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ADDING TO AUSTRALIA'S FUTURE

Comments on Australian Mathematical Sciences Council Symposium 'Adding to Australia's Future', 29-30 November 1991

Prepared by Gareth Clayton

This was a day and a half symposium looking at some areas where the Mathematical Sciences are important to Australia and at some issues in the teaching of Mathematics. The first day was taken up with a series of presentations, with very little time for questions or discussion. The half day was devoted to workshops and a plenary discussion. The symposium was attended by representatives of the constituent societies of the Australian Mathematical Sciences Council, namely: the Australian Association of Mathematics Teachers, the Australian Mathematics Society, the Mathematics Education Research Group of Australasia, the Mathematics Education Lecturers Association and the Statistical Society of Australia Inc.

What follows are some general observations from the talks, workshop and plenary discussions and some impressions gathered from the general osmosis that inevitably takes place at such events.

It is clear that changes are taking place in industry with more demand for Mathematical and Statistical understanding at all levels. However it is not much use, indeed it may be a disadvantage, to have people who can follow a set of rules in implementing Mathematical and Statistical tools, but do not really understand the concepts behind the rules. The concepts are more important than the rules. This applies at all levels, from the shop floor to top management. This has implications for the way in which learning takes place in the disciplines from the primary

school upwards. Many tertiary teachers are aware of this issue in the struggle to get students to understand and apply a way of thinking when all they want is to be given a template solution for each type of problem in a course which they can learn. The difficulties start in the primary schools and are further entrenched in secondary schools. The majority of primary teachers have, at best, reached a 'turn the handle' level of Mathematical understanding and so cannot use the flexibility needed to go past the rule following approach.

The issue of resources cropped up in a variety of ways. To upgrade the competence of primary and secondary teachers needs resources on the teacher side to provide time for in-service training and time for teachers to develop and trial different approaches in their classrooms. It also needs more resources of Maths educators to provide the in-service training. The Maths educators were also concerned about the lack of resources for research into Mathematics Education. The issue also arose in terms of the resources needed to provide courses to tertiary students, particularly in services courses, and the resources required to do research in Mathematics and Statistics. There is a view around, expressed by Senator MacGibbon and reflected in the DEET funding formulae, that the Mathematical Sciences are cheap areas to teach and do research in. Hopefully the Mathematical Sciences Council will have got the message from the symposium that this is an issue they should be following up more vigorously than they have in the past.

With the importance of the Mathematical Sciences to industry as one of the themes of the symposium, the links between the Mathematical and Statistical communities and

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industry were relevant. The changes that are taking place in industry requirements raise the need and opportunity for training courses in industry. The links with industry can be a two way process. While the Mathematical and Statistical communities can be providing training courses for industry, they can also look to industry to provide input into the training they do of students and industry support for improved resources. However there is a need for Mathematicians to remove their blinkers. There was a tendency in discussion to equate greater use of the Mathematical Sciences with encouraging more industrial research in Australia, despite the fact that the speakers from industry had all talked about the increasing use of Mathematical Sciences in day to day management. In the context of the industry content the question of relationships with related professional organisations was raised. While there has, apparently, been some consideration of involving the Australian Society for Operations Research in the

Council, the President was completely unaware of what might be happening in the Total Quality movement. Issues involving variability did not seem to rate high with the Mathematicians, typical was the attitude of one who complained about Biologists wanting to do controlled experiments, because all one needs to do is add a random noise at the end to take care of variability.

There was talk of trying to get a hearing with the Prime Minister's Science Council in relation to the importance of the Mathematical Sciences and the need for more support. Having heard the comments by some of the leading members of the Australian Mathematics community I would be concerned about the presentation of a complete picture of the potential for the Mathematical Sciences in industry. Some academic Mathematicians as a breed (as distinct from Statisticians) seem to be blissfully unaware of, or refuse to recognise, the role of related disciplines.

CENTRAL COUNCIL

The Annual General Meeting of Central Council was held in Sydney on Tuesday, 11 February 1992

Honours scholarships

There was some discussion on various aspects of the scholarships raised by Branches. It was decided that the possibility of awards to part-time students be left primarily to Branches, but that the original decision that funds be non-cumulative should stand, with requests for funds for tied awards being made to Council when necessary. Branches will be requested to report on the awards and on holders of scholarships.

Statistical Education

The Branch nominees as education liaison members are almost finalised. Dr Ken Sharpe is organising a workshop on initial tertiary statistics courses, to be held in conjunction with the 11th ASC. He is in contact with Branches about delegates.

Australian Foundation of Science

The Society is now a member, with positive feedback from the Foundation on our suggestions for possible statistically-oriented projects, and in particular, on our request that all scientific projects of the AFS involve statistical expertise when appropriate.

Elections

Council endorsed the selections of the Nominating Committee: Professor Tim Brown as President, Dr Ron Sandland as Vice-President, Associate Professor Helen MacGillivray as Honorary Secretary and Dr Ray Chambers as Treasurer. Professor Brown moved a vote of thanks from the chair to the retiring Vice-President, Professor Jarrett, and to the retiring Treasurer Dr Wood.

New ACT Associations Incorporation Act

The new ACT Incorporation Act requires some consideration of our constitution. In addition, the retiring

Treasurer recommended that we examine the role of officers involved in journal matters in the light of recent administrative changes. It was decided that a working party consisting of the President, Secretary and a member with extensive experience of the Society should consider the roles of ASPAI Secretary, Treasurer and Circulation Manager in view of the new ACT Associations Incorporation Act and report to Council in July, aiming to finalise matters for the 1993 AGM. One aspect of the new Act is the timing of our AGM which may now need to be held in March. Branches will be asked for opinions on holding the AGM in March.

Australian Mathematics Sciences Council

There was considerable discussion about a number of issues involving this Council, including the National Statement and profiles project, which involve a number of intra- and inter-state educational tensions and developments. The main point from reports from delegates to the National Symposium in November, 1991, and from the President as a member of the AMSC, was the importance of our continued involvement and profile in the AMSC. Council decided that it would underwrite attendance at the AGM in April of at least one of our AMSC delegates.

Accreditation

After a report from Dr Alan Welsh and some constructive discussion, it was decided to establish a working party to consult both widely and with designated members and report to the July Council meeting - see item in Newsletter from Dr Welsh.

Pacific Statistical Congress

After adjustment due to recent communication from NZSA about some funds in NZ, this fund will soon be wound up, with agreement from SSAI, NZSA and the Biometrics Society about future use of the name PSC.

Conferences

Apart from a progress report from Perth about the 11th ASC, a brief report was tabled on initial progress for Statcomp, 1993, to be held in Wollongong in September, 1993. Council also agreed to a recommendation from the Industrial Statistics Section to contribute \$1000 in underwriting to an Australia - Japan Workshop on Stochastic Modelling in Engineering Sciences Technology and Management, to be held in Brisbane, July, 1993.

Careers material

It was decided that, as a first priority, the President and Secretary should prepare and organise an updated flyer to replace the first very well-received flyer.

Date and place of next meeting

Tuesday, 7 July, during the 11th ASC in Perth.

BRANCH REPORTS

New South Wales

In 1991, there were eight general meetings of the branch, the average attendance being about 32, only 9% of the membership. A pleasing feature of the meetings was that numbers at dinner afterwards grew during the year. As with most societies and no doubt other branches, the purpose of the general meeting is not entirely clear. To what extent should speakers provide an academic account of their subject? Certainly, there are few opportunities for members of the profession to learn of recent research in any depth. But is the Branch general meeting necessarily the best venue for such a purpose? Being held at the end of the day, some distance from most people's place of work, it is not the most satisfactory environment for deeply technical talks. Perhaps though speakers could help by providing reference lists and even copies of relevant papers.

