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statistical society of australia incorporated

newsletter

31 May 1997 number 79

A CODE OF CONDUCT FOR THE SSAI?

Background

The issue of whether the SSAI should adopt a code of conduct has been around for several years following the adoption of codes by the Royal Statistical Society (RSS) in 1993 and the New Zealand Statistical Association (NZSA) in 1995. Central Council have been looking more seriously at the issue over the last 12 months, and at their February meeting it was agreed that we should canvass members' views via an article and questionnaire in the Newsletter.

The main reason for the SSAI adopting a code of conduct is to provide guidance to members on matters of ethics and professional conduct. Additionally, recognition by the general public of statistics as a useful and coherent discipline is an issue for us all. A code of conduct, which SSAI members undertake to observe, is an important step in gaining this recognition.

As the introductory part of the draft code below notes, the general public have a legitimate expectation that membership of a body like the SSAI gives an assurance of ability and integrity. The accreditation process will hopefully address the issue of ability through assessment of individual qualifications and experience. Likewise, a code of conduct will hopefully provide an assurance of members' integrity.

Codes of other Professional Societies

As you may know, the RSS implemented an accreditation process for its members several years ago. It's fair to say that the RSS Code of Conduct is reasonably prescriptive, at least in broad terms, of what its members (especially its accredited members) can and cannot do, even to the point of having formal disciplinary procedures in place. The NZSA, who do not have accreditation, have expressed their (otherwise similar) Code in aspirational rather than mandatory terms, and there are no disciplinary procedures. Both of these codes are less than two pages in length.

The codes of several other professional societies, including the Law Society of the ACT, the Association of Consulting Engineers Australia, and the Australian Society of Certified Practicing Accountants, were examined as part of a review of professional codes last year. All of these codes were long (between 10 and 30 pages), complex and detailed, and they were all quite prescriptive of their members' work practices. Indeed, by comparison, the RSS code is rather lightweight.

The SSAI Draft Code of Conduct below is a hybrid of the RSS and NZSA codes. Given that we are about to implement an accreditation process, more weight has been given to the more prescriptive RSS code, as we want it to cover both our regular and accredited members. Features of the other professional codes examined have not been incorporated at this stage, as we thought it preferable, in the first instance, to canvass members' views on the codes adopted by our statistical colleagues overseas.

Nonetheless, when examining the SSAI draft code below, please keep in mind the possibility of addressing each of the rules/issues in considerably more details (e.g. identifying and resolving conflicts of interest, what

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constitutes disclosure of assumptions in analysis and forecasting work, identifying activities which might compromise professional integrity/independence, etc.). Other issues could include your duty to advise clients when you expect the requested work may not meet the desired outcome, procedures/protocol for transferring work between statistical consultants (including full access to earlier work), standards for advertising members' services, specific grounds/procedures for whistleblowing, endorsed schedules of fees for work undertaken, etc. All hard issues, but other professional societies have chosen to tackle them! Do we want to go this far?

Your views are needed!

In my view the central issue to resolve is whether the SSAI should have a code of conduct, and if yes, how should it be used? Should it function as a set of broad voluntary guidelines designed merely to assist members in decisions and transactions, and to provide a minimum level of expected conduct? Or should the code function to govern members' professional behaviour, and by which members (at least the accredited members) are obliged to abide?

Enclosed with the Newsletter is a questionnaire seeking members' views on this very important issue. Please take time to fill it in and return it by the due date for analysis!

SSAI DRAFT CODE OF CONDUCT

1. Introduction

The overall objective of the Statistical Society of Australia Incorporated (SSAI) and its branches is to further the study and application of statistical theory and methods in all branches of learning and enterprise.

In general, the public has no ready means of judging the quality of professional service except from the reputation of the provider. Membership of an association of professionals, such as the SSAI, will often be taken by the public as an assurance of ability and integrity. It is therefore essential that the highest standards are maintained by all members of the SSAI whenever they are acting professionally and whatever their level of qualification.

In common with professional bodies in other fields, the SSAI has formulated its own rules as a Code of Conduct to define the behaviour expected of SSAI members practising in everyday professional life. This code of conduct has been drawn up to reflect the standards of conduct and work expected of all practising statisticians. It is a guideline for all members of the SSAI and is mandatory for all accredited members.

