Registered by Australia Post Publication No NBH3503 issn 0314-6820

statistical society of australia incorporated

newsletter

31 May 1996 number 75

SYDNEY INTERNATIONAL STATISTICAL CONGRESS (SISC-96)

SISC-96 is approaching rapidly - July 8th to 12th in Sydney - and all the indications are that it will be one of the major statistical events in Australia.

Registrations now number more than 600, with a substantial number coming from overseas. Registrants are coming from thirty-four countries, at last count!

The Organising Committee is dealing with more than 400 abstracts that have been submitted for SISC-96.

The program should ensure that there is something for everyone, no matter what their statistical tastes might be!

An early version of the Invited Paper program is printed in the centre pages of this issue of the SSA Newsletter.

The program is, of course, subject to change, and an up-to-date version will be available on the World Wide Web at

http://www.dms.csiro.au/sisc/

The Contributed Paper program will also be made available at the same Web site.

The final versions of both Programs will also be given to Congress registrants on their arrival.

It's not too late to register for this very exciting Congress.

Contact SISC-96,
Conference Action Pty Ltd,
PO Box 1231,
North Sydney NSW 2059 Australia;
phone (02) 9956-8333,
fax (02) 9956-5154;

or see the Web address given earlier.

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Deadline for next issue: 19 July 1996 *Printed by Koomarri Printers, Canberra*

PRESIDENT'S REPORT

The Society .. the members

There have been a number of occasions over the last six years when I have had to focus in a formal way on the roles and processes of the Society and on its membership. Examples of such occasions include the re-writing of the constitution to meet the revised ACT Incorporations Act; assembling and reconciling the various reports, surveys, proposals and feedbacks on accreditation; and writing the Society's information flyer.

Readers may remember that one need in the revision of the Rules was to legally clarify the "members" of the Society. The previous ACT Incorporation Act must have encouraged organisations started as "umbrella" societies like ours, to identify "members" as state groups/delegates, as we shared this problem with other national associations, for example the Netball Association. Consequently our previous Society Rules, established as recently as 1989, referred to both branches and individuals as "members". In the re-writing of the Rules however, there was no hesitation: the Society's members are the individuals.

A benefit of having to revise the constitution was the opportunity to clarify and/or identify many of the processes of the Society. This was not just in response to the drive in the 80's-90's for procedural correctness and transparent accountability, but part of the natural progression in the evolution of our Society, a part that is still continuing and will never finish because the constitution is a reflection of the Society, not an imposition on it. The constitution consists of two parts: the Rules which are registered in the ACT, and the Regulations, which have to be confirmed, or altered if desired, annually by Central Council, and which are a wonderfully convenient mechanism for recording and identifying guidelines for using the Rules, and for the Society's activities and processes. Many of these guidelines have, and will continue to, come from careful consideration of principles and experiences, and thus our Regulations in particular will continue to reflect our societal development.

The Society was formed as a national "umbrella" organisation in 1962. State branches still provide the focus and organisation of much of the Society's activities, and the umbrella aspect of the Society's roles will always be important, but the old suspicion of "centralism" seems to have been gradually evolving into a sense of belonging to a truly national society. This is not however saying that we do not still have some problems of a similar nature to reconciling different railway gauges! A strong candidate for our "railway gauges" might be our databases.

In bringing together all the comments/suggestions /feedback on accreditation, we have often found, upon investigation, that apparently diverse opinions arose from different emphases out of which came different expressions about what were often the same concerns. The underlying theme has been commitment of members to their profession in all its many and varied manifestations. Two aspects having consensus from the beginning of discussion - a long time ago - have been that membership of the Society should always be open to all who have an interest in, and commitment to, statistics; and that any form of accreditation should be an optional extra with the prime purpose of a public declaration that the practice and application of the statistical sciences is a professional occupation.

In writing the information flyer for the Society, I consulted and borrowed from some branches' flyers, comments on advantages of membership, such as forums, networking, meetings, information, opportunities. I noticed that all such comments had a theme of identification with a profession. The Society is an identification of a discipline and of a profession. The discipline is used in and affects an extraordinarily wide range of other disciplines, and the practice of the profession involves just as wide a range of types of work situations and colleagues.

Groupings like our Sections help in building collaboration with important user areas and special interests, and with outreach in general. It is not necessarily easy to find ways of representing the varied aspects of the profession, but Geoff Robinson's comments in the last issue brought to mind for me the similarities between the work he describes, and university teaching and statistical education in general. Members involved in statistical education, at all levels, are also constantly grappling with communicating basic statistical ideas, with outreach to the general community, and with finding appropriate forums for interchanging ideas and experiences, and for communicating with groups such as school teachers. But then probably the overwhelming majority of our members are involved in communicating essential statistical ideas in one way or another in their work. Similarly, I have observed with respect, conference/workshop organisers, editors - both journal and newsletter - and branch councils, initiating new conference, meeting and written formats, and encouraging people to use them to represent our multi-faceted and rich discipline. We should all be alert to ways and means of representing our profession.

Thus in all the above, what comes through is that the Society IS its members, collectively and individually. It does not exist or function except through its members. Our constitution is also ours, an evolving reflection of us. The Society as an organisation is a declaration of our discipline of statistical sciences and the profession of statistician in its many manifestations. Accreditation is one possible way of declaring that the practice of statistics is a professional occupation; it is not necessarily the only way. We are all involved in our work in communicating about statistics, and seeking better ways of doing it is part of the practice of statistics. The Society is us.

Helen MacGillivray

BRANCH REPORTS

New South Wales

H.G. Wells and the future of Statistics Education

The first meeting of the year saw the incoming President, David Griffiths, deliver the H.O. Lancaster Lecture. David, from the Department of Applied Statistics, University of Wollongong, titled his talk "H.G. Wells and the future of Statistics education". He felt that as we are approaching the 50th anniversary of the establishment of a Statistical Society in NSW he would take the opportunity to reflect on the past 50 years and muse on the future from his own quirky perspective.

David started his talk by asking us to name some of the major scientific achievements of the 20th century. I don't think there was anyone in the audience who actually gave Statistics as one of these achievements but apparently it is there in its own right, distinct from Mathematics. (My apologies to anyone who was aware of the status of Statistics in the top 20 scientific achievements.)

H.G. Wells noted that 'statistical thinking will one day be as necessary for efficient citizenship as the ability to read and write'. How right can someone be! Statistics is ubiquitous in society and we need to decide what our role will be in its future, especially since there is a very real danger of our discipline being taken over by others.

David expanded on these musings by reflecting on other issues such as:

- the education of statisticians;
- the roles of schools, universities and statisticians in statistical education;
- the changing statistical education needs of other disciplines; and,
- the realised and potential impact of technology and government on all these situations.

David finished his talk by saying he is very worried by the general perception, that I am sure we are all aware of, that 'we don't need statisticians' but he did finish on a high note saying that he thinks the future for statisticians is rosy and that the discipline will prosper.

Role of Genetic Variability in Assessing DNA Profile Evidence

As a result of the membership survey the NSW Branch Council decided to increase the number of applied talks given during the year. The first of these was given by David Balding from the School of Mathematical Sciences, Queen Mary and Westfield College, University of London who is visiting the Department of Statistics at the University of NSW. He spoke at the April meeting on the role of genetic variability in assessing DNA profile evidence.

I am sure we are all aware of how the use of DNA profile evidence is becoming more common. The assessment of this evidence has been the subject of controversy for a number of years. Arguments have focused on several topics, among which population genetics issues have perhaps been the most prominent. The pertinent questions are:

- how much variation is there between ethnic groups in the genetic characteristics investigated in forensic work?
- what effect does such variation have on the weight of DNA profile evidence?

David discussed the general framework in which these questions can be answered. Analyses within this framework show that the key population genetics quantity can be interpreted as a correlation between the genes of distinct individuals within an ethnic group. Although various methods for estimating F_{ST} have been proposed in the population genetics literature apparently each is unsatisfactory in the forensic setting. David described a novel, likelihood-based estimation method which has important advantages over the traditional methods. The method was illustrated with analyses of forensic data and then implications for DNA profile evidence were assessed.

