was agreed by the ASEAN Secretariat.

The First Preparatory Meeting of Mirror Analysis on International Merchandise Trade Statistics was hosted by Malaysia on 11th July, 2012. The meeting was attended by 27 participants, comprising of 20 officers from Department of Statistics, two consultants from EASCAB, two participants from Vietnam, and three participants from Indonesia.

The objectives of the meeting are to:

- a) improve the ability to compare the ASEAN Secretariat official statistics among the ASEAN countries;
- b) improve the production, organization, dissemination and use of external merchandise trade data, and components of foreign trade in services among ASEAN countries; and
- c) build the analytical capacity in the ASEAN Member States to evaluate the consistency of a country import and export data against their partner country data.

Mirror Analysis is one of the new recommendation in the IMTS: Concepts and Definitions 2010 issued by the United Nations and is also in line with the work program EASCAB. Mirror analysis can enhance data quality where comparison can be made between two countries at overall level and product level. If there is any discrepancy, the compiler will take the necessary actions in identifying the causes and make the possible corrections.

The second meeting will be held in Hanoi, Vietnam on 20th September, 2012 to further discuss the reason of the discrepancies.

For more information, please contact Zainuddin Ahmad at [zain\\_ahmad@stats.gov.my](mailto:zain_ahmad@stats.gov.my).

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### **POLAND**

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Tomasz Żądło

### **Report on survey sampling and small area estimation's sessions during Congress of Polish Statistics in Poznań, 18-20 April 2012.**

Survey sampling is a field of statistics with a long time tradition in Poland starting from Jerzy Sława Neyman's papers on stratified random sampling. The considerations were continued inter alia by R. Zasępa and Z. Pawłowski. Nowadays, research of many Polish survey statisticians in Poland include studies on small area



estimation. This is the reason why four sessions on both survey sampling and small area estimation were organized during the Congress of Polish Statistics (<http://www.stat.gov.pl/pts/kongres2012/english/index.htm>). During the sessions 14 papers in English were presented including 5 invited lectures:

- Ray Chambers, Gunky Kim, *Regression analysis using data obtained by probability linking of multiple data sources*,
- Jean-Claude Deville, Daniel Bonn  ry, Guillaume Chauvet, *Neyman type optimality for marginal quota sampling*,
- Lorenzo Fattorini, *Design-based inference on ecological diversity*,
- Malay Ghosh, *Finite population sampling: a model-design synthesis*,
- Li-Chun Zhang, *Micro calibration for data integration*.

Contributed papers were presented by: Konrad Furma  czyk and Stanis  aw Jaworski *Change point detection in a sequence of independent observations*, Sara Franceschi, Lorenzo Fattorini and Daniela Maffei *Design-based treatment of unit nonresponse by the calibration approach*, Wojciech Gamrot *On empirical inclusion probabilities*, Tomasz Klimanek *Using indirect estimation with spatial autocorrelation in social surveys in Poland*, Tomasz J  zefowski *Using a SPREE estimator to estimate the number of unemployed across subregions*, Marcin Szymkowiak *Construction of calibration estimators of total for different distance measures*, Imbi Traat *Domain Estimators Calibrated on Reference Survey*, Janusz L. Wywia   *Estimation of population mean on the basis of a simple sample ordered by auxiliary variable*, Tomasz   ad  o *On prediction of totals for spatially correlated domains*.

The book of abstracts (both in Polish and in English) is available at: [http://www.stat.gov.pl/pts/kongres2012/dok/streszczenia\\_referatow.pdf](http://www.stat.gov.pl/pts/kongres2012/dok/streszczenia_referatow.pdf).



## In Memorandum

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### Frank Nolan

*Reprinted from IAOS Newsletter (by Stephen Penneck) with minor amendment*

Frank Nolan was an active member of the International Association of Survey Statisticians. He made significant contribution to official statistics, especially in survey and census methodology, quality management and statistical infrastructure. Frank was Editor-in-Chief of the Statistical Journal of the International Association of Official Statisticians from 1 January 2011 until he died unexpectedly on 16 October 2012.

Frank Nolan was an international statistician. He began his career in New Zealand and ended it in the UK. Born in New Zealand in 1953, Frank graduated from Canterbury University in 1979 with a PhD in Mathematics, having previously gained his BSc and MSc at the Victoria University of Wellington. In 1980 he began working in Statistics New Zealand as a Research Officer in Statistical Methods Division, later becoming Manager of the Mathematical Statistics Branch from 1988 to 1992. He made a great mark there, both lifting the managerial practices of the division, and ensuring the overall robustness of the statistical advice that underpinned New Zealand's official statistics.

Frank moved to the UK with his family and joined the Office for National Statistics in August 2002. At the ONS, Frank held a number of Deputy Director posts initially managing Quality and Risk Management Division and more latterly concerned with methodology of social statistics, and then the 2011 census. For a brief period he was temporarily promoted to be ONS Director of Methodology. His last post at the ONS was as Deputy Director for Population Methodology and Statistical Infrastructure. Frank was elected as a member of the ISI in 1999, and became a member of both the IAOS and the IASS in 1992, and a Fellow of the Royal Statistical Society in 2002. He was elected to the RSS Council in 2011.

Frank did not have a long list of publications, but he did have a large influence on the statistics, organisations and people he worked with. He was in charge of the 2001 Census in New Zealand, which gave him a good fund of experience (and hair-raising stories). He led significant developments in methodology of quality management, and perhaps his largest contribution to the ONS was in managing the statistical research preparations for the 2011 Census. He had a keen eye for the weak points in an argument, and an almost mystical ability to see how research possibilities could provide the evidence for a decision. He was also involved in the first stages of the UK Beyond 2011 program and had ideas about alternatives to Census taking.

Frank was also a mentor – both individually and as a whole to the organisations he worked with. He would encourage people to develop themselves, acted as a sounding board, and took particular delight when those he worked with made contributions to the wider statistical community.