The code follows closely on that adopted by the Royal Statistical Society in the UK in 1993 and is similar to the Ethical Code adopted by the New Zealand Statistical Association in 1995.

2. Constitutional Authority

The constitutional authority for the SSAI Code of Conduct derives from its formal adoption by the SSAI at the AGM of xx/xx/xx. The SSAI binds itself to observe the principles of the code.

3. Rules of Professional Conduct

As an aid to understanding, these rules have been grouped into the principal duties which all members should endeavour to discharge in pursuing their professional lives.

3.1 The Public Interest

1. Members shall ensure that within their chosen fields they have appropriate knowledge and understanding of relevant legislation, regulations and standards and that they comply with such requirements.

2. Members shall in their professional statistical practice have regard to basic human rights and shall avoid any actions that adversely affect such rights. Enquiries involving human subjects should, as far as practicable, be based on the freely given informed consent of subjects. The identities of subjects should be kept confidential unless consent for disclosure is explicitly obtained.

3.2 Duty to Employers and Clients

3. Members shall carry out work with due care and diligence in accordance with the requirements of the employer or client and shall, if their professional judgment is overruled, indicate the likely consequences.

4. Members shall not disclose or authorise to be disclosed, or use for personal gain or to benefit a third party, confidential information acquired in the course of professional practice, except with prior written permission of the employer or client, or at the direction of a court of law. Members should seek to avoid being put in a position where they may become privy to, or party to, activities or information concerning activities which would conflict with their responsibilities in 1 and 2 above.

5. Members shall not purport to exercise independent judgment on behalf of a client on any product or service in which they knowingly have any interest, financial or otherwise.

6. Members should not allow any misleading summary of data to be issued in their name. In particular, a statistical analysis may need to be amplified by a description of the way the data were selected, and the way any apparently erroneous data were corrected or rejected. Explicit statements will generally be needed about the assumptions made when selecting a method of analysis. Views or opinions based on general knowledge or belief should be clearly distinguished from views or opinions derived from the statistical analyses being reported.

3.3 Duty to the Profession

7. Members shall uphold the reputation of the Profession and shall seek to improve professional

standards through participation in their development, use and enforcement, and shall avoid any action which will adversely affect the good standing of Statistics and Statisticians.

8. Members shall seek to advance public knowledge and understanding of statistics and to counter false or misleading statements which are detrimental to the Profession.

9. Members shall encourage and support fellow members in their professional development and, where possible, provide opportunities for the development of new entrants to the Profession.

10. Members shall act with integrity towards fellow statisticians and to members of other professions with whom they are concerned in a professional capacity, and shall avoid engaging in any activity which is incompatible with their professional status. Whilst members of the SSAI are free to engage in controversy, no member shall cast doubt on the professional competence of another without good cause.

11. Members shall not make any public statement in their professional capacity unless competent to do so and, where appropriate, authorised to do so. Members shall have due regard to the likely consequences of any such statement on others. Members shall not speak in the name of the SSAI without the authorisation of the Executive Committee of the SSAI.

3.4 Professional Competence and Integrity

12. Members shall seek to upgrade their professional knowledge and skill and shall maintain awareness of technological developments, procedures and standards which are relevant to their field, and shall encourage their subordinates to do likewise.

13. Members shall seek to conform to recognised good practice including quality standards which are in their judgment relevant, and shall encourage their subordinates to do likewise.

14. Members shall only offer to do work or provide service which is within their professional competence and shall not lay claim to any level of competence which they do not possess, and any professional opinion which they are asked to give shall be objective and reliable.

15. Members shall accept professional responsibility for their work and for the work of subordinates and associates under their direction.

16. The standards of integrity required of a professional statistician should not normally conflict with the interests of a client or employer. Members shall aim to avoid any such conflict and shall clearly advise their client of any such potential or actual conflict. If the conflict cannot be resolved satisfactorily the public interest and professional standards must be paramount.