South Australia

SA Honours Scholarship 1996

The 1996 Statistical Society of Australia Honours Scholarship was awarded jointly to Nicole Chamberlain and Liana Luzzi, both Honours students at the University of Adelaide.

SA Branch Council 1996

The South Australian Branch Council for 1996 is

President:	Dr Brenton Dansie (University of South Australia)
Vice-president:	Sandra Pattison (NCVER Statistics Div.)
Secretary:	Dr Gary Glonek (Flinders University)
Treasurer:	Mary Barnes (CSIRO Div. Mathematics & Statistics)
Council:	Lynne Giles (Flinders University)
	Bob Hall (University of South Australia)
	Bronwyn Harch (CSIRO INRE Biometrics Unit)
	Richard Jarrett (University of Adelaide)

Non-Gaussian Geostatistics

Peter Diggle of the Department of Mathematics and Statistics, Lancaster University, UK spoke to the February Branch meeting about his research on non-Gaussian geostatistics.

Conventional geostatistical methodology solves the problem of predicting the realised value of a linear functional of a Gaussian spatial stochastic process, $S(x)$, based on noisy observations at a finite set of sample locations. This methodological framework was extended by assuming that, conditional on $S(x)$, observations at sample locations form a generalized linear model with the corresponding values of $S(x)$ appearing as an offset term in the linear predictor. A Bayesian inferential framework, implemented via Markov chain Monte Carlo, was used to solve the prediction problem for non-linear functionals of $S(x)$, making a proper allowance for the uncertainty in the estimation of any parameters.

An application to an investigation of residual contamination from nuclear weapons testing in the South Pacific was used to motivate and illustrate the methodology.

Biographical: University of Newcastle upon Tyne, 1974-84 (Lecturer, then Reader); CSIRO 1984-88 (SRS, then PRS, then Chief); Uni Lancaster 1988- (Professor of Statistics and Director of Medical Statistics Unit); John Hopkins (Adjunct Professor, Biostatistics). Senior Honorary Secretary, Royal Statistical Society; European Regional Coordinator, Bernoulli Society.

Nonlinear Calibration Curves

After the Annual General Meeting on 27 March, Douglas Bates of the University of Wisconsin spoke to the Branch meeting on his recent findings on nonlinear calibration curves.

A calibration proceeds in two stages. Initially, a response is measured on samples with well-determined levels of the factor of interest, and a calibration curve is fitted to these data. Next, the response is measured on samples with an unknown level of the factor and the level is inferred through inverse prediction. That is, although we fit the calibration curve to the response as a function of the factor level, we use the curve to "predict" the factor level as a function of the response.

Frequently, we want an interval estimate as part of this inverse prediction. The problem of determining such "calibration intervals" has been extensively studied for cases in which the relationship between the response and the factor is assumed to be linear. However, the assumed relationship may also be nonlinear. For example, a four-parameter logistic function is often used in areas such as radioimmunoassay.

The conventional techniques for determining intervals in linear calibration problems do not extend readily to such nonlinear curves. An alternative technique based on the profile likelihood suggested by G.P.Y. Clarke was described. It was shown to be a general, easily understood technique which requires only a moderate level of computation.

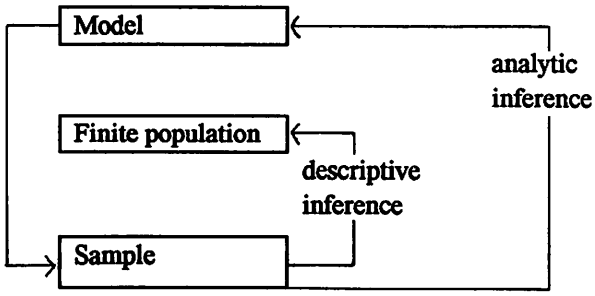
Biographical: Douglas Bates is visiting the Department of Statistics at the University of Adelaide until July while on study leave from the University of Wisconsin. His main research interests are statistical computing and nonlinear regression models. He is the author, with Donald Watts, of the book *Nonlinear Regression Analysis and Its Applications* and, with John Chambers, of the nonlinear regression functions in S-plus.

Gary Glonek

Canberra

Parametric Statistical Inference from Complex Survey Data

The first meeting of the Canberra Branch for 1996 was addressed by Professor Danny Pfeffermann, of the Hebrew University in Jerusalem, on the subject of parametric statistical inference from complex survey data. Danny first showed us the following diagram of the overall model behind sample surveys. Descriptive inference has been the standard technique of the ABS in the past: the subject of Danny's talk belongs in the domain of analytic inference.



Some of the most common estimators in the descriptive inference context involve probability weighting, where each observation is weighted by the inverse probability of its inclusion. Danny showed us some of the nice properties of such estimators; in particular, they satisfy a pseudo maximum likelihood criterion. But they have disadvantages too: inference is restricted to point estimation, and the distribution of the probability weighted estimators is unknown.

The basic idea of parametric inference from complex survey data is to extract the distribution of the sample data as a function of the superpopulation distribution that generates the population values, and the known features of the sampling design (in particular the first order sample inclusion probabilities). Given a superpopulation model, judicious choice of the sample inclusion probabilites leads to well-known distributions for the sample through an application of Bayes' Theorem. For more general sampling schemes, Taylor expansions lead to more complicated distributions.

Assuming independence then allows the analyst to use these distributions with standard inference techniques such as Wald tests. But is the assumption of independence a reasonable one to make? In fact, even if the population measurements are independent, it is not necessarily true that the sample measurements are independent as well. Danny demonstrated this with a miniature example involvng a population of size two, whose members take values 0 or 1 with probability ½, and simple random samples of size 2 with replacement.

Finally, Danny presented the results of some simulations comparing eight different methods of sampling. There was little difference between the methods in the situations examined, but one interesting feature of the results was the surprisingly long right tail of the distribution of the parameter.

An interesting question at the end of the talk raised the possibility of using these distributions to influence the choice of design, rather than using them simply to analyse a given survey design. With this idea and others raised during the talk to contemplate, a group of members joined Danny for dinner at Naturally Bernadette's.

Fractal Dimension and a Longitudinal Study of HIV in Developing Countries

The Annual General Meeting of the Branch in March was addressed by two speakers, Mr David Matthews and Ms Jessica Nakiyingi, both of the Australian National University. They had been sponsored by the Branch to attend the 1995 Workshop for Australia's Young Statisticians (WAYS), and they repeated the presentations they had given at that workshop.

David spoke on fractal dimension. Fractal dimension is a scale-free way of describing the roughness of a curve, and has many uses, ranging from describing the finish of a painted metal surface to analysing the preservative qualities of plastic food wrap. Several different methods of estimating fractal dimension have been developed over the last few years, and David described some of them. These included simple box counting, use of the periodogram, and the "level crossing" method.

David then presented three examples of situations where fractal dimension is used. The first involved plateau-honed surfaces, which refers to two surfaces in moving contact with one another. The profile of the surface is modelled by the minimum of two independent processes with different fractal dimension.

The second example involved the analysis of exchange rate fluctuations. Modelling of these fluctuations could involve three parts - sudden discrete jumps, continuous deterministic changes and stochastic fluctuations - and it is in modelling the last of these that a notion of fractal dimension is useful.

The third example involved fractal image compression. This works by dividing an image up into regions called domain blocks. For each domain block another region in the image is chosen that closely matches it - this is called the range block. Instead of storing the whole image, only the location of the range blocks is stored, along with the transformation needed to locate the domain block. In essence, the image is stored in terms of itself and its fractal properties. The space-saving benefits of such a technique are dramatic - up to 100:1 compression can be achieved. Furthermore, the image can be viewed at resolutions both lower and higher than the original.

Jessica spoke about a longitudinal study of HIV in developing countries, which is a project she worked on as a graduate in Uganda.

The study was funded by the Medical Research Council Program on AIDS in Uganda, and the main aim was to study the dynamics of HIV transmission in a rural community. The study area chosen was a rural district close to the Trans-African Highway, with two government-run dispensaries, a mission health centre, and a hospital 16 km away. The project began in 1989 with community mobilisation and the design and pre-testing of a questionnaire. A pilot survey was run in late 1989 and was followed up with verification of data against census results, a medical survey of residents (both adults and children) and follow-up.