Apart from the general meetings, the Branch last year held two symposia — one on Modern Regression Techniques and the other for young statisticians. The latter was run jointly with the ACT branch and its success can be gauged by the intention of student participants from Newcastle to run a similar conference this year.

Nominations for membership of the Branch Council were received by the end of October. Much to the Secretary's relief, the number of nominations was equal to the number required by the Constitution. This meant that there was no need to hold an election. Congratulations to Nick Fisher from CSIRO, the Branch President for 1992.

The Branch has made its first scholarship awards to full-time fourth year honours students. The recipients are Rodney Venn of the University of Wollongong and Ka Cheong Lee and Yu Ming Yung from the Department of Econometrics at the University of Sydney, who share an award. These awards are valued at \$1000 each. As pleasing as it is to make the first grants under this scheme, there is some disappointment with the number of applicants and the number of universities that they represented. There is a clear need to encourage students into the Statistics profession. Of course, people go where there are jobs. So perhaps the real need is to persuade employers that they need statisticians. The debate about accreditation, which the Society is embarking on, is tremendously important for the growth of our profession. The New South Wales Branch hopes to be able to make a significant contribution to the discussions.

This year the Branch and the Society have again the opportunity to honour one of Australia's great statisticians, Professor H.O. Lancaster, because in the Australia Day Honours List, Professor Lancaster was named as a recipient of the Order of Australia for services to mathematics and education. The New South Wales Branch is planning to celebrate this event with a special dinner after the new President, Dr Fisher has delivered the H.O. Lancaster lecture on the topic "Circular Analysis in Retrospect and Prospect" at the Annual General Meeting of the branch on Tuesday, March 10, 1992.

Victoria

October Meeting

Murray Hannah talked about the wide range of types of Statistical problems encountered working in the Victorian Institute for Dryland Agriculture. These ranged from plant breeding trials with large numbers of varieties in unbalanced factorial field trials, through genetic engineering laboratory experiments to satellite image analysis for data base work. The range of projects was illustrated with slides. Two specific problems were considered in more detail, one was a regression problem relating to cereal chemistry for bread making. The other was a animal breeding programme with large error variance which needed reducing by better management. The use of 3-dimensional spinning routines for picking out unusual treatment groups was also illustrated.

November Meeting

Dr Glen McPherson discussed the need for a new approach to the teaching of Statistics, particularly the need to look at the subject from the point of view of the user. He said there was very often a lack of awareness, or fear of Statistics on the part of users and that the information revolution had produced a number of Statistical packages which were introspective. Traditional Statistical teaching tended to be preoccupied with 'mathematical' problems and this was a difficulty. Statisticians needed more interface with the end users, who were often using powerful packages without any understanding of what they were doing. He advocated an experimental view where factual information had been collected and the model was being used to represent the experimental situation. The checking of the assumptions of the model must be emphasised. There is a need for objective measures of how well the model fits the data. The P-value should be

interpreted in terms of the ordering of the possible sample data sets, and users should realise that there is no guarantee of that everyone will interpret a data set in the same way. The teaching of Statistics should be tied to its usage and so needs to be put into higher years of undergraduate courses. Students should be collecting the data in experiments which they then have to analyse.

Queensland

Statistics in Queensland is in a very healthy state, if the response to the \$500 honours scholarship currently being offered by the Queensland branch of the Statistical Society of Australia is taken as an indicator. Twelve applicants from widely diverse backgrounds from four different Queensland universities have applied for the scholarship. The standard of the applicants is exceptional, with the arbitrators of who shall be the recipient of the scholarship facing an unenviable task.

Congratulations to Dr. Helen MacGillivray on her recent appointment to the influential Institutional Grants Committee of the Australian Research Council. The Committee is predominantly concerned with the disbursement of funds to Special Research and Key Centres in addition to Mechanism B and C Infrastructure.

South Australia

The Estimation of Frequency

Barry Quinn of the Maritime Systems Division of DSTO addressed the Branch on Tuesday 29th October, 1991 on the estimation of frequency.

Many signal processing models involve sums of sinusoids in additive noise. The statistical theory of such models has a long history, but there are surprisingly many problems still unsolved.

Much of Barry's work in the past seven years has been concerned with the estimation of the frequency parameters of sinusoidal models and inference associated with the number of sinusoidal components. In the seminar he discussed his contributions to

- (a) the estimation of the number of components;
- (b) testing for the number of components;
- (c) the resolution of close frequencies;
- (d) computationally and statistically efficient estimation of frequency.

In addition, he discussed some recent applications to the estimation of the range, speed and time of closest approach of a quiet sound source from a stationary receiver.

Feasibility of Risk Assessment for Pulp Mills

Ray Correll and Barbara Trudinger of the CSIRO Biometrics Unit and Division of Mathematics and Statistics, respectively, addressed the Branch on Wednesday 27th November, 1991 on the feasibility of risk assessment for pulp mills.

Risks from a pulp mill can be divided into accidents (acute risks) and risks from the controlled release of effluent (chronic risks). Our emphasis is on the chronic risks, but

the acute risks must be considered per se, and for their interaction with the chronic risks. Our effort has been concentrated on the threat to the marine environment.

Risk from accidents, such as spills of toxic waste, including those that could enter the secondary treatment plant, are of particular importance to the environment. A new plant should make provision for minimizing ecological damage by ensuring all spills can be isolated. We assume that an effective 'Hazop' chemical engineering risk analysis would be conducted during or after the design stage of a pulp mill.

Two main approaches to assessing the risk from controlled operations are being considered:-

The analytic method involves attempting to predict the effluent composition and toxicity, and hence the effect on species and the environment. This approach has many difficulties. Techniques exist for such analysis, however for total mill effluent, the resultant estimate would be so imprecise that it would not be useful. The effects of some individual chemicals can be assessed.

The reference mills method quantifies the reduction in toxicity that is projected for a new mill compared to an existing mill. A projected new mill will be unique in its combination of environment, wood mix and technology. However a suitable range of reference mills can be chosen that collectively cover all these aspects. Two such mills would be the Burnie mill and the Monsteras mill in Sweden.

Progress at quantitatively evaluating the following changes in technology were discussed: extended cooking; oxygen delignification; ClO_2 substitution; secondary treatment.

Western Australia

Study of Spawning Stock-Recruitment Relationships

The talk for our September 1991 meeting was given by Dr Nick Caputi, A WA branch member of long-standing, from the WA Marine Research Laboratory. Nick described some of the problems involved in developing a scientific basis for fisheries management regulation - in the context of the Western Australian rock lobster, prawn and scallop fisheries. A key requirement is to develop predictive relationships between spawning stock numbers and subsequent annual levels of recruitment (spawning and initial survival of new individuals). The problems Nick has confronted in trying to model stock-recruitment relationships (SRR's) include: errors and biases in stock and recruitment measurements, the time series nature of the data and its lack of stationarity. The uses for SRR's in WA have included simulation experiments to compare alternative harvest policies. Nick gave the meeting a good overview of a complex set of problems requiring inputs from biology, environmental science, economics, population dynamics and statistics.

Analysing Stoppage Statistics from a Multielement Materials Handling System

WA Branch President Dr Geoff Riley, from Alcoa of Australia Limited, addressed our October meeting. Geoff

presented a review of efforts to analyse, model and simulate the breakdown and repair behaviour of a multielement crushing, conveying and stockpiling system. Management objectives behind these efforts include: monitoring trends in reliability and repair times; relating overall system performance to that of individual components; targeting improvement efforts; and conducting "what if" calculations on proposals for equipment or procedural change. These objectives have been pursued in several collaborative efforts within Alcoa and externally (through the UWA honours projects of Patsy Maloney and Hien Vu). Among other things, these efforts have revealed an interesting application of the insensitivity theory for generalised semi-Markov processes.