17. Members acting in private practice, or acting independently of salaried employment, have the right of disengagement in the face of a dilemma involving professional standards or conscience. They may wish to seek advice and support from the SSAI.

18. Members in salaried employment who are in serious conflict with their employer over a matter of professional standards or conscience should notify the employer in writing of the contentious circumstances. If they are unable to resolve the conflict to their satisfaction, they are advised to refer the matter to the SSAI, which will advise and take such action as seems appropriate.

3.5 Disciplinary Procedures

19. This code sets out certain basic principles that are intended to help members maintain the highest standards of professional conduct. Should a case arise where a member is believed to have fallen short of the standards desired, procedures are defined within the rules of the SSAI which permit the convening of a Disciplinary Committee. The Committee will determine what action should be taken in any particular instance. Action will be appropriate to the circumstances, and in the most serious of cases, the sanctions available to the Committee shall include removal of accredited member status and expulsion from the SSAI.

Eden Brinkley

MEMBERSHIP LISTING UPDATE

It's time once again to update the membership listing for the SSAI. Enclosed with the Newsletter is a second questionnaire seeking an update to your address and other contact details. These details will be used to update the membership databases in the coming months, and from there we will generate a booklet of members' contact details and section interests for distribution with the August edition.

When completing the questionnaire you will see that we have included a couple of questions relating to our World Wide Web (WWW) site. Several overseas statistical associations have already implemented limited access to membership details on the WWW (can only access one member's details at a time). We are seeking your views on whether we should implement such a system for the SSAI, and if yes, what items we should include among the contact details.

Please take the time to complete this important questionnaire and return it by the due date.

Eden Brinkley

PRESIDENT'S REPORT

"I don't like statistics". Do we hear this much? Some think we do, others think we don't. Although none of us like to hear such a remark, it is important to analyse it and its circumstances so as to ensure it is not heard more than it should be. "Should be?" Yes, because often it is an acknowledgment of the importance of our discipline, when it means "I don't really want to have to do this as well as everything else, but I realise it's important". And it can be a reflection of the pervasiveness of our discipline, of its importance in use in just about every other area. If you haven't yet read Donald Horne's article "Learning Curbs" in *The Weekend Australian*, April 19, 1997, one interesting quote is "...some of the best 'skill-training' that universities can provide consists in the (highly labour-intensive) tasks of giving their students some practice in thinking things out, ..., enough knowledge of statistics so as not to be fooled by figures, Verrry interesting. What did H.G. Wells say quite a while ago? "Statistical thinking will one day be as necessary for efficient citizenship as the ability to read and write."

So we must be careful not to over-react but to take notice after we eliminate the "I'd rather be sailing" (or whatever) circumstances. We should beware of the type of over-reaction and problem-projection that has been seen in parts of mathematics education in the past decade giving rise to such gems as: "mathematics too hard? just re-define it"; or, "mathematics is a male conspiracy". By problem-projection, I mean focussing on an effect to the extent of hindering vision of the true problem. Some key elements in problems in mathematics education have been insufficient reflection of the totality of mathematical thinking, from problem identification through to communication, and insufficient teacher comfort and/or training with the discipline as a whole. There is good work proceeding on such problems at both secondary and tertiary level but mathematical and statistical education is a challenging area.

The mathematical and statistical sciences are diverse, far-reaching, multi-tentacled, and yet sequential and interwoven. They are not the kind of areas that reveal themselves quickly, and they are teacher-dependent areas, particularly with regard to gaining appreciation and confidence in them. Any comments as brief as these here can be no more than generalised indicators. But as the statistical sciences become more and more part of the establishment, we must beware of re-defining them, when we should be re-affirming their essentials.

Statistics deals with handling, quantifying, modelling and interpreting variation, and handling, quantifying, modelling and interpreting situations allowing for variation. Reflecting this, whether in teaching or communication in general, leads to both data-driven and model-driven communication. Emphasis on the nature of data and the use of modelling helps keep theories, concepts and techniques in perspective - as servants rather than dictators.