Jessica is working on other aspects of the study while in Australia, including estimation of survival times according to various factors such as gender, and population composition and change in a particular HIV-infected rural Ugandan community.

There are no Ugandan restaurants in Canberra, and so the meeting concluded with Indian fare at the Taj Mahal.

Small-area estimation with an application

A smaller crowd than usual gathered on a non-standard meeting day in April to hear Professor Partha Lahiri of the University of Nebraska-Lincoln, USA, speak on small-area estimation.

Three estimators are widely used in small-area estimation - the direct survey estimator, synthetic estimator and composite estimator. The last-mentioned is a weighted average of the previous two, and the weight can be found by a variety of methods, including BLUP, hierarchical Bayes (HBayes) and empirical Bayes (EBayes). In many simple situations, the BLUP and EBayes estimators are identical and straightforward to obtain, along with formulae for the variability of the estimators. However as the number of known quantities in the model decreases, the complexity of the calculations increases and the estimators are no longer identical.

The application Partha discussed was to the estimation of average weekly consumer expenditure on milk for 43 small areas in the USA. Partha treated a large survey as a census and then used ? of the data as his survey, in order to be able to compare sample results with the "population" values. In general, there was a 40 - 60% reduction in MSE gained by using a composite estimator over the direct survey estimator. In terms of variability, the variability of the HBayes estimator was usually the smallest, followed by EBayes. However, due to technical constraints, measures of variability were not available for BLUP estimators with the particular combination of number of small areas and sample sizes involved here (43 small areas with between 100 and 600 observations in each small area).

In questions after the presentation, Partha expressed an overall preference for the HBayes estimator, largely because of the availability of a measure of variability. More informal discussion continued over Thai food at the Siamese Kitchen - yet another of Canberra's fine restaurants.

Alice Richardson

NSW BRANCH MEMBERSHIP SURVEY 1995 - SUMMARY RESULTS

Thank you to all members who gave us some feedback. Of the 317 mailed out, 153 were returned by mid November (the final close-off for processing), representing 1 48% response rate. (Only two more were received after that date, and as all the tables had been finalised by then we unfortunately couldn't include their results in the tables).

With a response rate of only 48%, there is clearly room for non-response bias. Because the questionnaire was anonymous, we can't be too sure about who did and who didn't respond, but comparing the distribution of responses on the location question, to the distribution of addresses on our mailing list, it seems that at least there is not a geographic bias to the non-response.

The following summarises the main findings. If you are interested in more detail, the complete set of tables is available for inspection at the monthly meetings.

Who are our (responding) members?

- median membership among the respondents is between 6 and 10 years, with mean membership more than 10 years.
- 59% live within 45 minutes drive of the city centre, 14% in outer Sydney, 8% in the Hunter region, 5% in Illawarra, 10% elsewhere in NSW, and 5% outside NSW.
- 93% have a bachelors degree or higher involving statistics.
- 35% are currently academics, 6% students, 27% are involved in government, 20% in industry, 7% are self employed, and 3% retired.
- 34% are involved in mathematical stats, 31% in medical/biological stats, 18% in econometrics or finance stats, 17% in social stats, 16% in market/survey research, 16% in industrial stats, and 16% in agricultural stats. 16% state they are not involved in any specific field - just stats in general.

Why did respondents join the society?

Most respondents (89%) cited *professional development / to keep current with new ideas*, and 79% cited *to meet or keep in contact with other statisticians*. These two factors together account for the main reason for 74% of all members.

Nearly one half cited *to get the Australian Journal of Statistics*, and one third *to get the quarterly newsletters*, as among their reasons for joining, but as main reasons these two reasons together accounted for less than 8% of the respondents.

Why have members left the society?

19% of responding members knew someone who had left the society. The most common reason given was that the person had left the field of statistics (mentioned by 38% of those who knew someone who left), followed by membership being not value for money (cited by 21%), not finding the journal useful (17%), being unable to attend meetings (10%), and being able to attend meetings but finding them difficult to understand (10%), or not finding the program relevant (10%). Other reasons accounted for 20%.

Who attend the meetings?

Half of the respondents had not attended any meetings within the past year, and 37% attended a few, and 13% attended at least one in two meetings.

As would be expected, those who live within 45 minutes drive of the city generally attend more meetings than those who live further away.

There also appeared a slight trend there those associated with academia were more likely to attend than those involved in government or industry.

What attracts people to meetings?

Mostly the topics and the speakers attracted those who attended, but *the opportunity to meet other statisticians* was a reason given more often by those who attended frequently.

The opportunity for professional development and *convenient location* were also cited by more than one third of respondents.

What prevents people from attending?

Inconvenient/inaccessible location was mentioned by 52% of respondents, *inconvenient time of day/week* by 50%, and *the topic/speakers were not interesting* by 42%.

Views on the program of speakers

The majority (60%) of respondents find the current balance of the talks between theoretical and practical about right. Of the remainder, nearly three times as many find the talks to be too theoretical rather than too practical.

Similarly, 59% find the balance between specialised and general interest topics to be about right, but with nearly seven times as many among the remainder finding them too specialised or too general.

More than half volunteered a suggestion for future meetings, with the most common response (30%) being a request for talks concerning practical applications.

Views on the Journal and Newsletter

27% of respondents read or all least skim most of every issue of the Australian Journal of Statistics, 27% read or skim at least one article, 38% check the contents or flick through them, while 6% rarely even open them.

By contrast, 75% of respondents read or skim most of every issue of the Newsletter, with less than 1% rarely even opening them.

Other events attended

19% had attended the biennial conference at Monash (26% of academics, and 21% of government affiliated respondents), with less than 5% attending any other single event. 64% of respondents had not attended any event (other than the monthly meetings) organised by the Society.

39% however expressed a desire to attend some other events, 20% specifically mentioning a workshop or further education type event.

So where to now?

We are taking into account the suggestions made with regard to the monthly meetings. While the majority of respondents are happy with the current balance, most of the remainder have expressed a preference for more general or practical talks, and so in the current program we will shift the balance slightly by having a couple more talks in more general areas. We will still keep some specialised talks, but where these talks are presented in other venues (for example, through other conferences) we will advertise them rather than make them an integral part of the monthly program.

We also note the requests for workshops or general educational events, however at this point we face a dilemma in the enormous variety requested. Clearly there needs to be a "critical mass" audience to make the staging of an event worthwhile, and there did not seem the required numbers on any one area of topic to make such an event feasible. However we are keen to hear from anyone offering such workshops or basic eduction programs, and we will actively seek out such and advertise them for members when they are available.

With regard to the location or timing of the monthly meetings, we will extend the program we currently have of rotating the meetings through different nights, and we are currently considering running later times in summer. We are also looking at varying the venues more, to include at least one talk in Western or South-western Sydney, and to rotate the talks more often among the universities of Sydney, Macquarie, and New South Wales. Newcastle and Wollongong venues are still unlikely given that the majority of members live in Sydney, however we would happily support and help co-ordinate "car-pooling" arrangements from Wollongong and Newcastle to assist those members attend more meetings.

Thank you again for your help with this survey; we hope to use the findings to make this a more useful society for all.

NSW Branch Council

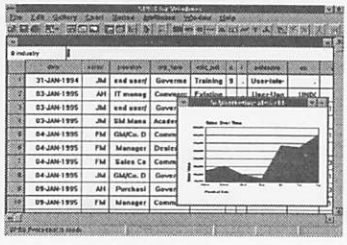
NOTE FROM THE EDITORS

Getting the Newsletter out by the nominated date of issue (as printed on the header on the front page) requires us to meet several deadlines along the way (e.g. material to typists, artwork to printers, delivery of inserts for postage, etc.). In preparing the March issue we experienced delays at several key stages which resulted in a lenthy delay to mailout. To bring us back on target we will need to ensure that future deadlines are more rigorously observed.

The deadline for submission of Newsletter material is usually six weeks prior to the nominated date of issue (i.e. six weeks prior to 31 March, 31 May, 31 August or 30 November), and is printed at the foot of the front page of the preceding issue. There is a little more time for inserts which are to be included at mailout, but they should be delivered to the Editors no later than three weeks prior to the date of issue. If you ever have any queries about something you want to include in the Newsletter, please don't hesitate to give one of the Editors a call.