Frank continually looked for new challenges and for ways in which he could further serve the statistical community. After some years of reviewing papers for the Statistical Journal of the IAOS, Frank became its Editor in Chief. He became involved in the RSS Centre for Statistical Education. He forged strong links with academic institutions, working with Southampton University to develop the MSc in Official Statistics, on which he taught for many years.

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## Gad Nathan

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*Reprinted from the ISI newsletter (by Danny Pfeffermann)*

Gad Nathan, a distinguished professor in survey sampling, passed away in July, 2012. Gad was born in Jerusalem in 1935, but spent much of his childhood in the U.K. He finished first and second degrees cum laude in Mathematics, Physics and Statistics at the Hebrew University, and later studied for PhD at the Case Institute of Technology in Cleveland, U.S.A., again completing his degree cum laude.

Over the years, Gad established himself as one of the pioneering and leading survey statisticians and his contributions to the theory and practice of survey sampling have won him broad international recognition and acclaim. His scientific contributions can be classified broadly into four categories:

- Contributions to the theory and application of analytical inference from complex samples such as tests of independence in contingency tables and modification of regression and longitudinal data analysis techniques.
- Development of new sampling methods like the discerning use of telephones and computers and the operation of duplicate surveys.
- Analysis and corrections of non-sampling errors such as response errors and non-response.
- Intelligent structuring of questionnaires such as the examination of cognitive aspects of questionnaire building and the treatment of sensitive questions.

Throughout his long career, Gad always combined theoretical research with practice, mostly through his long service at the Israel Central Bureau of Statistics where he started as Director of the Statistical Methods Division and ended as Chief Scientist. Among his outstanding contributions to the work of the CBS, of special significance is the automation of the CBS survey operations, spreading over all stages of the data processing, starting with data capture and coding and ending with the production of the published estimates. In addition, Gad has supervised many of the population censuses that have been carried out in Israel with many methodological contributions, including the conception of the last census that integrated for the first time administrative records with small area estimation.

Gad has always been very active in the statistical community of Israel and abroad. He served twice as Head of the Statistics Department at the Hebrew University, was President of the Israel Statistical Society and chaired the Israel Public Council of Statistics. Gad was a very active member of the ISI where he served as Vice President, and of the IASS, serving as Vice President and as member of the programme committee in four different periods. The highlight of his activities for the IASS was chairing the international committee that selected the “landmark papers in survey statistics”, contained in the Jubilee Commemorative Volume produced by the IASS. Gad was also the first recipient of the Waksberg Award for outstanding contributions to survey methodology.

Gad never confined his interests to the world of statistics, rich as it is. He was a true intellectual with deep interest and knowledge in many areas that shape our culture. He travelled all over the world and needed only two or three days to find out all that was going on in the new countries that he visited in music, theatre, films, exhibitions and no less important, hiking and cycling journeys. This was all before Google told us everything on what to do and where to go. In fact, in the last week before he died, Gad saw an exhibition and two plays with his beloved grandchildren, and attended the premier of a musical piece composed by a friend.

Gad's memory will always stay with us. He is survived by his wife, Batia, his daughter, Idit and his two grandchildren. A memorial session in his honour will be held in the next ISI meeting in Hong Kong.

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## **Paul S. Levy**

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*Written by Stanley Lemeshow, Jack Goldberg, Roy Whitmore, Moshe Feder*

Paul S. Levy, a prominent biostatistics educator and researcher, a Professor Emeritus at the University of Illinois at Chicago and a Senior Fellow at the Research Triangle Institute (RTI), died on Tuesday, March 13 with his family by his side in a convalescent center in Durham, North Carolina, from consequences of a spinal cord injury he suffered following a fall three years ago. He was 75.

Paul was an outstanding leader in public health and medical research. During his career, he authored more than 200 publications and 30 book chapters and monographs in the fields of biostatistics and epidemiology. His expertise in sampling methods allowed him to affect a broad range of topics.

Early in his career, he developed methods to measure the effectiveness of the Illinois Trauma System in getting severely injured patients to trauma centers. As part of this work, he pushed the science in new directions, most notably in devising measures of injury severity that would allow surgeons to compare outcomes across hospitals.

Paul was principal investigator for the Patient Registry for Primary Pulmonary Hypertension (PRPPH). His work on survival of patients with primary pulmonary hypertension was published in highly prestigious medical journals and has been cited by thousands of researchers. His co-PI, Stuart Rich, recently commented that the registry is considered a gold standard for information about PPH. Paul was instrumental in developing data collection and analysis tools for the Centers for Disease Control and Prevention's Behavioral Risk Factor Surveillance System, the largest ongoing telephone health survey in the United States. As part of his research, he proposed a simple software tool designed to measure the use of dietary supplements in the United States population. In parallel, he was one of the first to document the widespread use of dietary supplements in children from national data. His textbook, *Sampling of Populations: Methods and Applications*, is one of the most widely cited books in this field.

In recognition of his achievements in the development, evaluation, and dissemination of sample survey methodology and for the design and implementation of surveys of major public health importance, Paul was elected as a Fellow of the American Statistical Association and an elected member of the International Statistical Institute (ISI).

In addition to a thriving career, Paul demonstrated excellent physical endurance and stamina. Between the ages of 60 and 70, he competed frequently in ultra-marathon events that involved running for distances of 50 miles. When he was 66, he accomplished the feat of climbing 96 floors in Chicago's John Hancock Building in 15 minutes. He won several awards for his athleticism.

Paul was a much-loved and admired colleague, professor, and mentor throughout his illustrious career. He approached his life and his profession with precision, excellence, generosity and a great sense of humor.

"Paul gave me my first job. His advice was to work hard and fast, before people discovered I was around. I did," said Northwestern University professor Borko Jovanovic, a former colleague. "His second piece of advice was, 'Focus on problems useful to other people.' I did, and I have done well in my career ever since. His third suggestion was, 'If it is not fun, it is probably not worth doing.' He was the best boss I ever had."

"He had a unique way of getting to the heart of a problem. Paul had a gift for finding simple solutions to knotty statistical problems that stumped others," noted University of Washington professor Jack Goldberg, one of Paul's former students. "I remember how he would always say that if you went back to the basic tools of biostatistics and epidemiology, you could usually find an answer to your problem without having to do anything too complicated."