Consider three general groups apart from those who regard statistics as their discipline: those who do/have done some statistics entirely within another area; those who do/have done some statistics in "service" subjects; and those who do/have done some "mainstream" statistics. Concern about whether the latter group "like" statistics, has a considerable component of concern about recruitment into the profession, and involves much more than can be discussed here. But an aspect relevant here, is that a discipline whose appeal comes from its diversity, its multi-faceted applications, its interweaving of theory and practice, of quantitative and qualitative development, is not an "instant" discipline.

For all students, no matter what their quantitative inclinations, it is important that their introductions be a true sighting of statistics, even if the window is small. Constant consciousnous of the nature of the data and the use of modelling can help prevent either excess theory or false simplification from obscuring the essentials of quantifying uncertainty and variation.

False simplification tries to substitute rules, formulae and fixed jargon for focus on data and models, often resulting in permanent confusion. Unfortunately false simplification and lack of focus on data seem to increase with distance from statisticians' influence.

Consider the following which are just some taken from notes from other areas. "Measures of central tendency are referred to as averages". "The mean cannot be used for nominal or ordinal data". "..the distribution with the larger standard deviation ... its mean is not as good a representative of central tendency as the mean of the distribution with the smaller deviation". "The mean of the normal distribution is always 0 and the standard deviation always 1." "A z-test is testing that $\bar{X} = \mu$, and is called a goodness-of-fit test; two sample tests test if $\bar{X}_1 = \bar{X}_2$". Such notes are also often notable for a closed-door approach - reason-free rules and local jargon, with little reference to data nature and exploration, to models, or to key threads such as estimates, errors of estimates, and assessing the consistency of data with models or assumptions.

Introductory tools should be as close to the statistical bone as possible, to maximise focus on data and models. But close to the bone explanations do not shirk statistical responsibility. Rather they emphasise logical threads linking the basic tools, they clearly identify and emphasise assumptions, and they not only leave the door open for future development and more sophisticated tools, but actually lay the basis for them. Statistical knowledge and awareness of up-to-date statistical developments should influence the teacher/consultant but not obscure the essentials in introducing people to statistics. For example, using the term "meta-analysis" in an introductory psychology situation when each subject's known age is included in an analysis, is unlikely to either inform or build understanding. Trying to introduce concepts too

quickly that depend on understanding of statistical bones must surely inhibit building that understanding.

Obviously my comments come from observing students; probably close to 10000 over the past 20-odd years. But students and clients share at least some needs, and a measure of our effectiveness is their ability to continue to build on what we give them. There are no quick fixes, and we will always have to help with confusions. Minimising the "I don't like statistics" without damage to statistical health will always be a challenge, but there are also many who say "it's all coming together now" or "hey, we used all this straight away (in our work/other subjects) - and we understand what we're doing". And one of my favourites: "This subject promised to be a real drag, but I finished up enjoying it!"

Helen Macgillivray

CENTRAL COUNCIL

NOTICE of the ANNUAL GENERAL MEETINGS of the STATISTICAL SOCIETY OF AUSTRALIA INC

and the AUSTRALIAN STATISTICAL PUBLISHING ASSOCIATION INC.

to be held on Tuesday, 15 July 1997 commencing at 6pm, in the Carslaw Building, Room 173 (Level 1), University of Sydney, 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 1996 Annual General Meeting, held 10 July 1996 in Sydney appeared in the November 1996 edition of the Newsletter.

3. **Presentation of the 1996 Annual Report**

4. **Presentation of the Treasurer's Report**

5. **Appointment of signatories to operate accounts**

6. **Election of Section Chairs**

   Nominations for Section Chairs should be with the Secretary no later than 30 June 1997. All nominations will require a seconder and a statement from the nominee that he or she is prepared to stand.

7. **Australian Journal of Statistics**

   A special resolution will be put to the meeting to change the Rules of the Society as per the details sent to each Branch Secretary.

   The purpose of the Special Resolution is to change the Rules to allow the *Australian Journal of Statistics* to merge with the *New Zealand Statistician* to form *The Australian and New Zealand Journal of Statistics* published under the auspices of ASPAI; and to allow and facilitate editorial cooperation with the New Zealand Statistical Association.

   Copies of the Special Resolution can be obtained from Branch Secretaries or from the Society Secretary on request.