Statistically Speaking, SPSS Is The World's Leading Statistical Software Package . . . No Matter How You Analyse It

SPSS is the world's leading statistical data analysis software package, designed *for* statisticians, *by* statisticians. SPSS products and services are designed with the end-user in mind, providing you with a range of powerful, versatile, functional and user-friendly product features and a wide range of essential support services.



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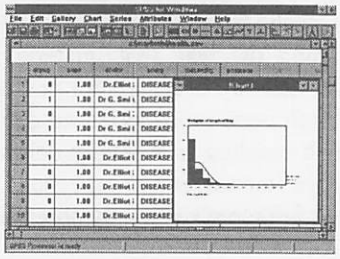
- Conjoint Analysis
- Multi dimensional scaling



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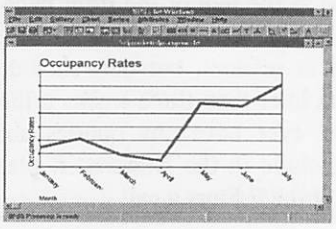

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SYDNEY INTERNATIONAL STATISTICAL CONGRESS (SISC-96)

SCIENTIFIC PROGRAM - Invited Sessions and Confirmed Speakers

IMPORTANT NOTE: allocation of session topics to time slots is subject to change

(In the session information below, ASC denotes the Australian Statistical Conference, with ASC-Q and ASC-E its Quality and Environment streams; INT = Interface meeting and IMS = IMS Special Topics meeting.)

Monday 8 July 1996

Monday Session 1 08.30 - 10.00

Opening Ceremony

Keynote address: R. M. May

Monday Session 2 10.30 - 12.20

ASC: "Spatial statistics."
Chair A. Baddeley
Speakers
N. Cressie
Y. Ogata, "Age-period-cohort analysis of incidence from incompletely detected retrospective data"
Discussant H. Rue

INT: "Multi-media."
Chair L. Wilcox
Speakers
D. Ryall & C. McDonald-Stuart, "Multimedia and interface in visualisation." (30 minutes)
D. Kimber , "Speaker segmentation for audio interfaces." (30 minutes)
M. Schmidt, "Identifying talkers with support vector networks." (30 minutes)
Discussant A. Weigend (10 minutes)
Reply (10 minutes)
General discussion

INT: "Saddlepoint & related methods."
Chair J. Robinson
Speakers
S. M.S. Lee & G.A. Young, "Asymptotics and resampling methods." (30 minutes)
E. Ronchetti, "A comparison of saddlepoint approximations for marginal distributions." (30 minutes)|
J. Kolassa , "A non-iterative method for conditional inference." (30 minutes)
Discussant
M. Martin (10 minutes)
General discussion (10 minutes)

Monday Session 3 14.00 - 15.50

ASC: "Markov Chain Monte Carlo.".
Chair R. Kohn
Speakers
S. Chib, E. Greenberg & R. Winkelmann, "Model comparison in longitudinal generalized linear models with random effects."
C. Carter, "A minimal conditioning approach to autoregressive modelling with level shifts."
K. Mengersen, "Do six metur meta?"
Discussant R. Gerlach

INT: "Graphics & visualisation."
Chair
Speakers
W. Cleveland, "Multipanel conditioning: modeling data from designed experiments."
P. Robertson, "Systematic design of visualisations."
L. Wilkinson, "A graph algebra."
Discussant

INT: "High-dimensional data."
Chair D. Scott
Speakers
D. Cook, "Escape from Pillai trace?" (30 minutes + 5 minutes' discussion)
E. Wegman, "High-dimensional clustering using parallel coordinates and the Grand Tour." (35 minutes + 5 minutes' discussion)
W. Eddy & S. Oue, "XNavigation - An interactive data visualisation system for local viewing in multivariate datasets." (35 minutes + 5 minutes' discussion)

Monday Session 4 16.00 - 17.50

ASC: "Statistical Education: Expanding Horizons."
Chair P. Shaw
Speakers
T. Lumley , "Statistical bibliography: past historic, present imperfect, future conditional." (25 minutes)
Discussant S. Young (15 minutes)
E. Sowey, "Statistical vistas: perspectives on purpose and structure." (20 minutes)
M. Correll, "-STR-E-T--C--H--I---N----G----->>> the content of the first tertiary Statistics subject." (20 minutes)
Discussion 30 minutes

INT: "New avenues for Markov Chain Monte Carlo."
Chair K. Kafadar
Speakers
K. Kafadar, overview (5 minutes)
M. Clyde, "Using Monte Carlo Markov Chains to account for model uncertainty." (30 minutes)
E. George , "Bayesian CART." (30 minutes)
Discussants
R. DeVeaux (15 minutes)
K. Mengersen (15 minutes)

INT: Geometric methods
Chair D. Carr
Speakers
L. Hearne, "Nonparametric density estimation using random tessellations." (35 minutes + 5 minutes' discussion)
B. Takacs, "Geometric modeling for facial landmark detection and recognition." (35 minutes + 5 minutes' discussion)
C. Ball, E. Wegman, "Geometric modeling of vehicle paths and confidence regions." (30 minutes + 5 minutes' discussion)
Discussant E. Wegman

Monday All-day ASC Workshop: Quality and Statistics in Industry. (Commences at 10.30am.)

Session 1 : "Linking Statistical Process Control with Automatic Process Control"
Chair
Speakers
J. MacGregor & J.S. Hunter, Linking Statistical Process Control with Automatic Process Control."
Session 2 : "Measuring organisational performance."
Chair
Speakers
J. Orsini, "Measuring quality in service industries"
G.K. Eagleson & S. Kelly, "Statistics in business: strategy or science."
I. Saunders, "Measuring organisational performance."
Session 3 : "Industrial experimentation."
Chair
Speakers
C.F. Jeff Wu, "An integrated strategy of robust parameter estimation."
J. Eccleston & D.J. Street , "The design of industrial experiments for dependent data."
J.A. John & N.R. Draper , "Response surface designs where levels of some factors are difficult to change."
Session 4 : Panel discussion. "Getting the most out of Statistics in Industry."
Chair R. Sandland
Speakers

Tuesday 9 July 1996

Tuesday Session 1 08.30 - 10.20

ASC: "Epidemiology & clinical trials."
Chair Dr Keith Dear
Speakers
L. Ryan, "Meta analysis when some studies don't have control groups: an application in CVS sampling." (30 minutes)
J. Simes, "Strategies to minimise bias in systematic overviews of clinical trials." (30 minutes)
Discussant I. Ford
Discussion (10 minutes)
ASC-Q: "Quality in Health Care."
Chair
Speakers
L. Burnett, M. Mackay, "Using performance indicators: what works and what doesn't."
S. Anderson, "Balancing the scorecard: using data for management in a health care organisation."
R. Gibberd, "Estimating patient injury due to health care."
A. Chennell
INT: Computational aspects of model diagnostics
Chair W. Eddy
Speakers
E. Slate, "Non-normality diagnostics for multivariate posterior distributions"
X.-L. Meng

Tuesday Session 2 10.30 - 12.20

ASC: "HIV AIDS modelling."
Chair S. Wilson
Speakers
S. Wilson, Overview
L. Billard, "Modelling the AIDS epidemic." (25 minutes)
N. Becker, "Analysis of trends in HIV infection." (25 minutes)
M. Segal, "AIDS incubation is shortening." (25 minutes)
Discussant
I. James (10 minutes)
Reply (10 minutes)
Discussion
ASC-Q/INT: "Software quality and metrics."
Chair R. Offen
Speakers
R. Jeffery
S. Eick
I. Richards
Discussant
R. Offen
INT: "Surface reconstruction."
Chair D. Swayne (Bellcore)
Speakers
G. Storvik, "Surface reconstruction from noisy images through Bayesian modeling."
W. Stuetzle, "3D Photography."
Discussant A. Buja