Paul earned a doctorate in biostatistics from The Johns Hopkins University, a master's degree in mathematical statistics from Columbia University, and a bachelor's degree in mathematics from Yale University.

He was a founding faculty member of the school of public health and the first director of the division of epidemiology and biostatistics at the University of Illinois at Chicago (UIC). Prior to his career at UIC, he was a faculty member at the Harvard Medical School, as well as the University of Massachusetts' School of Public Health, an epidemic intelligence officer at the Centers for Disease Control and Prevention, and a mathematical statistician at the National Center for Health Statistics. Most recently, Paul was employed by RTI, which he joined in 2002. Paul quickly gained his colleagues' admiration for his abilities, appreciation of his generous help, and fondness for his warm personality. Paul always found the time for either enlightening discussion of subtle statistical theory or practice, or a light conversation on sports or culture. At RTI, Paul focused on the development and dissemination of statistical methodology, particularly in the areas of sample survey methodology and epidemiology. He also taught a survey statistics class for the University of North Carolina's Odum Institute. During his last couple of years at RTI, Paul was working on, and completed, revisions to the fourth edition of the statistics textbook he wrote with Stan Lemeshow, "Sampling of Populations."

The following story is very characteristic of Paul: "He asked Paul Biemer to write one chapter for the new edition. Whenever Biemer was late with a draft, Paul would show up at Biemer's door in his baseball cap, and ask with a smile, when he would see the next draft. Although he did it in a very gracious manner, Paul was very tenacious and quite effective at making sure the work get done and was of the highest quality.

Paul served as president of the ASA Chicago Chapter and won the award for Teaching Excellence at the University of Illinois' School of Public Health in 1978.

Levy is survived by his wife Virginia Tomasek; his sons Joshua, Daniel and Jeremiah; his daughters-in-law Laurie and Carolyn; and four grandchildren.



## The Young Statistician Conference 2013

**Date:** 7 – 8 February 2013

**Venue:** Trinity College, Melbourne University, Melbourne, Australia

**Homepage:** <http://www.ysc2013.com/>

The conference will be held on 7–8 February 2013 at Trinity College, University of Melbourne. It will feature two full days of presentations from delegates, 4 world-class keynote speakers, a careers session and a conference dinner. The expected attendance is 100–150 delegates. Postgraduate students and early-career professionals in statistics and data analysis from all over Australia and beyond are particularly encouraged to attend, but all levels of experience and ages are welcome. This is a biennial event hosted by the Statistical Society of Australia Inc. (SSAI).

YSC2013 will be a celebration of our profession and our research. With data being generated more rapidly than ever before, statisticians fulfil a crucial role in today's society. The conference theme of "celebrating significance" incorporates two international celebrations of the contributions of statistics to our world: the International Year of Statistics and Mathematics of Planet Earth.

Keynote Speakers include **Professor Ray Chambers** (University of Wollongong), **Professor John Croucher** (Macquarie Graduate School of Management), **Professor Peter Hall** (University of Melbourne) and **Professor Rob Hyndman** (Monash University).

Other speakers include **Brian Pink** (ABS), **Dr. Bhavani Raskutti** (Pacific Brands), **Professor Kerrie Mengersen** (Queensland University of Technology), **Professor Thomas Lumley** (University of Auckland), **Associate Professor Michael Coory** (Murdoch Childrens Research Institute), **Michelle Hill** (Department of Education and Early Childhood Development in Victoria), **Antony Ugoni** (National Australia Bank) and **Dr. Kendra Vant** (Deloitte, Melbourne).

For more information about the conference, please visit the homepage or contact [info@ysc2013.com](mailto:info@ysc2013.com).



# NTTS 2013

New Techniques and Technologies for Statistics

**Date:** 5 – 7 March, 2013

**Venue:** The Charlemagne building, Brussels, Belgium

**Homepage:** [www.ntts2013.eu](http://www.ntts2013.eu)

NTTS (New Techniques and Technologies for Statistics) 2013 is an international scientific conference on the impact of new technologies on statistical collection, production and dissemination systems.

Present and share the outcomes of recent research activities in statistics in general and in official statistics including Eurostat ESSnet projects and VIP (Vision Infrastructure Projects). Promote new research methodological and technological development for use by Official Statistics.

Discuss future needs and developments of research in statistics, new paradigms for data use, access and retrieval (open data, big data, and organic data) and ICT developments and infrastructures for use by Official Statistics.

NTTS 2013 addresses research and development aspects related to innovative methods and techniques for official statistics with a particular emphasis on automatic and ICT-based methods. Papers are accepted in the following areas:

- New ways of collecting, accessing and using big amount of data.
- Integration, consolidation, combination of multiple data sources.
- Analysing data.
- Distributing, presenting and accessing data and microdata.
- Support for evidence-based policymaking.
- Use of standards for Official statistics.

**For more information, please contact** [estat-ntts@ec.europa.eu](mailto:estat-ntts@ec.europa.eu) .





## NatStats 2013

**Date:** 12 – 14 March 2013

**Venue:** Brisbane Convention and Exhibition Centre, Brisbane, Australia

**Homepage:** <http://www.nss.gov.au/blog/natstats.nsf>

The Australian Bureau of Statistics will be hosting the third NatStats conference at the Brisbane Convention & Exhibition Centre, 12 - 14 March 2013.

The conference will provide a unique opportunity for key stakeholders from across the statistical community to help build a strong and vibrant National Statistical Service in Australia.

The theme for NatStats 2013 is

**“A better informed Australia: the role of statistics in building the nation”.**

The conference will explore what nation building means to Australia, and how statistics are critical in informing the decisions which shape our future. An exciting program is being designed with policy and decision makers in mind. Senior staff from policy departments, academia, community organisations and the private sector as well as key international speakers will be invited to provide their perspectives on the role of statistics in building Australia through informed decision making.