8. **Any 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 1996 Annual General Meeting, held 10 July 1996 in Sydney appeared in the November 1996 edition of the Newsletter.

3. **Presentation of the 1996 Annual Report by the Editor of the Australian Journal of Statistics.**

4. **Presentation of the 1996 Annual Report by the Newsletter Editors**

5. **Presentation of the Financial Report**

6. **Appointment of signatories** to operate the accounts

7. **Australian Journal of Statistics**

   A special resolution will be put to the meeting to change the Rules of the Society as per the details sent to each Branch Secretary.

   The purpose of the Special Resolution is to change the Rules to allow the *Australian Journal of Statistics* to merge with the *New Zealand Statistician* to form *The Australian and New Zealand Journal of Statistics* published under the auspices of ASPAI; and to allow and facilitate editorial cooperation with the New Zealand Statistical Association.

   Copies of the Special Resolution can be obtained from Branch Secretaries or from the Society Secretary on request.

8. **Any other Business**

9. **Date and place of the next meeting**

Neville Weber
Hon Secretary

BRANCH REPORTS

New South Wales

The consumer price index and the measurement of inflation

The April meeting of the New South Wales branch was held at the Sydney office of the Australian Bureau of Statistics (ABS). Attendance was well in force, with about 60 delegates winding their way through the pristine corridors of the ABS building in what could be described as a seemingly hypnotic trance, lured on by the irresistible aroma of delicious fresh sandwiches and other light refreshments. In the room was a mesh of old and new faces mingling, chatting, exchanging ideas, experiences, business cards, jokes and smiles. This atmosphere of camaraderie, typical of the NSW branch, clearly confirmed the old adage, "... not all statisticians are gloom". Finally, the convergence towards the seminar room, where the speaker, Bill McLennan, presented an interesting and informing talk on the uses and shortcomings of the Consumer Price Index (CPI).

In a talk that contained less than a page of mathematical formulae, Bill was able to clearly explain the complexities and usefulness of the CPI. While it is commonly used as an index of inflation, Bill emphasised that the CPI was not specifically designed for this purpose and is conceptually unsuitable. The paradox, of course, is that its apparent misuse as a measure of inflation is universally accepted! Drawing from his experience as head of the Government Statistical Service in the UK, he maintains the staunch opinion that a more robust index still needs to be developed for measuring inflation.

Bill's talk was certainly enlightening to many who knew little about the CPI and was successful at bringing to light some gross misconceptions about the CPI.

50th Anniversary Celebrations of the NSW branch

The year 1997 marks the 50th anniversary of the NSW branch of the Statistical Society of Australia. It is desirable to make the theme of the celebrations for this significant year one of reflection. Reflection not only of how the NSW branch has evolved over the past 50 years, but more importantly, where we, as a viable body of statisticians, should focus our future endeavours in order to gain substantial influence in developing our discipline and boosting the status of statistics and statisticians in Australia and worldwide.

At this juncture in the history of the NSW branch, thought should be given to the role of experienced statisticians in setting a direction for young statisticians. In academia, there is an increasing need for senior academics to formulate creative and relevant programs of study for future statisticians. More diverse avenues for research need to be explored, with due regard given to increased collaboration with industry. With the recent changes to government funding in academia, statistics and statisticians face the gruelling task of trying to attract students into a discipline whose applications are not immediately obvious to the novice. This introduces a necessity for industry to recognise its need for statistical expertise and to aid academia by making possible career paths for graduates in statistics more obvious. These and many other issues are only some of the pertinent questions which we as a society should strive to provide adequate and workable answers to in the next phase of our existence.

We are inviting statisticians of varying persuasions, both young and old, to contribute to the discussions and celebrations in this momentous year by being present at the main event of the anniversary year, to be held in Sydney on Thursday, 25 September 1997. Details of the program for that day will be released shortly.

Membership and Awards

The NSW branch is happy to welcome a new member, Ms Gigurbhorg Gudaugsdottir, into its fold. We look forward to meeting Gigurbhorg at our next meeting in May.