Tuesday Session 3 14.00 - 15.50

ASC: "Biometrics."
Chair K. Basford
Speakers
T. Speed, "Identifying QTL in crosses between outbred lines." (25 minutes)
B. Harch, "Using graphics to improve the utilisation of germplasm collections." (25 minutes)
M. O'Neill, "Levene's test: a robust test for detecting variance heterogeneity." (25 minutes)
Discussion (5-10 minutes)
ASC-Q: "Using Statistics for Quality Improvement - I."
Speakers
V. Nair, "Recent directions in accelerated testing for reliability assessment."
B. Abraham, "Measurement system variation."
R. Kacker, N.F. Zhang & C. Hagwood, "A scientific approach to keep a measurement process in control."
INT: "Time series & model selection."
Speakers
M.A. Cameron Overview, "Statistical and computational issues in analysing very large, complex sets of data." (10 minutes)
G. Kitagawa, "Monte Carlo methods for the estimation and selection of time series models." (30 minutes)
D. Huang, (30 minutes)
R. Taplin, "Model selection for time series in the presence of outliers." (20 minutes)
Discussant C. Carter (10 minutes)
General Discussion

Tuesday Session 4 16.00 - 17.50

ASC: First E.K. Foreman Lecture
Chair D. Trewin
Speaker
W. McLennan, "A history of survey sampling in the Australian Bureau of Statistics." (45 minutes)

Discussants
L. Cox (10 minutes)
R. Chambers (10 minutes)
S. Kuzimich (10 minutes)
General Discussion

ASC-Q: "Using Statistics for Quality Improvement - I."
Speakers
G. Riley, "Mass balances and process modeling."
G.K. Robinson, "Uncertainly arising from sampling of materials."
S. Park, "Response surface designs and the application for quality improvement in industry."
Discussant

INT: "Influence & sensitivity."
Chair J.C. Lee
Speakers
W. K. Fung, "Influence in discriminant analysis."
A. de Falguerolles, "Empirical detection of influential observations in generalized bilinear analyses."
Y. Tanaka, "Sensitivity analysis in multivariate methods: General robust procedure based on influence functions and its software."

Tuesday All-day Interface Workshop: Imaging

Session 1 Industrial Imaging
Chair Mark Berman (CSIRO Div.Mathematics & Statistics)
Speakers
8.30 - 8.40 Mark Berman (Overview)
8.40 - 9.30 Jean Serra (Centre for Mathematical Morphology, France), "Industrial control by vision."
9.30 - 9.55 Ronald Jones (CSIRO Division of Mathematics & Statistics "A graph-based segmentation of wood micrographs."
Discussant
9.55 - 10.05 Adrian Baddeley (University of Western Australia)
10.05 - 10.10 Reply
10.10 - 10.20 General Discussion

Session 2 Remote Sensing
Chair Andy Green (CRC for Australian Mineral Exploration Technologies)
Speakers
10.45 - 10.55 Andy Green (Overview)
10.55 - 11.20 Jeff Settle (University of Reading, U.K.) "Spectral unmixing of remotely sensed, multispectral images."
11.20 - 11.45 Bruno Jedynak (INRIA, France) "Active testing for tracking roads in satellite images"
11.45 - 12.10 Harri Kiiveri (CSIRO Division of Mathematics & Statistics) "Some statistical models for remotely sensed data."
Discussant
12.10 - 12.20 David Jupp (CSIRO Earth Observation Centre, Australia)
12.20 - 12.25 Reply
12.25 - 12.35 General Discussion

Session 3 Biomedical Imaging
Chair Nick Lange (National Institutes of Health, USA)
Speakers
1.45 - 1.55 Nick Lange (Overview) "Spatially varying two-parameter gamma densities for frequency domain analyses of fMRI time series."
1.55 - 2.20 Ian Ford (University of Glasgow, UK) "Functional neuroimaging and statistics: the interface."
2.20 - 2.45 Andrew Holmes (Wellcome Dept. of Cognitive Neurology, UK) "Voxel based approaches to the statistical assessment of functional neuroimaging experiments."
2.45 - 3.10 Neil Crellin (Stanford University, USA) "Statistical models for image sequences."
Discussant
3.10 - 3.20 Iain Weir (Queensland University of Technology)
3.20 - 3.25 Reply
3.25 - 3.35 General Discussion

Session 4 Astronomical Imaging & Statistics
Chair Ray Norris (Australia Telescope National Facility)
Speakers
4.00 - 4.30 Albert Bijaoui (Nice Observatory, France) "Image processing from significant wavelet coefficients."
4.30 - 5.00 Eric Feigelson (Pennsylvania State University, USA) "The emerging field of astrostatistics."
5.00 - 5.30 Matthew Colless (Mt.Stromlo & Siding Springs Observatories,) "The statistics of the structure of the universe."
Discussion
5.30 - 5.50 Panel discussion led by Ron Ekers (Australian Telescope National Facility)

Wednesday 10 July 1996

Wednesday Session 1 08.30 - 10.20

ASC-Q/E: "Monitoring and modelling air quality."
Chair L. Cox
Speakers
B. Sawford, "The atmosphere as a stochastic medium - implications for air quality."
D. Nychka, "A comparison of the regional oxidant model with observational ozone data."
D. Carr, "Graphics for looking at environmental data."
Discussant S. Hunter

IMS: "Classification."
Chair J. Friedman
Speakers
R. Quinlan, "First-order relational learning."
R. Olshen, "Tree-structured classification with applications to imaging and HIV Genetics."
D. Hand, "Classification rules - matching the solution to the question."

INT: "New directions in programming environments."
Chair R. Becker
Speakers
J. Chambers, "Evolution of the S Language."
G. Sawitski, "New directions in programming environments: extensible software."
R. Gentleman & R. Ihaka. "The R Language."
Discussant G. Stone

Wednesday Session 2 10.30 - 12.20

Plenary address (ASC):
Speaker A.F.M. Smith, "Bayesian curves and CARTs."

Plenary address (IMS/INT):
Speaker J.H. Friedman, "Local learning based on recursive covering."

Wednesday Session 3 14.00 - 15.50

ASC-E/INT: "The interface of computing with statistics in environmental biology and environmental protection."
Chair D. Carr
Speakers
L. Cox
W. Piegorsch, "Interactive statistics on the Internet: applications in environmental biology."
G. Stone, "Water quality monitoring in a river."
Discussant G. Laslett

ASC: "Stochastic Networks."
Chair
Speakers
R. Williams, "Some recent developments; for queueing networks."
P. Pollett, "Estimating blocking probabilities in telecommunications networks with linear structure."

IMS: "Bayesian Nonparametrics."
Chair A.F.M. Smith
Speakers
A. Gelfand, "Approaches for semiparametric bayesian regression."
M. West, "Issues and models in Bayesian non/semi-parametric time series analysis."
P. Diaconis, "Bayesian nonparametrics: from Poincare (1896) to Berkeley (1996)."

Wednesday Session 4 16.00 - 17.00

Pitman Medal & Life Membership Awards

SSAI Presidential Address
Speaker H. MacGillivray

All-day ASC Workshop: Survey Design and Analysis

This workshop aims to provide survey practitioners and researchers with an opportunity to discuss recent theory and current best practice in particular areas of survey design, estimation and data analysis. The workshop will be relevant to practitioners and researchers in the government, private and academic sectors, aiming to help bring them up to date with current debate and theory in the relevant areas, as well as providing an opportunity to discuss practical approaches to frequently encountered design, estimation and analysis problems.

The workshop will be held as part of SISC-96, on Wednesday 10th July, and one day registration for the workshop will be available. The workshop will run from 8.30am to 5pm, comprising the three sessions set out below. Each session will consist of invited presentations/panel discussions by experienced practitioners, and researchers in the field, followed by an opportunity for general discussion and questions.

Minimising and Adjusting for Non-Response in Household Surveys
(Organisers: Eden Brinkley, ABS and Michael Sparkes, The Wallis Group).
This session will cover issues in non-response, how it arises, how it can be minimised in the collection phase of the survey, and how it can be adjusted for in the estimation phase. Theory and current practice in surveys both in the official statistics field and in private sector surveys will be covered.

Design Based and Model Based Design and Estimation
(Organiser: Greg Griffiths, ABARE).
This session will cover recent theory and current practice in the use of design based and model based surveys. It will start with an overview of the two approaches to design, and will draw on two related examples to illustrate the characteristics of each, and their relative strengths and weaknesses. The session will attempt to draw out the characteristics of surveys that make them suitable candidates for alternative design philosophies.