As a participant at the NatStats 2013 Conference, you will contribute to the effective use of better, broader and more comparable information which will assist the NSS. Improving the NSS will allow better monitoring of government services, improve access to and use of data by the wider community, and reduce overall costs for the provision of government information services.

Plenary speakers include **Professor Alan Hayes AM** (Australian Institute of Family Studies), **Professor Ian Chubb AC** (Australia’s Chief Scientist), **Ross Gittins AM** (Sydney Morning Herald), **Dan Gregory** (The Impossible Institute), **Professor Jane Halton PSM** (Department of Health and Ageing), **Alan Smith** (UK Office for National Statistics) and **Brian Pink** (ABS).

**For more information, please visit the homepage, or contact either [natstats@nss.gov.au](mailto:natstats@nss.gov.au) or [natstats2013@absoluteevents.com.au](mailto:natstats2013@absoluteevents.com.au).**



## 41st Annual Meeting of the Statistical Society of Canada

**Date:** 26 – 29 May 2013

**Venue:** University of Alberta, Edmonton, Alberta, Canada

**Homepage:** <http://www.ssc.ca/en/meetings/2013>

### **Registration:**

Online registration coming soon

Advance registration ends: May 7, 2013. After this date, you will only be able to register on-site during the conference, at additional expense.

**Program:** **Debbie Dupuis** (HEC Montréal)

Abstract submission deadline: **January 31, 2013**

Note: Each speaker may make only one contributed paper presentation, although she/he may co-author other papers.

- Workshops
- SSC Sections, May 26, 2013
- SAS, May 29, 2013
- Case Studies
- Satellite Meetings
- The Canadian Statistical Sciences Institute (CANSSI) Annual Meeting - University of Alberta, May 25, 2013
- Prizes and Awards:
  - Student Research Presentation Awards
  - Student Travel Awards

For further information, go to the Statistical Society of Canada website at:

<http://www.ssc.ca/>



## 2013 Graybill Conference Modern Survey Statistics

**Date:** 9 – 12 June 2013

**Venue:** Colorado State University, Colorado, United States

**Homepage:** <http://www.stat.colostate.edu/graybillconference/index.html>

The focus of Graybill 2013: Modern Survey Statistics is on new developments in survey statistics, broadly defined. The program consists of a short course, invited plenary talks and a contributed poster session. It is the aim of the conference to bring together a wide range of researchers, practitioners, and graduate students whose work is related to survey statistics in a wide sense. Topics of interest include:

- Analytic inference
- Small area estimation
- Nonresponse
- Calibration
- Variance estimation
- Probability sampling designs
- Estimation with auxiliary information

**Keynote speakers:**

- Ray Chambers, University of Wollongong, Australia
- Wayne Fuller, Iowa State University
- Danny Pfeiffermann, University of Southampton, United Kingdom
- Jon Rao, Carleton University
- Chris Skinner, London School of Economics
- Steve Thompson, Simon Fraser University, Canada

**Invited Speakers:**

- Yves Berger, University of Southampton, United Kingdom
- Herve Cardot, University of Burgundy, France
- Guillaume Chauvet, Statistics Laboratory, ENSAI
- Alan Dorfman, Bureau of Labor Statistics
- Malay Ghosh, University of Florida
- Camelia Goga, University of Burgundy, France
- David Haziza, University of Montreal, Canada
- Jae-Kwang Kim, Iowa State University
- Frauke Kreuter, University of Maryland
- Partha Lahiri, University of Maryland
- Rod Little, University of Michigan
- Isabel Molina, Universidad Carlos III de Madrid, Spain
- Domingo Morales, Universidad Miguel Hernandez, Spain
- Anne Ruiz-Gazen, Toulouse School of Economics, France
- Alastair Scott, University of Auckland, New Zealand
- Nikos Tzavidis, University of Southampton, United Kingdom
- Rick Valliant, University of Michigan
- Lily Wang, University of Georgia
- Suojin Wang, Texas A&M University
- Changbao Wu, University of Waterloo, Canada

**If you have questions about the conference arrangements, please send an email to [graybillconference@stat.colostate.edu](mailto:graybillconference@stat.colostate.edu)**



## ITACOSM13

**Date:** 26 – 28 June 2013

**Venue:** University of Milan-Bicocca, Milan, Italy

**Homepage:** <http://www.statistica.unimib.it/itacosm13/>

ITACOSM is the bi-annual international meeting of the Survey Sampling Group of the Italian Statistical Society. It is intended as a forum of scientific discussion on the developments of theory and application of survey sampling methodologies in human and natural sciences.

Conference highlights include:

- keynote and invited speakers:
  - **Jean-Francois Beaumont**, Statistics Canada
  - **Mark Handcock**, University of California – LA
  - **David Haziza**, University of Montréal
  - **P.S. Kott**, RTI International
  - **Monica Pratesi**, University of Pisa as past-president address
  - **Avinash C. Singh**, Center for Excellence in Survey Research - NORC at University of Chicago
  - **Yves Tillé**, University of Neuchâtel
- a stimulating program of invited sessions, contributed presentations and posters
- satellite courses (included in the conference registration)

For more information, contact [info.itacosm13@statistica.unimib.it](mailto:info.itacosm13@statistica.unimib.it)



## **European Survey Research Association (ESRA) Fifth Conference, July 2013**

**Date:** 15 – 19 July 2013

**Venue:** University of Ljubljana, Ljubljana, Slovenia

**Homepage:** <http://www.europeansurveyresearch.org/conference>

The fifth Conference of the European Survey Research Association (ESRA) will be held in Ljubljana, Slovenia, from the 15th to the 19th of July, 2013.

The objectives of ESRA are to promote:

- communication between survey researchers in Europe and with those in other parts of the world
- communication between substantive researchers in the social sciences and survey methodologists in order to improve the quality of the research in both fields
- the study of survey designs, procedures and analysis techniques with the objective of improving survey quality

The communication objectives of ESRA are pursued by the means of scholarly activity such as the arrangement of conferences, symposia or colloquia, the encouragement of scholarly publications in the Association's journal 'Survey Research Methods', and the exchange of knowledge and best practice.