Four students from the NSW branch were recently awarded 1997 Honours scholarships at the last Annual General Meeting. They are: Nell Carney of Sydney University, Gabrielle Lyovic of Newcastle University, Lin Luo and Catherine Wong, both of University of New South Wales. Many congratulations to these students and once again, we look forward to having their presence at the next and subsequent branch meetings.

Abie Ekangaki

Victoria

Statistics, the precautionary principle and biological conservatism

At the July meeting, Dr Mark Burgman from the University of Melbourne's Department of Botany spoke on "Statistics, the precautionary principle and biological conservatism". The International Union for the Conservation of Nature has developed guidelines in which critical parameters have been determined for classifying species as critically endangered, for example when population numbers are less than 50 mature adults or quantitative analysis shows the probability of extinction in the wild is at least 50% within the longer of 5 years or two generations. However there is a poor understanding of the nature and sources of variablity and, in particular, the concept of statistical power. The majority of experiments which have been designed to estimate critical parameters have a totally inadequate power to detect ecologically significant differences, and failures to detect differences have been incorrectly interpreted as implying that no differences exist.

Relief may be in sight however, with a new Bachelor of Science degree in Environmental Science being offered at the University of Melbourne with a strong emphasis on statistical methods and quantitative research. The first students will graduate in 1998.

Statistics for biology and health sciences

K. Lange

Mathematical and Statistical Methods for Genetic Analysis

(Statistics for Biology and Health)
1997. Approx. 290 pages.
Hardcover DM 84,–
ISBN 0-387-94909-7

This book will enable graduate students in the mathematical sciences to understand and model the epidemiological and experimental data encountered in genetics research. Mathematical, statistical, and computational principles relevant to this task are developed hand in hand with applications to gene mapping, risk prediction, and the testing of epidemiological hypotheses. The book begins with a introductory chapter on population genetics and ends with a brief appendix on molecular genetics.

P.J. Brockwell, R.A. Davis

Introduction to Time Series and Forecasting

(Springer Texts in Statistics)
1996. XIII, 420 pages. 122 figures and diskette.
Hardcover DM 98,–
ISBN 0-387-94719-1

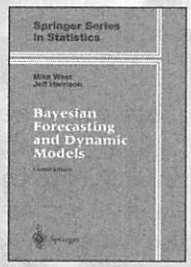
This book is aimed at those who wish to gain a working knowledge of time series and forecasting methods as applied in economics, engineering, and the natural and social sciences. It assumes only a knowledge of basic calculus and elementary linear algebra. The emphasis is on methods and the analysis of data sets. Each book includes a copy of the program ITSM which runs on DOS, Windows, or Windows 95 platforms.

J.P. Klein, M.L. Moeschberger

Survival Analysis

(Statistics for Biology and Health)
1997. Approx. 520 pages.
Hardcover DM 94,–
ISBN 0-387-94829-5

The use of counting process methodology has allowed for substantial advances in the statistical theory to account for censoring and truncation in survival experiments. This book makes these complex methods more accessible to applied researchers without an advanced mathematical background. The authors present the essence of these techniques, as well as classical techniques not based on counting processes, and apply them to data.



M. West,
J. Harrison

Bayesian Forecasting and Dynamic Models

(Springer Series in Statistics)
2nd ed. 1997. Approx. 725 pages.
Hardcover DM 88,–
ISBN 3-387-94725-6

The second edition of this book includes revised, updated, and additional material on the structure, theory, and application of classes of dynamic models in Bayesian time series analysis and forecasting. In addition to wide ranging updates to central material in the first edition, the second edition includes many more exercises and covers new topics at the research and application frontiers of Bayesian forecastings.

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How do people choose their Tattslotto numbers?

Dr Malcolm Clark of Monash University spoke on 'How do people choose their Tattslotto numbers?'

In this talk Malcolm explored several possible ways in which people might choose their Tattslotto numbers in single-entry draws (ie excluding quick picks and system entries) by developing some models of the choosing process.

Simple models, based on a random choice of all six numbers per game, and independent games, lead to either a binomial model or a multinomial model for the number of times a particular number is selected in a set of entries. However data from a set of 12 consecutive draws giving the total number of times each number was selected in each draw shows clearly that people do not choose their numbers at random.