Statistics in the Geosciences: Problems, Progress and Prospects

In November, WA Branch members were treated to a talk by Associate Professor Nick Rock, of the UWA Geology Department. The talk reviewed the history of the interaction between statistics and the geosciences. Several areas of fruitful interaction were highlighted (eg, geostatistics and the development of techniques for angular and closed (percentage) data), but evidence was also given of a certain level of disillusionment with statistical methods. This was seen as resulting in a number of special difficulties inherent in the observational and inexact context of geoscience (eg, no random sampling, no experimental control, temporal and spatial dependence, non-stationarity, multiple levels of structure and complexity, sparsity of data, censoring and truncation). A couple of current projects (seeking to identify good predictors of the presence of gold and diamonds) were used to illustrate these difficulties. Other examples (use of Bayesian methods and GIS data to predict gold presence in Canada, and use of geochemical data to predict geological boundaries in Scotland) demonstrated the success that can be achieved with sufficient attention to context and detail. A very interesting talk concluded with a discussion of the improved levels of communication, training and interaction needed for statistics to realise its true potential in geoscientific endeavours, and help advance a very important part of Australia's economy.

Incorporation

In early November, a significant milestone was reached when the branch received its Certificate of Incorporation from the Corporate Affairs Department. We are now officially known as "The Statistical Society of Australia: Western Australian Branch Incorporated".

Canberra

1991 seems a long time ago, with the start of the 1992 academic year just around the corner and the 1992 bureaucratic/political year well and truly underway. It will be even further away when this newsletter comes out. If reading about the Canberra Branch's activities over the last quarter of 1991 smacks a bit of ancient history, take heart — the October, November and December 1991 meetings of the Branch all provided food for thought, both in terms

of the topics they covered, as well as the questions they raised.

The 1991 Census

To start, Glenn Cocking of the ABS addressed the Branch in October on what was undoubtedly the biggest statistical exercise that has ever been carried out in Australia — the 1991 Census. Glenn was the (unfortunate?) person with overall responsibility for Australia's biggest census yet. At total cost of approximately \$113m, or \$6.50 per head of population, and employing up to a total of 1070 temporary staff at the Census Processing Centre at Ultimo in Sydney, Glenn (and the ABS) certainly did their bit for the Australian economy last year. For most of us, the census came and went in the first week of last August. We sat down with our forms, worked out how to mark our ages, discovered that we had overshot the questions applicable to the kids in the house, hastily covered up our mistake (we don't want people to know that statisticians make mistakes like that, do we?) and gratefully handed over the completed forms to the census collector. What we did not see, but which Glenn's talk made clear, was the sheer amount of organisational effort that went into the smooth running of this collection, the careful design and testing that lay behind into its various new features (like the self coded responses designed to be directly computer processed via OMR technology) and the carefully thought out and effective media campaign that ensured a generally positive attitude to the census by the Australian population. Glenn concluded with a brief overview of the many products and services that the ABS plans to derive from the census data. There is no space here to go into details, but, rest assured that the ABS certainly does not intend to just publish a few tables and then archive all that data!

Knibbs Lecture

November saw Murray Aitken deliver the Knibbs Lecture, with a talk entitled 'Statistical Consulting, Research, Computing, Theory and Teaching — the Roles of a University Statistical Consulting Centre'. Drawing on his experiences with the University of Lancaster's Centre for Applied Statistics, Murray gave his listeners an insider's viewpoint on the trials, triumphs and tribulations of running a Statistics Centre whose main focus is providing a consulting service. In contrast to the traditional theoretical emphasis of most statistics departments, Murray's talk was based on the premise that a consulting centre should form the centrepiece of a statistics department's activities, providing the stimulus for its research as well as its teaching activities. This philosophy formed the basis for the operation of the Lancaster Centre, and was largely the reason that this centre was (at least initially) a very successful operation. However, as with most enterprises of this type, the problem of maintaining a core set of long run projects with only 'soft' short term funding became too difficult, and eventually the Centre contracted, with Murray moving on to Tel Aviv University. Murray's talk concluded with some practical advice on the actual running of a university consulting centre, particularly one used by other university researchers, and the need to adopt a rational charging policy for its services. The discussants for the lecture were Ross Cunningham (providing an ANU perspective on

consulting) and Richard Morton (providing a CSIRO perspective on consulting). All in all, a thought provoking session, particularly in view of the less than spectacular record of university-based statistical consulting in Australia. (As a postscript, Murray has now taken up a five year ARC-funded fellowship at the Centre for Mathematics and its Applications (CMA) at the ANU, in which time he aims to finish off what he describes as a somewhat 'controversial' book on likelihood theory.)

Exit Polling for the BBC

The final meeting of the Canberra Branch for 1991 was in December, when Phil Brown, also visiting the CMA from Liverpool University, gave a talk on his experiences in exit polling for the BBC in the early to mid 1980s. The polls were conducted for the BBC's Newsnight program, and were an integral part of media coverage of a number of by-elections that were held in Britain at the time. These by-elections were of particular interest because of the rise of the so-called Alliance parties, and there was great interest in the information provided by these polls for modelling the demographic and political factors underlying voter choice for these new parties. At the time of writing this report, Canberra has just had another election for its Legislative Assembly under its unique (and universally despised) Modified D'Hondt system of voting. With a ballot paper close to a metre wide, a voting system which allows anywhere between one and every single box on the ballot paper to be marked, and around 85 candidates from about 20 different 'party' groupings vying for the voter's attention, one cannot but wonder how Phil would have fared in Canberra last Saturday!

Professional Accreditation

Following on from Phil's talk, Alan Welsh chaired a discussion of his article in the last Newsletter on the issue of competency based professional accreditation for statisticians. Alan has identified a very real problem for statistics in Australia in the 1990s, and one that will require the Society as a whole to think deeply about what it is and where it is going. Pretending the competency issue isn't there will not make it go away. I understand that Central Council is in the process of establishing a Working Party on the issue, so further developments can be expected.

Other News

A final snippet of news (which like a lot of this report, seems to have a strong Anglo-Australian flavour) is that Bill McLennan, the Deputy Australian Statistician, has just been 'head hunted' by the British Government to head their Central Statistical Office (the CSO is the UK equivalent of the ABS). For those of us who have known and worked with Bill over the many years that he has presided as the 'nuts and bolts' manager at the ABS, his appointment came as a pleasant surprise and a confirmation of the quality of Australian statistical activities. Some readers of this Newsletter may be aware that the Royal Statistical Society, as well as the British Press, have for a number of years voiced sharp criticism of the operation of the CSO, and in particular its exposure to political pressure.

Bill's appointment is seen as an acceptance by the British Government of these deficiencies, and an attempt to rebuild and inject new ideas into the CSO. Bill will have a tough job ahead of him, and we all wish him the best of luck.

LA TROBE UNIVERSITY

Department of Statistics

BIostatistician/Statistician/Modeller

(3 year appointment, 2 positions expected)

The Department of Statistics strongly supports research and is particularly active in the areas of inference for stochastic processes, robust statistics, conditional inference, statistics for AIDS data and other areas of biostatistics. One position involves modelling the spread in infectious diseases for the purpose of assessing childhood immunisation schedules in Victoria and Australia. This project includes development of computer software for these models. Salary up to \$44,075.

A second position, shared with a local hospital, is expected to become available very shortly. This position will be offered over a wide salary range.

For further information contact Professor Niels Becker,

Telephone: (03) 479 2606, FAX: (03) 479 2466, Email: N.Becker@latrobe.edu.au

SURVIVING STATISTICS - A USER'S GUIDE TO THE BASICS

In order to gain a clear understanding of the statistical needs of teachers and students, the ABS asked educators throughout Australia what the Bureau could do to make using and teaching statistics easier. Undoubtedly the most frequent request was for "... something on how to use statistics". In response to these requests the ABS has produced *Surviving Statistics - a User's Guide to the Basics* (Catalogue No. 1332.0, \$12.50).