ESRA 2013 sessions include:

- |                                       |                                  |
|---------------------------------------|----------------------------------|
| • Data archiving                      | • Sampling and sample design     |
| • Data linkage                        | • Substantive applications       |
| • Longitudinal surveys                | • Survey analysis techniques     |
| • Methods for cross-national analysis | • Survey mode                    |
| • Other                               | • Unit Nonresponse and attrition |
| • Paradata and fieldwork              | • Web surveys                    |
| • Question testing and piloting       | • Weighting and imputation       |

If you enquires about the conference please contact ESRA at:  
[conference@europeansurveyresearch.org](mailto:conference@europeansurveyresearch.org).



## 2013 Joint Statistical Meetings (JSM)

**Date:** 3 – 8 August 2013

**Venue:** Palais des congrès de Montréal, Montréal, QC, Canada

**Homepage:** <http://amstat.org/meetings/jsm/2013/index.cfm>

JSM (the Joint Statistical Meetings) is the largest gathering of statisticians held in North America. It is held jointly with these societies:

- \*American Statistical Association
- \*Institute of Mathematical Statistics
- \*International Biometric Society (ENAR and WNAR)
- International Chinese Statistical Association
- International Indian Statistical Association
- International Society for Bayesian Analysis
- Korean International Statistical Society
- \*Statistical Society of Canada

(\*indicates the founding societies of JSM)

Attended by more than 6,000 people, meeting activities include oral presentations, panel sessions, poster presentations, continuing education courses, an exhibit hall (with state-of-the-art statistical products and opportunities), career placement services, society and section business meetings, committee meetings, social activities and networking opportunities.

**Comments and suggestions are welcome at** [meetings@amstat.org](mailto:meetings@amstat.org).



## The 59<sup>th</sup> World Statistics Congress

**Date:** 25 – 30 August, 2013

**Venue:** The Hong Kong Convention and Exhibition Centre (HKCEC), Hong Kong

**Homepage:** <http://www.isi2013.hk/en/index.php>

The 59th World Statistics Congress (WSC) will be held in Hong Kong during 25-30 August 2013. The meeting venue will be the Hong Kong Convention and Exhibition Centre (HKCEC), which is a magnificent, multi-purpose venue located right in the heart of Hong Kong on the Victoria Harbour.

The 59th WSC provides a platform for the international statistical community to share and present the latest knowledge and innovation in statistics. The scientific programme encompasses a wide range of topics facilitating professional exchanges and sharing amongst experts and practitioners in various statistical spheres. Featuring the unique theme "Youth", a series of sessions will be organised on the "Theme Day" of the 59th WSC to address, from various statistical perspectives, topics surrounding the "Youth". Delegates are welcome to plan tailor-made events from a wide spectrum of activities including scientific programme, social programme, satellite meetings and short courses.

Short courses will be run during 22 – 25 August and include the following:

- Analysis of Complex Sample Survey Data
- ISI Declaration of Professional Ethics – What does it Mean in Practice?
- Editing and Imputation of Survey Data
- Practical Tools for Designing and Weighting Survey Samples
- Business Survey Methods
- Actuarial and Statistical Aspects of Reinsurance
- Statistical Methods of Meta-Analysis
- Design of Experiments with Applications in Marketing and Service Operations
- Wavelet Methods for Environmental Time Series
- Heavy Tail Phenomena

**For more information, please visit the homepage or contact** [wsc2013-enquiry@censtatd.gov.hk](mailto:wsc2013-enquiry@censtatd.gov.hk).





## RSS Annual Conference

**Date:** 2 – 5 September, 2013

**Venue:** University of Northumbria, Newcastle, England

**Homepage:** <http://www.rssconference.org.uk/>

The 2013 Conference of the Royal Statistical Society will take place from 2-5 September at the University of Northumbria in Newcastle in North East England.

As usual the first day (Monday 2 September) will see a number of short courses and workshops take place with the welcome reception for the main conference scheduled for the evening.

The main conference programme will begin on the morning of Tuesday 3 and will run through to the afternoon of Thursday 5 September.

Following a successful introduction at the RSS 2012 Conference the Society's Awards Ceremony will again form part of the conference programme.

**More details will become available on the homepage.**



## 2013 International Methodology Symposium

Statistics Canada  
October 15-18, 2013  
Ottawa, ON, Canada

### Producing reliable estimates from imperfect frames

#### Call for Contributed Papers

Statistics Canada's 2013 International Methodology Symposium will take place at the Ottawa Convention Centre, located in the heart of downtown Ottawa, from **October 15<sup>th</sup> to 18<sup>th</sup>, 2013**.

The Symposium will be titled "**Producing reliable estimates from imperfect frames**". Members of the statistical community, such as those from private organizations, governments, or universities, are invited to attend, particularly if they have a special interest in methodological issues resulting from the use of imperfect frames.

The first day will consist of workshops, while the following days will consist of both plenary and parallel sessions covering a variety of topics. Additional research and results may be presented via poster sessions.

We are soliciting contributed papers examining **methodological issues resulting from the use of imperfect frames**. Topics may include:

- Frame Developments
- Multiple Frames
- Two-phase Designs
- Adaptive Designs
- Alternative Designs
- Indirect Sampling
- Telephone Surveys
- Web Surveys
- Hard to Reach Population Surveys
- Tracing Methods
- Use of Administrative Data
- Combined Data Sets
- Big Data
- Calibration and Related Estimation Methods
- Adjustments for Coverage Errors
- Adjustments for Classification Errors
- Small Domain Estimation

Your proposal must be submitted by e-mail to [symposium2013@statcan.gc.ca](mailto:symposium2013@statcan.gc.ca) by **March 20<sup>th</sup>, 2013**. It should include a 250-word abstract (in French or English) giving the content of the presentation, as well as its title and your full contact information.