Analysis of Survey Data
(Organisers: Michael Adena, INTSTAT and David Steel, University of Wollongong).
This session will draw on some practical examples to look at the analysis of data from sample surveys. As well as a number of practical issues that arise in any analysis project using survey data, the session will cover the implications of survey design for data analysis, and some discussion of software available for the analysis of survey data.

Queries on the workshop should be addressed to Susan Linacre (fax : 61 6 253 1093, email: sisd.exec@abs. telememo.au).

Session 1: Design Based and Model Based Surveys: Design and Estimation
Chair
Overview
Speakers

Session 2: Minimising and Adjusting for Non-Response in Household Surveys
Organiser E. Brinkley & M. Sparkes
Chair
Speakers

Session 3 : Analysis of Survey Data
Organiser M. Adena & D. Steel
Chair
Speakers

Thursday 11 July 1996

Thursday Session 1 08.30 - 10.20

ASC: "Session in celebration of Ted Hannan's contributions to time series. I"
Chair J. Gani
Speakers
J. Gani, Introduction and overview, "Policies for the control of AIDS."
P. Robinson, "Ted Hannan's work on times series regression and adaptive estimation." (30 minutes)
M. Deistler, "The parametrization of state space forms via balanced canonical forms."
W. Dunsmuir, "Functional limit theorems in time series inference."

ASC: "Nonparametric methods for design & analysis of experiments."
Chair M.L. Puri
Speakers
E. Brunner, "Rank tests in factorial designs: fixed and mixed models." (35 minutes)
S. Arnold, "Nonparametric hypotheses: properties and interpretations." (20 minutes)
H. Dette & A. Munk, "Validation of nonparametric linear models." (15 minutes)

S. Sun, "Nonparametric adaptive procedures in one-factor experiments." (15 minutes)
Discussant N. Neuman
Reply (10 minutes)
General discussion (10 minutes)
IMS: "Curve estimation & modelling."
Chair K-A. Do
Speakers
A. Barron, "Adaptive selection, neural networks, and information theory in nonparametric estimation."
M. Bock, "Wavelets in curve estimation and modelling."
D. Nolan, "Limit theory for a survival function estimator."

Thursday Session 2 10.30 - 12.20

ASC: "Session in celebration of Ted Hannan's contributions to time series. II"
Chair D. Nicholls
Speakers
D. Nicholls, Introduction and overview
D. Brillinger, "Estimation of speed, direction and structure from spatial array data." (30 minutes)
V. Solo, "Kriging or Splines, Nonparametrics or Time Series: When to use each." (30 minutes)
P. Thomson, "On the estimation of trend and seasonal patterns." (20 minutes)
ASC: "Applications of continuous time stochastic processes."
Chair W. Dunsmuir
Speakers
R. Tweedie, "Diffusions in Markov Chain Monte Carlo." (30 minutes + 5 minutes discussion)
B. Goldys, "On ergodic properties of non-linear diffusions." (30 minutes + 5 minutes' discussion)
P. Brockwell, "Continuous time threshold ARMA models and their applications." (30 minutes + 5 minutes' discussion)
IMS: "Curve estimation."
Chair K-A. Do
Speakers
D. Scott, "Remarks on improved density estimation in the tails." (30 minutes + 5 minutes' discussion)
G. Wahba, "Dynamical systems trajectory estimation via tunable models with noisy data." (30 minutes + 5 minutes' discussion)
J.S. Marron, "Exact risk analysis of wavelet regression." (30 minutes + 5 minutes' discussion)

Thursday Session 3 14.00 - 15.50

ASC: "General applications."
Speakers
M. Lunn, "Competing risks: applied to analysis of a clinical trial in advanced breast cancer."
T. Lewis, "Outliers in hierarchically structured data."
A. Lee, "Covariate transformation diagnostics for generalized linear models."
ASC: "Computational methods in experimental design."
Chair J. Eccleston
Speakers
J.A. John & E.R. Williams, "CYCDESIGN: A package for constructing block and row-column designs." (35 minutes + 5 minutes' discussion)
R. J. Martin , "Construction of optimal or near-optimal designs for dependent observations using simulated annealing." (35 minutes + 5 minutes' discussion)
L. Burgess & D.J. Street, "Computational methods for constructing orthogonal main-effect plans." (25 minutes + 5 minutes' discussion)
IMS: "Time series and Chaos."
Organiser P. Pollett
Chair P. Pollett
Speakers
A. Weigend, "New machine learning techniques for nonlinear time series applied to financial engineering."
H. Tong, "On the statistical inference of a machine-generated autoregressive model."
R. Wolfe, "Repeated ordinal responses."

Thursday Session 4 16.00 - 17.50

ASC: " Statistics in the electronic era."
Chair A.D. Lunn
Speakers
G. Galmacci, "Statistics and computer networks."
S. Young, "ASC computer-based learning in Statistics."
D.M. Bates & W.N. Venables, "Graphical assessment of parameter variability."
Discussant C. Lunneborg
ASC: RSS discussion paper.
IMS: "Information in nonparametric problems."
Speakers
P. Bickel, "Information calculus for non i.i.d. data."
I. Ibragimov, "Some estimation problems for SPDE (=stochastic partial differential equations)."
Discussant V. Solo.

All-day ASC Workshop: Environmental Impact Assessment

Session 1 : "Spatial and temporal modelling of environmental processes."
Chair V. Barnett
Speakers
S. Coles "Non-Gaussian modelling of spatial and spatio-temporal environmental processing."
R. Nirel "Modelling and analysing spatial outliers in environmental data."
K. Pollock, "Wildlife and fisheries environmental impact assessment."
Discussant V. Barnett
Session 2 : "Environmental modelling."
Chair A. El-Shaarawi
Speakers
A. Jakeman, "Identification of large scale hydrologic systems."
D. Helsel, J.Taylor & J. Larson
Discussant
Session 3 : "Environmental regulation and control."
Chair V. Barnett
Speakers
A. Brown, "Expenditure by Industry in the UK on Pollution Abatement."
M. Hutchinson, "Spatial and temporal representation of topography and weather."
J. Heycox, "Official environmental information systems."
Session 4 : "Ecotoxicology, bioaccumulation and risk analysis."
Chair R. Nahhas
Speakers

A. Bailer, "Statistical endpoint estimation in ecotoxicology studies."
J. Simmons & M. Donald
G. Berry, "Exposure, retention, elimination and effect."
Discussant L. Ryan

Friday 12 July 1996

Friday Session 1 08.30 - 10.20

ASC-E: "Sampling and remediation of degraded environments."
Chair A. El-Shaarawi
Speakers
W. Ryall, "Contaminated sites - statistical bases for investigation and remediation."
A. Stein, "Sampling and characterizing of degraded soils at different scales."
T. Kuzniar
Discussant A. El-Shaarawi

ASC: "Robust and nonparametric regression."
Chair S. Sheather
Speakers
A. Welsh, "Robust estimation of smooth regression and spread functions and their derivatives." (35 minutes)
R. Kohn, "Nonparametric regression using Bayesian variable selection." (35 minutes)
J. McKean, "Diagnostics to detect differences in robust fits of linear models." (35 minutes)
Discussion (5 minutes)

IMS: "Resampling"
Chair A. Davison
Speakers
D. Hinkley, "Uses and implementation of double bootstraps." (30 minutes)
J. Robinson, "Asymptotic approximations in resampling." (30 minutes)
B. Efron

Friday Session 2 10.30 - 12.20

ASC-E: "Biological indicators of aquatic pollution."
Chair R. Nahhas
Speakers
A. El-Shaarawi, "Detection and Estimation of an Intervention's Impact on Resident Biota."
K. Clarke, "Marine pollution and biodiversity: quantifying taxonomic distinctness and species redundancy."
O. Johannsson, "Long-term biological monitoring in the Laurentian Great Lakes."
Discussant R. Nahhas

ASC: "Huge data sets."
Chair
Speakers
M. Cameron, D.X. Chan, P.M. Kuhnert & G. Stone, "Statistical and computational issues in analysing very large, complex sets of data."
C. Mallows, "Coverage designs for software testing."
J. Kettenring, "Massive data sets."