Most people who need to use ABS statistics in their work or studies have had very little statistical training and many find statistical tables overwhelming and difficult to understand. *Surviving Statistics* addresses these problems by providing 100 pages of explanations, practical examples and actual case studies on the analysis and use of statistics. *Surviving Statistics* also encourages consistency and standards in the use of statistics.

Surviving Statistics covers topics such as:

- Collecting data,
- Organising data,
- Graphing data,
- Interpreting data,

- Understanding ABS price indexes,
- Statistics and the Australian community.

Included are 20 pages of exercises to be used in the class room or by anyone wanting reinforcement of the points outlined in the text. These exercises are designed to both summarise the topics covered in the chapters and to encourage students to think about the meaning behind the numbers. Answers to the exercises are provided to cut down lesson preparation time for teachers.

The ability to critically select and interpret statistics is an important skill in our society and is vital for making important decisions that affect our lives. *Surviving Statistics* is an essential resource for developing these skills and to understand the mass of information that is presented to us every day.

To order your copy of *Surviving Statistics*, please contact the ABS Bookshop in your capital city. If you have any comments about *Surviving Statistics*, or want more information, phone the Schools Contact Officer, Tania Adami (ABS Sydney), on (02) 268 4697.

SPECIAL INTEREST SECTION

Medical Statistics

A workshop preceding the 1992 Statistical Conference in Perth is being considered. One idea concerns "the use of statistical analyses and arguments for resolving issues of causation in the law, government policy and public health". Recent examples include determination of the number of deaths caused by drug use, a possible link between power lines and cancer, and the health effects of passive smoking.

It would be useful to know if this topic is of general interest to members of the Society. I would also be interested in any other suggested topics for a workshop, either in Perth or at any other time or place. My address is on the back page; phone (03) 344 6991, fax (03) 344 7014.

A satellite meeting on Biostatistics is to be held in Newcastle from Monday 30 November to Wednesday 2 December 1992. Details are contained in the Australasian Conferences section of this issue.

John Hopper

Panel Session on Statistical Consulting

Preparations are well advanced for a stimulating and worthwhile session on Statistical Consulting at the 11th Australian Statistical Conference in Perth in July. All panellists are experienced consultants, and they will offer their ideas and suggestions on a variety of topics related to the crucial question: How do I best organise myself as a consultant?

Aspects of this question include: How do I best organise my time? How do I estimate how long each job will take? How do I schedule the work? The kinds of "difficult" clients, and how best to deal with them. How do I gain

proper recognition for my work? How much should I charge? (or: How much time should I allocate?) How do I deal with the various ethical issues which arise? What records should I keep?

There will be six speakers, and each will speak for 10 minutes. This will be followed by general discussion, in which the audience will be able to comment on matters raised by the speakers, and to suggest other questions which should be considered.

If you have a question which you think could be usefully discussed by one of the panellists, you are invited to send it to Ken Russell (e-mail: kgr@uow.edu.au) before the Conference.

Ken Russell

Statistical Education

A workshop on 'The First Tertiary Statistics Course' is to be held, in Perth, immediately prior to the 11th Australian Statistical Conference (from 2.00 pm Friday July 3, to 1.00 pm Sunday July 5). The workshop will consider the issues of course objectives, content and presentation and will consist, primarily, of discussion and activity sessions rather than formal presentations. The number of participants will be limited to 30 with some places reserved for representatives from each of the branches; the remaining places will be allocated on a first come basis. People interested in attending this workshop should contact me as soon as possible. My address is on the back page or I can be contacted by phone on (03) 344 6410, by fax on (03) 344 7499, or by e-mail on U6191366@ucsv.ucs.univmelb.edu.au.

Ken Sharpe

WORKING PARTY ON PROFESSIONAL ACCREDITATION

At its Annual General Meeting on 11 February, Central Council set up a working party under the chairmanship of the Vice-President Ron Sandland to investigate possible courses of action for the Society in respect of professional accreditation. The other members of the working party are Tony Pettit, Dennis Trewin and Alan Welsh.

The terms of reference require, amongst other things, the working party to examine a number of models for professional accreditation and recommend a preferred course of action to Central Council. The working party is required to consult widely as well as to consult a number of explicitly named members of the Society in preparing a

report for the July Central Council meeting. If adopted by Central Council, the report will be published in the Newsletter to attract feedback from the membership before the Society takes further action.

The issues involved are very important to all statisticians. While there will be opportunities to comment throughout the process, contributions made early on which can be incorporated into the working party's report are likely to have most impact. Members are therefore invited to submit their thoughts and ideas on professional accreditation to the working party as soon as possible.

Alan Welsh

New President for FASTS

At the FASTS AGM on 15 November in Canberra Dr Ditta Bartels was elected President of FASTS.

Ditta has been an inaugural member of FASTS Board, a Vice President and Treasurer. For the past three years she has been Counsellor (Science and Technology) at the Australian Embassy in Bonn. Through this work she has developed extensive networks amongst scientists, industry

leaders and government officials in Australia and Europe. Ditta returns to Australia in January and has asked Tony Wicken to remain President of FASTS until then.

She will hold a Board meeting in February to work out the direction for FASTS for the next two years. Ditta will be working for UNSW on its international initiatives.

Courses in S and S-PLUS

Sydney: 27 April - 1 May 1992

Perth: 1 - 5 July 1992

Learn to use the full potential of S or S-PLUS. You can attend for the whole week, or select from the following modules.

Introduction to S Programming (2 days)

Basic use of S and S-PLUS for interactive data analysis and graphics. Suitable for people with little or no experience with the S language.

Advanced Graphical Techniques (1 day)

Extends the use of graphics for data analysis and displays. Some of the course material is drawn from the 2nd edition of "Elements of Graphing Data", by W.S. Cleveland, soon to be published.

Statistical Models in S (2 days)

Based on the new book by J. Chambers & T. Hastie, includes: data frames and object oriented programming, linear and nonlinear models, GLMS, tree based models, time series models.

Make the Perth course part of your trip to the Australian Statistical Conference.

Presenter: Dr Bill Venables, Senior Lecturer in Department of Statistics, University of Adelaide. Dr Venables is a very experienced Lecturer and Statistical Consultant and has in recent years given courses on the S language both in Adelaide and in Bond University. His well known "Notes on S" have been successfully used in short courses in many countries, including Holland, Japan, the UK, the USA and Canada.

Contact: Sue Clancy, CSIRO Division of Mathematics & Statistics
Phone: (02) 413 7549 Fax: (02) 416 9317

NEWS ABOUT MEMBERS

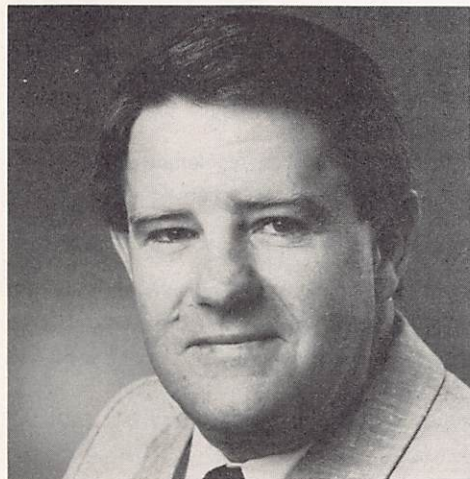
Dennis Trewin of the Australian Bureau of Statistics has been appointed as a joint Editor of the International Statistical Review. His co-editor is Bernard Silverman of the University of Bath. The main aim of the Review is to publish papers of an expository, review or tutorial nature that will be of wide interest to readers. If you think you could make a contribution of this type, Dennis will be glad to hear from you.