We will contact you by **May 10<sup>th</sup>, 2013** to inform you whether or not your proposed communication has been accepted. In the case where it has been accepted, the final slides of your presentation will have to be submitted (in English or French) by **August 26<sup>th</sup>, 2013**. Proceedings from the conference will be published and disseminated to participants. Your final paper will need to be sent by **December 20<sup>th</sup>, 2013**.



## In Other Journals

**Survey Practice**  
Practical Information for Survey Researchers



**VOL 5, NO 3 (2012)**

[www.surveypractice.org](http://www.surveypractice.org)

**Editors' Introduction**

K. Goidel, K. Rao

**Methods for Improving Response Rates in Two-Phase Mail Surveys**

J. M. Brick, W.R. Andrews, P. D. Brick, H. King, N.A. Mathiowetz, L. Stokes

**Surveying Rare Populations Using a Probability-based Online Panel**

G. Wright, J. Peugh

**Encouraging Survey Response via Smartphones**

M. Millar, D. A. Dillman

**The Mode of Invitation for Web Surveys**

W. Bandilla, M. P. Couper, L. Kaczmirek

**Refusal Conversion Incentives and Participation in a Longitudinal Study of Older Adults**

M. Colicchia, M. Czaplewski, A. Jaszczak



VOL 6, NO 3 (2012)

<http://w4.ub.uni-konstanz.de/srm/issue/current>

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R. Chambers

**Multivariate Boundaries of a Self Representing Stratum of Large Units in Agricultural Survey Design**

R. Benedetti, F. Piersimoni

**Robust Lavalée-Hidiroglou stratified sampling strategy**

M. Caterina Bramati

**Handling Nonresponse in Business Surveys**

R. Borgoni, D. Marasini, P. Quatto

**Robust Small Area Estimation and Oversampling in the Estimation of Poverty Indicators**

C. Giusti, S. Marchetti, M. Pratesi, N. Salvati



December 2012, VOL 28, NO 4

<http://www.jos.nu/entry.asp>

**Letter to the Editor**

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J. Wagner, B. T. West, N. Kirgis, J. M. Lepkowski, W.G. Axinn, S. Kruger Ndiaye

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Editors-in-Chief

## **Evaluating Survey Questions: A Comparison of Methods**

T. Yan, F. Kreuter, R. Tourangeau

## **Discussion**

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## **Discussion Evaluation Procedures for Survey Questions**

W. E. Saris

## **Rejoinder**

T. Yan, F. Kreuter, R. Tourangeau

## **Disfluencies and Gaze Aversion in Unreliable Responses to Survey Questions**

M. F. Schober, F. G. Conrad, W. Dijkstra, Y. P. Ongena

## **Inferentially Valid, Partially Synthetic Data: Generating from Posterior Predictive Distributions not Necessary**

J. P. Reiter, S. K. Kinney

## **Confidentialising Exploratory Data Analysis Output in Remote Analysis**

C. M. O'Keefe

## **Editorial Collaborators**



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<http://www.statcan.gc.ca/pub/12-001-x/12-001-x2012002-eng.htm>

## **Survey Quality**

L. Lyberg

## **Data collection: Experiences and lessons learned by asking sensitive questions in a remote coca growing region in Peru**

J. Garcia-Yi and U. Grote

## **Imputation for nonmonotone nonresponse in the survey of industrial research and development**

J. Shao, M. Klein and J. Xu

## **Some theory for propensity-score-adjustment estimators in survey sampling**

J. K. Kim and M. K. Riddles

**Assessing the accuracy of response propensity models in longitudinal studies**

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**Confidence interval estimation of small area parameters shrinking both means and variances**

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**Condition indexes and variance decompositions for diagnosing collinearity in linear model analysis of survey data**

D. Liao and R. Valliant

**Bayesian inference for finite population quantiles from unequal probability samples**

Q. Chen, M. R. Elliott and R.J.A. Little

**Multiple imputation with census data**

S. K. Kinney



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**VOL 28, NO 1-2 (2012)**

<http://iospress.metapress.com/content/r32572329205/?p=d83645b238914d958a970f2342deb11f&pi=0>

**Reshaping health statistics: A new framework**

J. Madans, C. Abou-Zahr, A. Bercovich, T. Boerma, D. Carlton, L. Castro, M. Desmedt, E. Domingo, J. Kahimbaara, M. Marquardt, H. Nviiri, E. Norgaard, E. Vassenden, M. Wolfson

**Measuring health in population surveys**

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**Protecting confidentiality in a data enclave**

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**The French health information system**

M. Goldberg, E. Jougl, M. Fassa, R. Padieu, C. Quantin

**Measuring health care costs of individuals with employer-sponsored health insurance in the U.S.: A comparison of survey and claims data**

A. Aizcorbe, E. Liebman, S. Pack, D. M. Cutler, M. E. Chernew, A. B. Rosen

**Combining health register data and biobank data**

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**Health statistics in the Netherlands, review 1995–2009, preview 2010–2015**

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**Evaluation of the interest of using discharge abstract databases to estimate breast cancer incidence in two French departments**

C. Quantin, E. Benzenine, M. Fassa, M. Hägi, E. Fournier, J. Gentil, D. Compain, E. Monnet, P. Arveux, A. Danzon



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**December 2012, VOL 80, ISSUE 3**

<http://onlinelibrary.wiley.com/doi/10.1111/insr.2012.80.issue-3/issuetoc>

**Statistical Disclosure Risk: Separating Potential and Harm**

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**Evaluating, Comparing, Monitoring, and Improving Representativeness of Survey Response Through R-Indicators and Partial R-Indicators**

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**Assessing the Performance of Classification Methods**

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**Traceable Regressions**

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**Interval Estimation of Treatment Effects In Randomized Trials: When do Confidence Intervals Have Nominal Coverage?**

E. Scosyrev



**A Special Gen(d)re of Statistics: Roots, Development and Methodological Prospects of Gender Statistics**

F. Mecatti, F. Crippa and P. Farina

**Acknowledgement of Refereeing Work**

Article first published online: 21 NOV 2012

**Short Book Reviews**



**STATISTICS  
IN  
TRANSITION**  
*new series*

*An International Journal of the Polish Statistical Association*

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**VOL 13, NO 2**

[http://www.stat.gov.pl/pts/15\\_ENG\\_HTML.htm](http://www.stat.gov.pl/pts/15_ENG_HTML.htm)