IMS: "Resampling."
Chair
Speakers
H. Kuensch, "The blockwise bootstrap in action." (30 minutes + 5 minutes' discussion)
R. Liu, "Notions of limiting P-value based on data depth and bootstrap." (30 minutes + 5 minutes' discussion)
. Romano, "Subsampling." (30 minutes + 5 minutes' discussion)

Friday Session 3 14.00 - 15.50

Plenary address (ASC/IMS):

Speaker
B.W. Silverman, "Why should statisticians care about wavelets?"

Closing ceremony

E.J. Pitman prize

AGENDA FOR ANNUAL GENERAL MEETINGS

NOTICE of the ANNUAL GENERAL MEETINGS of the STATISTICAL SOCIETY OF AUSTRALIA INC and the AUSTRALIAN STATISTICAL PUBLISHING ASSOCIATION INC.

to be held on Wednesday 10 July 1996 commencing 1 pm in Sydney Room, Sheraton - Wentworth Hotel Sydney.

AGENDA FOR THE SSAI ANNUAL GENERAL MEETING

1. Apologies and Proxies

Proxies must be given in writing as per attached proforma. They must be given to the secretary no later than 24 hours before the time of the meeting.

2. Confirmation of the Minutes.

The minutes of the Adjourned 1995 Annual General Meeting, held 20 July, 1995 at Brisbane have been circulated to Branch secretaries. Copies of these Minutes will also be available at the meeting.

3. Presentation of the 1995 Annual Report.

4. Presentation of the Treasurer's Report.

5. Election of Section Chairs.

Nominations for Section Chairs should be with the Secretary no later than 28 June, 1996. All nominations will require a seconder and a statement from the nominee that he or she is prepared to stand.

6. Appointment of signatories to operate accounts.

7. Accreditation.

The proposed changes to the Rules of the Society to enable introduction of optional accreditation were detailed in the November 1995 Newsletter (number 73). These changes will be put to the meeting.

8. Other Business.

9. Date and place of the next meeting.

AGENDA FOR THE ASPAI ANNUAL GENERAL MEETING

1. Apologies and Proxies

Proxies must be given in writing as per attached proforma. They must be given to the secretary no later than 24 hours before the time of the meeting.

2. Confirmation of the Minutes.

The minutes of the Adjourned 1995 Annual General Meeting, held 20 July, 1995 at Brisbane have been circulated to Branch secretaries. Copies of these Minutes will also be available at the meeting.

3. Presentation of 1995 Annual Report by the Editor.

4. Presentation of the Financial Report.

5. Appointment of signatories to operate the accounts.

6. Other Business.

7. Date and place of the next meeting.

Neville Weber
Hon Secretary

SPECIAL INTEREST SECTIONS

Survey and Management

A satellite meeting on Longitudinal Studies in Israel, will follow the 1997 ISI session in Istanbul (see Overseas Conferences). It will cover aspects of both the design and analysis of surveys and studies with a longitudinal component, and the special problems posed by the longitudinal nature of the survey.

The first two days (August 28-29) will be devoted to papers on new methodological research including theoretical models, design issues, practical questions of collection and processing, longitudinal analysis and frameworks for inference, measurement and other non-sampling errors. There is special interest in papers devoted to the problems of weighting for panel surveys, to take into account population and household composition changes, attrition, non-response, etc. The last day (August 31) will be devoted to a workshop on case-studies. These should reflect methodological innovations and novel developments including operational issues (e.g. cost-benefit analyses; frequency of data collection/length of recall period and impact on data quality; efficient design strategies to minimize attrition due to change in location). Proposals for papers reporting on surveys that highlight these topics and those covered in the first two days are invited. Abstracts should include full information on authors and their affiliations, a contact address (including e-mail and fax), key words and text of 200-300 words. The deadline for submission is 31 December 1996 and acceptance is conditional on the attendance at the meeting of at least one of the authors. Abstracts should be submitted, preferably via e-mail (in ASCII or TeX), by fax or by mail to: Gad Nathan, Central Bureau of Statistics, 91905 Jerusalem, Israel; Fax: +972-2-6553-319; E-mail: gad@olive.mscc.huji.ac.il, or to any other member of the Programme Committee.

A reminder of the One Day Workshop on Survey Design and Analysis, SISC-96, 10 July 1996: This workshop will provide survey practitioners and researchers with an opportunity to discuss recent theory and best practice in particular areas of survey design, estimation and data analysis. It will be relevant to practitioners and researchers in the government, private and academic sectors, providing an opportunity to discuss practical approaches to frequently encountered design, estimation and analysis problems.

The workshop will run from 8.30am to 5pm, comprising three sessions: design and model based approaches to survey design and estimation; methods for minimising and adjusting for non-response in household surveys; and issues related to the Analysis of Survey Data. Each session will consist of invited presentations or panel discussions by experienced practitioners and researchers in the field, followed by an opportunity for general discussion and questions. Registration for SISC-96, covers registration for the workshop.

Queries on the workshop or the Longitudinal Studies meeting in Israel, should be addressed to Susan Linacre, fax (06) 253 1093, INTERNET address sisd.exec@abs.telememo.au

Young Statisticians

WAYS 1996 (Workshop for Australia's Young Statisticians) to be held in Wagga

The Workshop for Australia's Young Statisticians has been going strong for 5 years, being held at Wollongong, Newcastle, Canberra, Sydney and the Gold Coast respectively. The venue for this year's workshop will be Wagga Wagga in south eastern NSW.

The aims of the workshop are:

1) to provide an informal atmosphere for young statisticians from different environments to meet. The workshop is a means of contact between young statisticians studying or working in government, the private sector, or academia, in research or consultancy roles, and in different areas of application (eg. biometrical, industrial, scientific, survey design, financial). It is one of the important events for the Young Statisticians section within the Statistical Society, in providing a communication and support network for young statisticians.

2) to encourage and further the professional development of young statisticians. One ways this is done is by inviting more experienced statisticians to the workshop to draw upon their general experiences as a practising statistician or discuss applications of statistics they have particular interest or expertise.

Wagga Wagga (pop 60,000) is the largest inland city and the heart of the Riverina district in NSW. Often known as the "garden city", Wagga is close to the Snowy Mountains, and approximately midway between Sydney and Melbourne. The probable venue at this stage is within the scenic Charles Sturt University campus (10 kms from the centre of Wagga), which also hosts the well known Charles Sturt University winery.

The proposed timing is Wednesday 2 to Friday 4 October 1996. Note that this coincides with the October long weekend in NSW, as in previous years.

Although costing has not been finalised, it is expected to be around $300 per participant. Some financial assistance may be available, especially for students.

Please let us know (contact information below) if you wish to receive hard copy of the brochure detailing costs and other information when it becomes available in late June.

If there are any queries, please contact Damian Collins, PMB Agricultural Research Institute, Wagga Wagga 2650 phone (069) 381 876, email collind@agric.nsw.gov.au, fax (069) 381 809; or Colin Sharp, School of Information Studies,Charles Sturt University, Wagga Wagga 2650, on (069) 332 517, email: on csharp@csu.edu.au.

AUSTRALASIAN CONFERENCES

CONFERENCE SUMMARY

Decision Making and Risk Assessment in Biology, 24-28 July 1996, University of Otago, Dunedin, New Zealand.
Information: Conference Administrator, Centre for Applications of Statistics and Mathematics, University of Otago, PO Box 56, Dunedin, New Zealand; tel: +64 (3) 479-7774; fax: +64 (3) 479-8427, email: casm@maths.otago.ac.nz. (Further details in this issue.)

Sydney International Statistical Congress, 8-12 July 1996, Sheraton-Wentworth Hotel, Sydney.
Information: Director, SISC-96, CSIRO Division of Mathematics & Statistics, Locked Bag 17, North Ryde NSW 2113, fax: (02) 325 3200, email: sydney96@syd.dms.csiro.au. (Further details in Newsletters 66, 68, 72 and 73.)

Workshop on Analysing Survey Data, 10 July 1996, Sydney.
Information: Gemma van Halderen (06) 252 7342. (Further details in Newsletter 72.)

Third International S Conference, 15-17 July 1996, Macquarie University, North Ryde.
Information: http://www.dms.CSIRO.AU/sisc/third_s.htm (Further details in this issue.)