Professor Oliver Lancaster has been made an Officer in the General Division of the Order of Australia for service to mathematical sciences and to education. He is an Emeritus Professor of Mathematical Statistics at the University of Sydney. (See NSW Branch report.)

Bill McLennan, Deputy Australian Statistician, was recently appointed to head Britain's Central Statistical Office (CSO) by Prime Minister John Major. The appointment is part of a movement by the British Government to rebuild market and public confidence in Britain's economic figures, following allegations over many years of political interference and of inadequate data collection methods being used. Mr McLennan's appointment is seen by many as a crucial move by the British Government in their efforts to improve their statistical services, and has been welcomed by British financial and economic institutions.

Mr McLennan began work with the ABS in 1960, while completing a honours degree in economics and pure mathematics at the Australian National University. Mr McLennan worked in both State and Central Offices of the ABS in a range of capacities, and was promoted to the position of Deputy Statistician in 1986. He was a key figure in consolidating the ABS from a number of separate operations into a successful corporate body, and was instrumental in the move towards revenue raising through direct marketing of economic statistics.

The ABS has a deservedly high international reputation for the reliability of its economic data, and was rated second only to Canada by The Economist magazine in 1991. Britain's statistics were rated ninth out of ten OECD countries.




Under Mr McLennan's leadership, the CSO will explore new ways of collecting data, and will participate in the transition of Europe into a single economic unit. The CSO's budget has been expanded, and new staff have been hired to collect new data to improve the accuracy of balance of payments figures and national accounts. Economic data collections will be centralised and the collections expanded to include better measures of a number of economic sectors. Mr McLennan's ABS experience will be particularly valuable in achieving these aims, and in bringing the CSO's name into the marketplace. Mr McLennan says he plans to run the CSO with some independence, drawing on his ABS experience, and to introduce a more dynamic style of management.

The Australian Statistician, Ian Castles, reported that Mr McLennan's appointment is a tribute to his professional qualities, and that Mr McLennan "is respected within Australia and internationally for his statistical, administrative and leadership skills and qualities." In a broader context, Mr McLennan's appointment is seen as an international recognition of the high standard of official statistics in Australia.

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SCHOOL OF MATHEMATICS

PROFESSOR OF STATISTICS

Applications are invited for a Chair of Statistics. Applicants must have a distinguished record of research and scholarship in Statistics, and be committed to providing academic leadership. The position is available from 1 February 1993, or on a date which is mutually agreeable.

The School of Mathematics is one of the largest in Australia and has a record of excellence in research and teaching at all undergraduate and postgraduate levels. Within the School, the Department of Statistics, with an academic staff of around 10, has active research groups in design and analysis of experiments, engineering statistics, stochastic calculus, financial mathematics, clinical trials and statistical computing. The Department encourages interaction with other disciplines, and research activity involving applications. In addition, the School of Mathematics is currently building up strength in the area of mathematical and statistical computer science.

The new Professor will be expected to serve as Head of Department or Head of School for a term or terms if so requested.

Salary: \$73,800 per annum, rising to \$77,900 per annum after July 23rd, 1992. Further information may be obtained from Professor I.H. Sloan, Head of School. Telephone (02) 697-2957, Facsimile (02) 662-6445, or from the Dean of the Faculty of Science, Professor G. Brown (02) 697- 2960.

Subject to the consent of the University, professors may undertake a limited amount of consultative work.

The University reserves the right to fill any chair by invitation.

Applications close: 15th May, 1992

Details of the position, together with conditions of appointment and application procedures are available from Ms Gillian Phillips, the Senior Appointments Unit, The University of New South Wales, PO Box 1, Kensington NSW 2033 (telephone (02) 697 2709, facsimile (02) 313 6561). EEO groups are encouraged to apply.

83085

AUSTRALASIAN CONFERENCES

CONFERENCE SUMMARY

Workshop on Approximate Conditional Inference, 30 June - 3 July 1992, ANU, Canberra. (Full details in Newsletter 57.)

Information: Dr Andrew Wood, CMA, ANU, GPO Box 4, Canberra ACT 2601, tel. (06) 249 0705, fax (06) 249 5549, email woamath@durra.anu.edu.au.

11th Australian Statistical Conference, 6-13, July 1992, University of Western Australia, Perth, WA. (Full details in Newsletter 53, 54 and this issue.)

Chairman of Programme Committee, Prof. Ian James, Mathematics, Murdoch University, Murdoch WA 6150, tel. (09) 332 2480, fax (09) 310 1711, email james@prodigal.murdoch.edu.au.

12th International Symposium on Forecasting (ISF-92), 7-10 August 1992, Wellington, New Zealand.

Information: Prof. L. Fraser Jackson, ISF-92, PO Box 10-277, Wellington, New Zealand.

Australian Population Association Sixth National Conference - Australian Population Futures, 28-30 September 1992, Manly Pacific Parkroyal, Sydney. (Full details in this issue.)

Information: Patrick Corr, Conference Registrar, Sixth National Conference, Australian Population Association, 13 Corben Avenue, Moorebank, NSW 2170, tel. (02) 268 4387, fax (02) 268 4334.

Workshop on Practical Applications of the Bootstrap, 2-4 December 1992, Canberra, Australia.

Information: Kim Anh-Do, Statistical Sciences Division, CMA, Australian National University, Canberra, ACT 2601.

Analysis of Repeated Measurements Data: An Overview, Hamilton, 3-4 December 1992, New Zealand.

Note: To be held prior to IBC 92 at the University of Waikato.

Information: David Fletcher, Department of Mathematics and Statistics, University of Otago, Box 56, Dunedin, New Zealand.

Dynamic Graphical Analysis of Statistical Models, 6 December 1992, Hamilton, New Zealand.

Note: Short course prior to IBC 92.

Information: B. Dow, IBC 92 Secretary, Ruakura Agricultural Centre, Private Bag 3080, Hamilton, New Zealand.

The XVth International Biometrics Conference, 7-11 December 1992, Hamilton, New Zealand. (Full details in Newsletter 57 and this issue.)

Information: IBC 92 Secretary, Ruakura Agricultural Centre, East Street, Hamilton, New Zealand.

11TH AUSTRALIAN STATISTICAL CONFERENCE, Perth, 6-10 July 1992

The 11th Australian Statistical Conference will be held in the picturesque grounds of the University of Western Australia from July 6th to 10th. The list of invited speakers is as long as it is diverse and all groups within the statistics community will find on it something of interest to them. Also in Perth that week will be hordes of mathematicians attending the 36th Annual Meeting of the Australian Mathematical Society and the 18th Australian Conference on Combinatorial Mathematics and Mathematical Computing. Some joint sessions are being organised. The business end of the conference thus promises a level of excitement seldom experienced in statistical circles.

The social scene will be no less stimulating. Tours of Fremantle and Swan Valley Wineries have been arranged. Dinner will be on the Wednesday night, a departure from tradition, and features a sumptuous smorgasbord and bottled wine for a modest price of \$28. The cocktail party on Monday night will be held in conjunction with the Australian Mathematical Society. Late night carousers will be catered for on most other nights.

Delay no longer. Rush your completed registration form to the conference secretary (address below) so that Perth 92 will not be recorded as a missing value in the list of your life experiences.

Invited Speakers/Programme

The Conference programme will feature talks by a number of eminent invited speakers with some special sessions.

A session sponsored by the Federal Office of Road Safety will be held on Tuesday 7th July on the topic of Accident and Injury Statistics. Keynote speakers will be Leonard Evans from the Operating Sciences Department, General Motors Research Laboratories, Michigan, and Olga Pendleton from the Texas Transportation Institute. The session will be available for one day

registration and is coordinated by Matthew Knuiman, Department of Public Health, University of WA.