**Finite population sampling: a model-design synthesis**

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**Application of rotation methods in sample surveys in Poland**

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**Estimation of parameters for small areas using hierarchical Bayes method in the case of known model hyperparameters**

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**Application of order statistics of auxiliary variable to estimation of the population mean**

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**Methods of representation for kernel canonical correlation analysis**

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**Taxonomic analysis of the Polish public health in comparison with selected European countries**

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**Statistics and Sociology: The mutually-supportive development from the perspective of interdisciplinaryization of social research**

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**Time series model for predicting the mean death rate of a disease**

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**Research on constructing composite index of objective well-being from China mainland**

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<http://repository.cmu.edu/jpc/>

**Special Issue on Statistical and Learning-Theoretic Challenges in Data Privacy**

A. B. Slavkovic, A. Smith

**An Axiomatic View of Statistical Privacy and Utility**

D. Kifer, B.- R. Lin

**Minimaxity, Statistical Thinking and Differential Privacy**

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**Learning in a Large Function Space: Privacy-Preserving Mechanisms for SVM Learning**

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**Differential Privacy for Protecting Multi-dimensional Contingency Table Data: Extensions and Applications**

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**Confidentialising Survival Analysis Output in a Remote Data Access System**

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**Privacy Protection from Sampling and Perturbation in Survey Microdata**

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**Towards Providing Automated Feedback on the Quality of Inferences from Synthetic Datasets**

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**Achieving Both Valid and Secure Logistic Regression Analysis on Aggregated Data from Different Private Sources**

Y. Nardi, S. E. Fienberg, R. J. Hall

**Privacy-Preserving Data Sharing in High Dimensional Regression and Classification Settings**

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**TRANSACTIONS ON  
DATA PRIVACY**

Foundations and Technologies  
<http://www.tdp.cat>

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**December 2012, VOL 5, ISSUE 3**

<http://www.tdp.cat/issues11/vol05n03.php>

**t-Plausibility: Generalizing Words to Desensitize Text**

B. Anandan, C. Clifton, W. Jiang, M. Murugesan, P. Pastrana-Camacho, L. Si

**Differential Privacy and Statistical Disclosure Risk Measures: An Investigation with Binary Synthetic Data**

D. McClure, J. P. Reiter

**P3ERS: Privacy-Preserving PEer Review System**

E. Aïmeur, G. Brassard, S. Gambs, D. Schönfeld

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**BIOMETRIKA**

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**December 2012, VOL 99, ISSUE 4**

<http://biomet.oxfordjournals.org/content/current>

**Testing one hypothesis twice in observational studies**

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**Classification based on a permanental process with cyclic approximation**

J. Yang, K. Miescke, P. McCullagh

**Orthogonalization of vectors with minimal adjustment**

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**Choosing trajectory and data type when classifying functional data**

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**Dispersion operators and resistant second-order functional data analysis**

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**A geometric approach to projective shape and the cross ratio**

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**Bidirectional discrimination with application to data visualization**

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**A two-stage dimension-reduction method for transformed responses and its applications**

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**Scaled sparse linear regression**

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**Simultaneous supervised clustering and feature selection over a graph**

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**On the sparsity of signals in a random sample**

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**Two-stage testing procedures with independent filtering for genome-wide gene-environment interaction**

J. Y. Dai, C. Kooperberg, M. Leblanc, R. L. Prentice

**Penalized balanced sampling**

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**Bootstrap confidence bands for sojourn distributions in multistate semi-Markov models with right censoring**

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**Statistical properties of an early stopping rule for resampling-based multiple testing**

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**Finite population estimators in stochastic search variable selection**

M. A. Clyde, J. Ghosh

**Compatible weighted proper scoring rules**

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**Proportional mean residual life model for right-censored length-biased data**

K. C. G. Chan, Y. Q. Chen, C.- Z. Di

**An efficient empirical likelihood approach for estimating equations with missing data**

C. Y. Tang, Y. Qin



**January 2013, VOL 176, ISSUE 1**

<http://onlinelibrary.wiley.com/doi/10.1111/rssa.2012.176.issue-1/issuetoc>

**Editorial: The use of paradata in social survey research**

G. Durrant, F. Kreuter

**Experimental designs for identifying causal mechanisms**

K. Imai, D. Tingley, T. Yamamoto

**A Bayesian approach to complex clinical diagnoses: a case-study in child abuse**

N. Best, D. Ashby, F. Dunstan, D. Foreman, N. McIntosh

**Fairness and the changing fortunes of people in Britain**

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**Do non-response follow-ups improve or reduce data quality?: a review of the existing literature**

K. Olson

**Using level-of-effort paradata in non-response adjustments with application to field surveys**

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**Tailored fieldwork design to increase representative household survey response: an experiment in the Survey of Consumer Satisfaction**

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**Interviewer speech and the success of survey invitations**

F. G. Conrad, J. S. Broome, J. R. Benkí, F. Kreuter, R. M. Groves, D. Vannette, C. McClain

**An examination of the quality and utility of interviewer observations in the National Survey of Family Growth**

B. T. West

**Assessing the measurement error properties of interviewer observations of neighbourhood characteristics**

C. Casas-Cordero, F. Kreuter, Y. Wang and S. Babey

**Analysing interviewer call record data by using a multilevel discrete time event history modelling approach**

G. B. Durrant, J. D'Arrigo, F. Steele

**Using paradata to explore item level response times in surveys**  
M. P. Couper, F. Kreuter

**Obituaries: Owen Nankivell; John Alfred Bather**



## **Journal of the American Statistical Association**



**VOL 107, ISSUE 500 (2012)**  
<http://amstat.tandfonline.com/toc/uasa20/current>

**A Bayesian Model of NMR Spectra for the Deconvolution and Quantification of Metabolites in Complex Biological Mixtures**