Workshop on Animal Bioassay Experiments, 17-19 July 1996, University of Newcastle.
Information: Dr Keith Dear, Department of Statistics, The University of Newcastle, CALLAGHAN NSW 2308, tel: (049) 215527, fax: (049) 217063, dear@frey.newcastle.edu.au, http://frey/~dear. (Further details in this issue.)

ISIS: Information, Statistics and Induction in Science, 20-23 August 1996, Melbourne
Information: David L Dowe, email dld@cs.monash.edu.au. (Further details in this issue.)

Australasian Genstat Conference, 4-6 December 1996, Adelaide.
Information: email genstat96@adl.biom.csiro.au (Further details in Newsletter 72.)

APORS'97, Fourth Conference of the Association of Asian-Pacific Operational Research Societies within IFORS, 30 November - 4 December 1997, World Congress Centre, Melbourne, Victoria
Information: APORS97, c\o PR Conference Consultants Pty Ltd, PO Box 326, BALWYN VIC 3103, or Pam Richards, e-mail: APORS97@sci.monash.edu.au; tel. (03) 9816 9111; fax: (03) 9816 9287. (Further details in this issue.)

OVERSEAS CONFERENCES

18th International Conference Information Technology Interfaces ITI'96, 18-21 June 1996.
Information: ITI'96, SRCE, J. Marohnia bb, H.R.-10000 Zagreb, Croatia; phone/fax +385 1 616 55 91; email iti@srce.h.r.; WWW: http://www.srce.h.r./iti.

Fourth International Applied Statistics in Industry Conference, 3-5 June 1996, Dallas, Texas, USA.
Information: Tracy Caldwell, Conference Secretary, 2183 S. Cooper Ct., Witchita, KS 67207-5834, USA; (1) (316) 777-4425, fax (1) (316) 689-6889, email tracy.caldwell@acginc.com.

Fourth International Applied Statistics Industry Conference, 24-26 June 1996, Dallas, Texas, USA.
Information: Tracy Caldwell, Conference Secretary, 2183 S. Cooper Ct, Wichita, KS 67207-5834; phone +1 (316) 777-4425; email tracy@acginc.com.

Sixteenth Annual International Symposium on Forecasting (ISSF96), 24-26 June 1996, Istanbul, Turkey.
Information: Program Chairperson Celal Aksu, School of Business and Management, Temple University, Philadelphia, PA 19122; email esra@templevm; fax +1 (215) 576-5994; or General Chairperson Muhittin Oral, Sciences de l'Administration, Universite Laval, Ste-Foy, Quebec, G1K 7Pr Canada; email muhittin.oral@fsa.ulaval.ca; fax +1 (418) 656-7722.

Sixth Biennial International Conference on Panel Data, 27-28 June 1996, University of Amsterdam, Amsterdam, The Netherlands.
Information: Jan F. Kiviet, Faculty of Economics and Econometrics, University of Amsterdam, Roetersstraat 11, 1018 WB Amsterdam, The Netherlands; email JFK@FEE.UVA.NL; fax +31 205 254 349.

Third International Conference on Forensic Statistics, 1-3 July 1996, University of Edinburgh, Scotland.
Information: C.G.G. Aitken, Department of Mathematics and Statistics, The King's Buildings, The University of Edinburgh, Mayfield Road, Edinburgh, EH9 3JZ, UK; fax +44 131-650 6553; email icfs96@maths.ed.ac.uk.

18th International Biometric Conference (IBC-96), 1-5 July 1996, Amsterdam, The Netherlands.
Information: Paul Koopman, Secretary, Netherlands Region of the Biometric Society; fax: (31) 2940-13906.

International Workshop on Radiation Exposures by Nuclear Facilities - Evidence of the Impact on Health, 9-12 July 1996, Portsmouth, England.
Information: Workshop Secretaries, Michael Schmidt, David Timms and Heiko Ziggel, Fax +44 1705-84-21-57; email schmidtm@scil.sci.port.ac.uk.

11th International Workshop on Statistical Modeling, 15-19 July 1996, Orvieto, Italy.
Information: Dipartimento di Scienze Statistiche, Universita di Perugia, via A. Pascoli, Casella Postale 1315/PG1, 06100 Perugia, Italy; fax +39 (75) 43-242, email wks96@stat.unipg.it.

International Conference on Problems of Statistical Education, 21-23 July 1996, St Petersburg, Russia.
Information: Prof. I. Elisseeva, St Petersburg University of Economics and Finance, 30/32 Griboedov Kanal, 191023 St Petersburg, Russia; tel. (812) 110-55-94; fax (812) 247-30-45.

7th International Conference on Statistical and Mathematical Models in Environmental Sciences, organized by The International Environmetrics Society, 22-26 July 1996, University of Sao Paula, SP, Brazil.
Information: Ines Iwahita (IEA/USP), phone +5511 818-4442, fax +5511 221-9563, email ties@ime.usp.br, http://www.ime.usp.br/cpereira/index.html.

International Conference on Applied Statistics in Business and Economics, 25-31 July 1996, Moscow, Russia.
Information: Prof. M. Korolev, 39 Myasnitskaya Str., 103450 Moscow, Russia; tel. (095) 207-48-51; fax (095) 207-45-92.

Joint Statistical Meetings, 4-8 August 1996, Chicago, Illinois.
Information: ASA, 1429 Duke St., Alexandria, VA 22314-3402; tel. (1) 703 684-1221; fax. (1) 703 684-2037; email: meetings@asa.mhs.compuserve.com.

17th Meeting of the International Society for Clinical Biostatistics (ISCB), 26-29 August 1996, Budapest, Hungary.
Information: Ms Emilia Korbuly, ISCB-17 Secretariat, PL Box 434, H-1371, Budapest 5, Hungary.

COMPSTAT 96 _ XII Symposium on Computational Statistics, 26-30 August 1996, Barcelona, Spain.
Information: Prof. Albert Prat, Dept. of Statistics, Avda. Diagonal 647, 08028 Barcelona, Spain; tel. (34) 3 4016569; fax. (30 3 4016575; email Prat@eio.upc.es.

InterCASIC '96; International Conference on Computer-Assisted survey Information Collection, 11-14 December 1996, San Antonio, Texas, USA.
Information: AAAS Meetings Office, 1333 H St, NW, Washington, DC 20005; phone +1 (202) 326-6450; fax +1 (202) 289-4021.

International Symposium on Contemporary Multivariate Analysis and its Applications, 19-22 May 1997, Hong Kong.
Information: Multivar 97, c/o Dept. of Mathematics, Hong Kong Baptist University, Kowloon Tong, Hong Kong; fax: +852 2336 1505; tel: +852 2339 5056; email: multivar97@hkbu.edu.hk

International Biometric Society (ENAR) Spring Meeting, 23-26 March 1997, Memphis, Tenessee, USA.
Information: ENAR Conference Manager, 11250 Roger Bacon Dr. Suite 8 Reston, VA 22090, USA; fax +1 (703) 435-4390.

Third International Conference on Health Effects of Low Dose Radiation: Challenges for the 21st Century, 11-14 May 1997, Stratford-upon-Avon, UK.
Information: Rachel Coninx, Conference Executive, BNES, One Great George Street, London SW1P 3AA, UK; fax +44 (0) 171 233 1743.

1997 Joint Statistical Meetings, 10-14 August 1997, Anaheim, California.
Information: American Statistical Association, 1429 Duke St, Alexandria, VA 22314-3402, USA; email meetings@asa.mhs.compuserve.com

IASS/IAOS Satellite Meeting on Longitudinal Studies, August 27-31, 1997, Jerusalem.
Information: Gad Nathan, Central Bureau of Statistics, 91905 Jerusalem, Israel; Fax: +972-2-6553-319; E-mail: gad@olive.mscc.huji.ac.il or Susan Linacre, Australian Bureau of Statistics, PO Box 10, BELCONNEN ACT 2615, Fax: 61 6 252 5239, Email: sisd.exec@abs.telememo.au

IMS and Bernoulli Society European Regional Meeting: Mathematical Statistics and its Applications to Biosciences, first week in September 1997, Rostok, Germany.
Information: F. Liese, W.R. Richter, University of Rostok, Germany.

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