Jerry Lawless, University of Waterloo, is sponsored by Alcoa of Australia, and will feature in a session on industrial statistics with particular emphasis on reliability aspects. It is anticipated that contributed talks on a wide variety of problems relevant to industrial applications will be presented at the session.

A number of the speakers are jointly sponsored by the Annual Meeting of the Australian Mathematical Society (AMS) or the Australian Conference on Combinatorial Mathematics and Mathematical Computing (ACCMC). The invited speakers include Sun-Ichi Amari (Tokyo, joint with AMS), Rosemary Bailey (Queen Mary, joint with ACCMC), Bela Bollobas (Cambridge, joint with ACCMC), Ole Barndorff-Nielsen (Aarhus), Herbert David (Iowa State - order statistics), Persi Diaconis (Harvard, joint with AMS), Peter Green (Bristol - medical imaging) Peter Hall (ANU), Wolfgang Hardle (Bonn - nonparametric regression), Richard Smith (Chapel Hill - experimental data and chaos), Ron Hocking (Texas A&M - variance component estimation), Bruce Lindsay (Penn State), Terry Speed (Berkeley) and Richard Tweedie (Colorado State).

The programme structures at the three conferences will enable cross attendance and facilitate strong interaction.

Contributed Papers: Call for Abstracts

Contributed papers of approximately 30 minutes duration are invited. Abstracts should be of high quality reproduction and no more than one page in length. Allow a 4cm margin on the left and 2.5 cm margin on the other three sides. They should be in the hands of the conference secretary no later than May 1st, 1992.

More Information

Registration forms, accommodation details and any other information can be obtained from Russel John, ASC11 Secretary,

Agricultural Economics, School of Agriculture, University of Western Australia, Nedlands WA 6009, Australia; Ph (09) 380 3410, fax (09) 380 1098, email aerdj@uniwa.uwa.oz.au

PANEL SESSION ON STATISTICAL CONSULTING, July 1992, Perth

A panel session on Training for Statistical Consultants is being arranged for the 11th Australian Statistical Conference in Perth in July, 1992.

The training of statistical consultants is an important topic, and it is hoped that this panel session will be timely and useful. Most past discussions on training have focussed on the technical knowledge of statistics, and on the interpersonal skills, which a consultant should have. While these will be featured, it is anticipated that the panel session will go further, and will explore other skills which a statistical consultant should have if s/he is to be successful. Amongst these are the ability to schedule competing activities, to determine the appropriate fees to charge, and to know how to advertise his or her services. Ethical considerations, ways of gaining appropriate recognition for the work done, and the division of work between a statistician and a "professional" client are also potential subjects.

It is intended that the panel session will have the following six speakers (in alphabetical order), from various areas of application.

Teresa Dickinson	(CSIRO DMS)
Ian Gordon	(U of Melbourne)
Philip McCloud	(Monash U)
Ken Russell	(U of Wollongong)
Tony Swain	(Queensland DPI)
Richard Tweedie	(Colorado State U)

Each will talk for not more than 10 minutes, and then the session will be opened to general discussion and questions from the audience. It is hoped that, at the very least, a summary of what is said will appear in a later issue of the SSAI Newsletter.

Ken Russell is organising this Panel Session. He would be delighted to receive suggestions of topics or issues to be included in the Session, or the names of people who might be approached to speak. He can be contacted c/o Dept of Mathematics, University of Wollongong, P.O. Box 1144, Wollongong, NSW 2500 Australia (e-mail: kgr@uow.edu.au). Early replies would be appreciated.

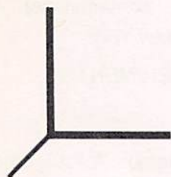
AUSTRALIAN POPULATION ASSOCIATION, SIXTH NATIONAL CONFERENCE, 28 - 30 September 1992, Manly, Sydney, Australia.

Australian Population Futures

The APA is calling for papers and seeking expressions of interest in attending its Sixth National Conference, Australian Population Futures.

The conference will include sessions on Australia's Asian and Pacific neighbours. Australia's population 1992 and future directions, population issues for business and the economy, metropolitan growth and decentralisation, implications for Australian cities and other population issues.

For further information regarding the Conference, please telephone Patrick Corr on (02) 268 4387, fax (02) 268 4334, or write to Conference Registrar, Sixth National Conference, Australian Population Association, 13 Corben Avenue, MOOREBANK NSW 2170



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BIOMETRIC SOCIETY

The XVIth International Biometric Conference

Invited sessions - Provisional program

1. EXTENSIONS OF GENERALIZED LINEAR MODELS.

Chairperson: A.J. DOBSON (Australia)

Speakers: J.P. PALMGREN (Finland) Use of exponential family non-linear models in medical research.

K-Y. LIANG (USA) Extensions of generalized linear models in the past two decades: overview and some biomedical applications.

2. THE AIDS EPIDEMIC: PAST, PRESENT, FUTURE.

Chairperson: L. BILLARD (USA)

Speakers: N.G. BECKER (Australia) AIDS incidence data: projection backwards and forwards.

K. DIETZ (Germany) Dynamic AIDS models - have they explained anything?

3. BAYESIAN MONITORING OF CLINICAL TRIALS.

Chairperson: D.O. DIXON (USA)

Speakers: T.A. LOUIS (USA) Bayesian methods for clinical trials: with an example from AIDS research.

D.B. DUNCAN (USA) Sequential Bayes t-tests for clinical trials.

4. BIOMETRY IN HUMAN GENETICS AND PLANT GENETICS.

Chairperson: E.A. THOMPSON (USA)

Speakers: R.C. ELSTON (USA) Linkage analysis of quantitative traits in Humans.

S. KNAPP (USA) Gene mapping in plant breeding.

5. DESIGN AND ANALYSIS OF LARGE SCALE FIELD EXPERIMENTS.

Chairperson: R. KEMPTON (United Kingdom)

Speakers: H.D. PATTERSON (UK) Design and analysis of series of crop variety trials.

P.D. JOHNSTONE (New Zealand) Design and analysis of a series of fertilizer trials

6. STATISTICS IN ECOLOGY AND ENVIRONMENTAL SCIENCE.

Chairperson: I. YOSHIMURA (Japan)

Speakers: J.N.R. JEFFERS (UK) The role of biometrics in environmental decision support.

G.P. PATIL (USA) Environmental sampling and statistical modeling with examples

7. INTERFACE OF GEOGRAPHIC INFORMATION SYSTEMS AND STATISTICAL ANALYSIS TOOLS.

Chairperson: P.J. DIGGLE (UK)

Speakers: M. BERMAN (Australia) Some statistical problems arising in the analysis of image data.

B.W. TURNBULL (USA) Tests for disease clusters about putative sources of hazard: application to TCE contamination and Leukaemia in up-state New York.

8. USE OF COMPUTERS TO DESIGN EXPERIMENTS.

Chairperson: D. RASCH (Germany)

Speakers: B. SCHNEIDER (Germany) A.P.C. program for sequential designs.

J.P. VILA (France) Optimal designs of experiments by stochastic optimization.

9. CONSULTING AND COLLABORATION.

Chairperson: P. DAGNELIE (Belgium)

Speakers: D.J. HAND (UK) The reality of applied statistics (provisional title).

J. DERR (USA) How to increase effectiveness in statistical consulting and collaboration?

10. STATISTICAL NEEDS FOR DEVELOPING COUNTRIES.

Chairperson: N. GOODCHILD (Australia)

Speakers: J. RILEY (UK) Biometrical perspectives under global change.

S. NOKOE (Kenya) The status of statistics and computing in Eastern and Western Africa.

Further information available from Dr Harold Henderson, IBC '92 Secretary, Ruakura Agricultural Centre, Private Bag 3080, Hamilton, New Zealand; phone 64-7-8562839, fax 64-7-8385012; 6-mail (internet) ibc@ruakura.maf.govt.nz.