W. Astle, M. De Iorio, S. Richardson, D. Stephens, T. Ebbels

**A Nonparametric Regression Model With Tree-Structured Response**

Y. Wang, J. S. Marron, B. Aydin, A. Ladha, E. Bullitt, H. Wang

**Direct Simultaneous Inference in Additive Models and Its Application to Model Undernutrition**

M. Wiesenfarth, T. Krivobokova, S. Klasen & S. Sperlich

**Functional Causal Mediation Analysis With an Application to Brain Connectivity**

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**Measurement Error Case Series Models With Application to Infection-Cardiovascular Risk in Older Patients on Dialysis**

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**Nonparametric Estimation for Censored Mixture Data With Application to the Cooperative Huntington's Observational Research Trial**

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**A Stochastic Model for Calibrating the Survival Benefit of Screen-Detected Cancers**

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**Using Mixed Integer Programming for Matching in an Observational Study of Kidney Failure After Surgery**

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**Modeling Protein Expression and Protein Signaling Pathways**

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**Estimating Identification Disclosure Risk Using Mixed Membership Models**  
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**Minkowski–Weyl Priors for Models With Parameter Constraints: An Analysis of the BioCycle Study**

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**Tracking Epidemics With Google Flu Trends Data and a State-Space SEIR Model**

V. Dukic, H. F. Lopes, N. G. Polson

**Modeling Criminal Careers as Departures From a Unimodal Population Age–Crime Curve: The Case of Marijuana Use**

D. Telesca, E. A. Erosheva, D.A. Kreager, R.L. Matsueda

**Testing for Gene–Environment and Gene–Gene Interactions Under Monotonicity Constraints**

S. S. Han, P. S. Rosenberg, N. Chatterjee

**Estimation of High Conditional Quantiles for Heavy-Tailed Distributions**

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**SURE Estimates for a Heteroscedastic Hierarchical Model**

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**Interactions in the Analysis of Variance**

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**Correct Ordering in the Zipf–Poisson Ensemble**

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**Spike-and-Slab Priors for Function Selection in Structured Additive Regression Models**

F. Scheipl, L. Fahrmeir, T. Kneib

**Sparse Reduced-Rank Regression for Simultaneous Dimension Reduction and Variable Selection**

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**Higher-Order Infinitesimal Robustness**

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**A Multiresolution Method for Parameter Estimation of Diffusion Processes**

S. C. Kou, B. P. Olding, M. Lysy, J. S. Liu

**AdaptSPEC: Adaptive Spectral Estimation for Nonstationary Time Series**

O. Rosen, S. Wood, D. S. Stoffer



**Optimal Detection of Changepoints With a Linear Computational Cost**

R. Killick, P. Fearnhead, I. A. Eckley

**Modeling Repeated Functional Observations**

K. Chen, H.- G. Müller

**Consistent High-Dimensional Bayesian Variable Selection via Penalized Credible Regions**

H. D. Bondell, B. J. Reich

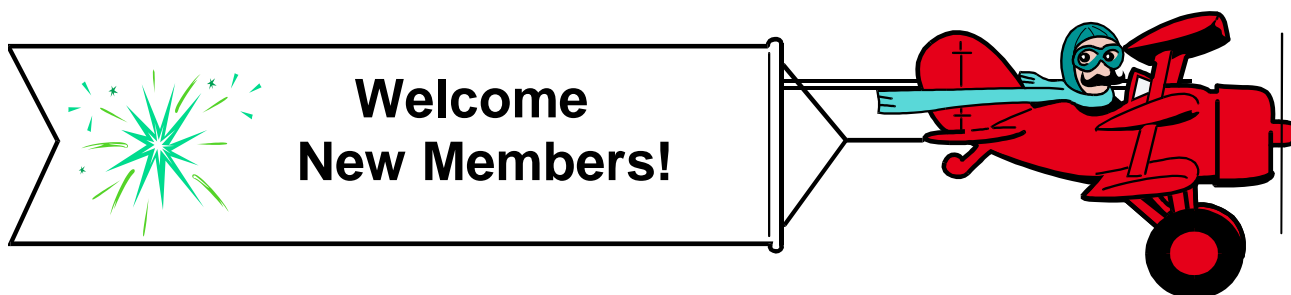
**A Semiparametric Change-Point Regression Model for Longitudinal Observations**

H. Xing, Z. Ying

**Instrumental Variable Estimators for Binary Outcomes**

P. S. Clarke, F. Windmeijer

**Book Reviews**



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We are very pleased to welcome the following new members!

Country	Name	Surname
Colombia	Leonardo	Trujillo
Mauritius	Mamode Hossen	Gendoo
New Zealand	Stephen	Haslett
Nigeria	Olugbemi Alabi	Olujimi
Norway	Jon	Pedersen
Senegal	Boubacar	Sow
Uganda	Viola	Nampeera

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## IASS Officers and Council Members

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### Executive Officers

<b>President (2011-2013):</b>	Raymond Chambers (Australia)	<a href="mailto:ray.chambers@internode.on.net">ray.chambers@internode.on.net</a>
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	Monica Pratesi (Italy)	<a href="mailto:m.pratesi@ec.unipi.it">m.pratesi@ec.unipi.it</a>
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	Olivier Dupriez (Belgium/USA)	<a href="mailto:odupriez@worldbank.org">odupriez@worldbank.org</a>
	Natalie Shlomo (UK)	<a href="mailto:natalie.shlomo@manchester.ac.uk">natalie.shlomo@manchester.ac.uk</a>
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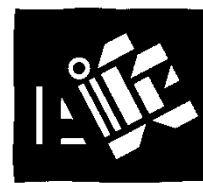
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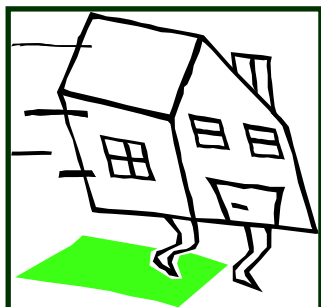
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