SATELLITE CONFERENCES TO IBC92

A number of satellite conferences and workshops have been planned to coincide with IBC92. Preliminary information is published in this issue. Further information will be published in the next *Biometric Bulletin*, may be requested on the IBC92 registration form, or may be obtained by contacting the organiser of each conference.

Dynamic graphical analysis of statistical models: short course

Professor R Dennis Cook, University of Minnesota, will conduct this short course on Sunday 6 December 1992, at the University of Waikato, the site of IBC92. He is a leading authority on the use of modern graphical methods in analyses based on statistical models. Graphical methods will be demonstrated on a Macintosh using XLISP-STAT, a graphics programming environment developed recently by Luke Tierney, University of Minnesota. This environment allows easy access to virtually all the modern graphical methods - high dimensional rotation, animation, brushing, linking, identification, touring, slicing and so on. New theory and methods for graphical data analysis will be explored. An important feature of Professor Cook's work is utilising and developing new methods to create practical, usable tools for consulting statisticians.

Participants will receive information on how to obtain XLISP-STAT, without charge, for Macintosh, PC or Unix. More information may be obtained from the IBC92 secretary. You may register for this short course (\$NZ 75) now on the IBC92 registration form.

Satellite meeting on Biostatistics

This meeting will be Monday 30 November to Wednesday 2 December 1992 at the Centre for Clinical Epidemiology and Biostatistics, University of Newcastle. Topics include:

Minisymposium: Genetic Epidemiology - Design, Analysis and Conduct of Twin and Family Studies

Clinical Trials: Crossover Trials; Quality of Life; Meta-analysis; Issues in Sample Size Determination; AIDS Research in Australia

Issues in New Drug Approval: Statistical Considerations; Data Integrity; Post-Marketing Surveillance

Invited Speakers include: R. Elston (Genetic Epidemiology), J. Lachin (Sample Size), M. Kenward (Cross-over Trials), L. Fisher (Statistical Issues in New Drug Approval)

Registration Fee: \$150 or \$50 per day (\$75 for students) — early Registration Fee of \$120 (\$60 for students) for registrations before 1 September. Date for submission of Abstracts: 1 September.

For further information contact Kate Boyle, Department of Statistics, University of Newcastle, Newcastle, NSW 2308, phone (049) 215 520, fax (049) 684 742

Molecular Evolution Workshop

Bruce Weir is organising a workshop in Molecular Evolution for 2-4 December, 1992. It will be held in Rotorua at the Forest Research Institute, and will be named in honour of the late Allan Wilson. For more information contact Dr Bruce Weir, North Carolina State University, Raleigh NC 27695-8203, USA, email nbsweir@ncsumvs.bitnet.

Workshop on Practical Applications of the Bootstrap

This workshop is being planned for 2-4 December 1992 at Australian National University in Canberra (subject to a successful grant application by June 1992).

Keynote speakers include Rudolf Beran, University of California, Berkeley; Richard Olshen, Stanford University; Nick Fisher, CSIRO, Sydney; Tom Louis, University of Minnesota (Biostatistics); and Peter Hall, ANU.

For more information contact Dr Kim-Anh Do, Statistical Sciences Division, CMA, Australian National University, Canberra, ACT 2601, Australia, phone +61 (6) 249 0564 or +61 (6) 258 1708, fax +61 (6) 249 5549, email dokstat@durra.anu.edu.au

Analysis of repeated measurements data: an overview

This workshop is planned for December 3 - 4, prior to IBC92, in Hamilton. The workshop will be led by Mike Kenward of Reading University, an authority on the subject, and author of a number of important papers in this area. The aim is to provide a forum for the presentation and discussion of the many approaches and problems associated with analysis of repeated measurements data. It should therefore be of interest to statisticians in many different application areas.

For more information contact Dr David Fletcher, Department of Mathematics & Statistics, University of Otago, Box 56, Dunedin, New Zealand, fax +64 (3) 479 8427, phone +64 (3) 479 7890, email dfletcher@otago.ac.nz

Methods for correlated data: current research

This satellite conference was previously titled "Statistical methods in epidemiology". It is being jointly organised by the Biostatistics Group, Department of Preventive and Social Medicine, and the Department of Mathematics and Statistics, University of Otago, to be held on 14-16 December, 1992 in Queenstown.

The focus of the conference will be on current research in different aspects of the analysis of correlated data, with emphasis on applications in epidemiology and medicine. We hope to draw together statisticians currently working in the area to discuss some of the issues. Invited speakers will include Professor Norman Breslow, University of Washington, Seattle, Dr. Michael Kenward, University of Reading, and Professor Alastair Scott, University of Auckland, New Zealand. Specific topics will include methods for discrete data or survival data, repeated measurements, estimating equations and random effects models.

For further information contact Dr Katrina Sharples, Department of Preventive and Social Medicine, University of Otago Medical School, Box 913, Dunedin, New Zealand (katrina@otago.ac.nz), Fax +64 (3) 479 0529, Phone +64 (3) 479 7221).

2nd Australasian Genstat Conference, Rotorua, New Zealand, 14-16 December 1992

This is the second international Genstat conference to be held in Australasia, and is to follow the International Biometric Conference at Hamilton, New Zealand. The conference aims to provide a forum for Genstat users, both from Australasia and from further afield - to report on their research and consulting using Genstat, to exchange ideas, make suggestions, and to see the latest Genstat developments.

The Conference will take place at the Forest Research Institute, Rotorua. Participants may register on the evening of Sunday 13 December or first thing on Monday morning, and the conference will end at midday on Wednesday 16th. The cost of Registration (which includes lunch, tea and coffee and a Sunday evening reception) will be NZ \$180 before 1 September 1992, and NZ \$220 thereafter. Accommodation will be available in student hostels at a

cost of about \$100 per person for three nights; alternatively participants can book their own accommodation at local motels.

The Scientific Programme will be on:

- New statistical facilities in Genstat
- Development of statistical methodology using Genstat
- Innovative applications of Genstat
- Use of Genstat for teaching
- Future developments

Potential contributors should send a one-page abstract to Roger W Payne or David B Baird by 1 May. Accepted contributions will be notified by 1 June.

For further information and a registration form, please contact Roger W Payne, Statistics Department, Rothamsted Experimental Station, Harpenden, Herts, AL5 2JQ, UK (Email Payne @resa.afrc.ac.uk) or David B Baird, MAF, PO Box 24, Lincoln, New Zealand (Email: Bairdd@chpc.dsr.govt.nz).

International Workshop on Matrix Methods for Statistics

This workshop will be held from 4-5 December 1992 at the University of Auckland, New Zealand. Co-sponsored by the International Linear Algebra Society (ILAS), this workshop is a satellite to IBC92 in Hamilton (90 minutes drive south of Auckland). The purpose of the workshop is to foster the interaction, in an informal setting, of researchers in the interface between matrix theory and statistics. We propose that there be no parallel sessions, and that all, or almost all, the talks be of 20 minutes duration.

Garry Tee (Auckland) has been invited to talk about the work of Alexander Craig Aitken (1895-1967), and his plans to publish Aitken's Collected Papers. Registration fee will be US\$20.

We would like to know who is coming and who is giving a talk by June 30, and would like title and abstract by 31 August 1992. If you are interested in participating in this workshop please contact: George PH Styan, Dept. of Mathematics and Statistics, McGill University, Burnside Hall 1240, 805 ouest, rue Sherbrooke, Montreal, Quebec H3A 2K6, Canada; Fax: +1 (514) 398-3899, Email: MT56@MUSICA.MCGILL.CA

Call For Monograph Papers

An International Conference on Establishment Surveys will be held in Buffalo City, New York, USA from 27th to 30th June 1993. The Organising Committee is seeking contribution to a conference monograph aimed at providing a comprehensive and current review of methodology for survey of businesses, farms, and institutions. Monograph authors will present their papers at the conference and then revise them for publication in the edited volume. The Organising Committee expects to be able to pay the travel expenses of monograph authors. Deadline for submission of abstracts is 15 May 1992. For further information, contact Bernard Wong of the Australian Bureau of Statistics (NSW office) on (02) 268 4660.

Royal Statistical Society Conference

Sheffield, England, 9 - 11 September 1992

Plenary lectures by Professor George Box (Madison, Wisconsin) and Professor Adrian Smith (Imperial College, London).

Invited paper sessions on Statistics in the Environment; Implications of Attempts to Improve Official Economic Statistics; Computer-Intensive Methods; Clinical Biostatistics; Graphical Modelling; Survey Methods; Complex Stochastic Systems; Quality; Modelling Microsocial Data; Statistical Computing Environments; Modern Data-Analysis methods; The Use of Population Registers; Communication; Epidemiology and Clinical Trials; Multivariate Analysis.

Associated Events are:

- . The 1992 Caradog-Jones Lecture by Professor Richard Royall (Johns Hopkins University, Baltimore).
- . Short courses in Longitudinal Data-Analysis; Experimentation in Engineering.

Registration forms will be distributed with the March 1992 issue of RSS News and Notes. If you would like this information sent to you directly, please contact: Dr Nick Fieller, Department of Probability and Statistics, University of Sheffield, Sheffield (e-mail: N.Fieller@uk.ac.sheffield.primea).

Note: The 1992 European Meeting of Statisticians will be held at the University of Bath, from 14 to 18 September. The journey by rail from Sheffield to Bath takes about 3 hours.

OVERSEAS CONFERENCES

Statistics in Public Resources and Utilities, and In Care of the Environment (SPRUCE), 7-10 April 1992, Lisbon, Portugal.

Information: V. Barnett, Dept. Probability & Statistics, The University, Sheffield, S3 7RH, UK; Phone (44) 742 768555, ext. 4297; Fax (44) 742 739826; e-mail IVB@UK.AC.SHEF.PA

Seventh International Conference on Multivariate Analysis (Part 1), 6-9 May 1992, University Park, PA, USA.

Information: C.R. Rao, phone (814) 865-3194, fax (814) 863-7114, e-mail crrl@psuvm.psu.edu.

46th Annual Quality Congress, 18-20 May 1992, Nashville, TN, USA.

Information: Shirley A. Ferger, ASQC, 611 E. Wisconsin Ave., Milwaukee, WI 53203, USA.

International Workshop on Bayesian Robustness, 18-21 May 1992, Milano, Italy.

Information: CNR IAMI, via Ampere 56, I-20131 Milano, Italy.

First US/Japan Conference on the Frontiers of Statistical Modelling: An Informational Approach, 24-29 May 1992, Knoxville, TN, USA.

Information: Judy Snow, Conference Coordinator, Department of Statistics, 331 Stokely Management Centre, The University of Tennessee-Knoxville, Knoxville, TN 37996-0532, USA.

International Conference on Econometric Inference Using Simulation Techniques, 5-6 June 1992, Rotterdam, The Netherlands.

Information: Mrs C.J.J. de Ruiter, c/o Tinbergen Institute, Erasmus University, PO Box 1738, NL-3000 DR Rotterdam, The Netherlands.

9th International Conference on the New Quality Philosophy in Statistical Research and Statistical Education, 6-8 June 1992, Sofia, Bulgaria.

Information: Prof. V. Shvyrkov, IS-SSE, 536 Oasis Dr., Santa Rosa, CA 95407, USA.

Fifth International Symposium on Statistical Decision Theory and Related Topics, 14-20 June 1992, West Lafayette, USA.

Information: Shanti S. Gupta, Dept. of Statistics, Purdue University, West Lafayette, IN 47907, USA.

International Conference on Computers and Learning, ICCAL'92, 17-20 June 1992, Nova Scotia, Canada.

Information: Dr Ivan Tomek, Jodrey School of Computer Science, Acadia University, Wolfville, Nova Scotia, Canada, B0P 1X0.

The 5th International meeting on Statistical Climatology (5IMSC), 22-26 June 1992, Toronto, Canada. Held jointly with the 12th Conference on Probability and Statistics in Atmospheric Science.

Information: Francis W. Zwiers, Numerical Modelling Division, Canadian Climate Centre, 4905 Dufferin Street, Downsview, Ontario, Canada M3H 5T4, phone 1-416-739-4415, fax 1-416-739-4521, e-mail acrmiz@cid.acs.doe.ca.

International Conference on Social Science Methodology, 22-26 June 1992, University of Trento, Italy, organized by the Research committee on Logic and Methodology of the International Sociological Association. Papers are invited in fundamentals of social science methodology, research design, data collection methods and data analysis techniques.

Information: H.M.A. Schadee/J. van Puffellen, Dipartimento di Politica Sociale, Via Verdi, 26, 38100 Trento, Italy, phone 39 461 8813313, fax 39 461 881499 or 881348, email CONF92 at ITNCISTI or SCHADEE at ITNCISTI.

GLIM 92 and 7th International Workshop on Statistical Modelling, 13-17 July 1992, Munich, Germany.

Information: Ludwig Fahrmeir, Seminar für Statistik, University of München, Ludwigstr. 33, D-8000, München 22, Germany.

Vth International Meeting of Statistics in the Basque Country, 3-7 August 1992, San Sebastian, Spain.

Information: J.P. Vilapana, IMSIBA-4, The Secretariat, PO Box 32, E-48940 LEJONA/LEIOA (Biscay), Spain.

1992 Joint Statistical Meetings, 10-13 August 1992, Boston, MA, USA.

Information: ASA, 1429 Duke St., Alexandria, VA 22314-3402, USA.

Second International Conference on Statistical Data Analysis Based on L1-Norm and Related Methods, 17-20 August 1992, Neuchatel, Switzerland.

Information: Prof. Yadolah Dodge, Conference Organizer, University of Neuchatel, Groupe de Statistique, Pierre-a-Mazel 7, CH-2000 Neuchatel, Switzerland.

Thirteenth International Meeting on Clinical Biostatistics, 17-21 August 1992, Copenhagen, Denmark.

Information: Karsten Schmidt, Spadille Biostatistik ApS, PO Box 25, NW Gadesvej 4, DK 3480 Fredensborg, Denmark.

Fourth International Conference on Statistical Methods for the Environmental Sciences, 17-21 August 1992, Espoo, Finland.

Information: A.H. El-Shaarawi, National Water Research Institute, PO Box 5050, Burlington, Ontario L7R 4A6, Canada.

7th International Congress on Mathematical Education (ICME-7), 17-23 August 1992, Quebec City, Canada.

Information: Congres ICME-7 Congress, Université Laval, Quebec, QC, Canada G1K 7P4.

10th Symposium on Computational Statistics (COMPSTAT), 24-28 August, Neuchatel, Switzerland.

Information: COMPSTAT Secretariat, Groupe de Statistique, Université de Neuchatel, Pierre-a-Mazel 7, CH-2000 Neuchatel, Switzerland.

Royal Statistical Society Full Conference, 9-11 September 1992, Sheffield, United Kingdom.

Information: Prof. P.J. Diggle, Mathematics Department, Lancaster University, Lancaster LA1 4YF, UK.

1992 European Meeting of Statisticians, 14-18 September 1992, Bath, UK.

Seventh International Conference on Multivariate Analysis (Part 2), 21-23 September 1992, Barcelona, Spain.

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Seventh International Conference on Multivariate Analysis (Part 3), 16-22 December 1992, New Delhi, India.

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