Using a parametric log-linear model for the expected frequencies of each number from 11 of the 12 draws Malcolm was able to allow for a number of different possible effects such as whether people tend to prefer or avoid boundaries, whether there are some numbers seen as intrinsically lucky, and whether people prefer birth date numbers (ie 31 or smaller). In addition allowance was made for the number of weeks since the number was last drawn as well as the total number of times it had been drawn in the past.

The results were illustrated by some effective plots which showed that, in general, players avoid the edges, especially the bottom row; give preference to birth dates; prefer the middle numbers, around 19 and 20 and regard number 7 as lucky. There are also week to week variations in selection probabilities based on the number of weeks since a number was last drawn, for example, if a number has been drawn for two weeks in a row its selection probability increases. Malcolm showed how these results were confirmed using a randomisation test based on simulating 99 sets of data similar to the 12 weeks used in the analysis.

Criminal Justice Statistics and Research Unit, Victorian Department of Justice

Dr. Inez Dussuyer, Manager of the Criminal Justice Statistics & Research Unit (Victorian Department of Justice) spoke to members of the Victorian branch on 24 September 1996. Her talk was divided into 4 parts; (a) background to the Unit and its establishment, (b) the Unit's roles and responsibilities, (c) an overview of the Unit's work, and (d) challenges for the Unit.

A review conducted in 1994 recommended the establishment of a criminal justice statistics and research unit within the Department of Justice. In June 1995, the Victorian Criminal Justice Statistics and Research Unit was officially established with the aim of providing statistical information and analysis from a Department-wide perspective to assist senior management in policy development and strategic planning.

The unit has four core 4 staff who are qualified in statistics, criminology and policy analysis. Additional project staff and/or consultants assist the Unit from time to time. A steering committee, comprised of senior officers from the Department of Justice, representatives from the ABS and the academic sector, ensures the effective operation and development of the Unit as well as approving the Unit's business plan and research program.

The role of the Unit is to provide independent, high quality and relevant statistical information and analysis on criminal justice. Specifically, the Unit's work is directed at the provision of statistical information for policy and planning support, the effective coordination of statistical information across the Justice Portfolio and the management of applied research. The Unit relies on the provision of statistical information collected in police, courts and corrections, and works in close liaison with statistical units in these agencies.

Major activities of the Unit during 1995/96 have included the establishment of a monthly summary statistical report for senior management which draws on a wide range of statistics from police, courts and corrections and enables broad trends to be monitored; an assessment (by an out posted ABS officer) of statistical data standards within the criminal justice area; research on the repeat offending patterns in young people, a statistical overview of drug offending and preliminary work on the relationship between socio-economic factors and crime.

Examples of analyses carried out by the Unit include: comparisons of crime in Victoria with crime in other states; prevalence of different types of recorded crime; comparisons in court activity between Victoria and other states; profiles of frequently heard offences in Victorian higher courts and the Magistrates' Court; what sentences are imposed in courts; trends in prisoner numbers in Victoria and elsewhere in Australia; comparison of crime in country and metropolitan areas.

The issue was raised of what questions drive statistical analysis in criminal justice and the need for useful statistical analysis to be aligned to the concerns and priorities of policy and decision makers.

Finally, some challenges were identified for the Unit. These included the development of common definitions of key statistical indicators, improved access to statistical information and the effective circulation and use of statistical information to policy and decision makers.

Honours Scholarships

Congratulations to Ms Karlie Speirs and Ms Kuan Nee Koay who have each been awarded a scholarship by the Society. Karlie, whose major study is Statistics and Operations Research attends the Royal Melbourne Institute of Technology, while Kuan Nee is a student in the Department of Econometrics and Business Statistics, Monash University. Each award consists of $500 plus one year's membership of the Society.

Belz Lecture: What every statistician should know about robust and nonparametric regression

The 1996 Belz lecture was given by Dr. Simon Sheather of the Australian Graduate School of Management who spoke on "What every statistician should know about

robust and nonparametric regression". After describing the essential nature of several robust regression techniques that are designed to reduce the influence of outliers, several examples were presented to illustrate the ways in which these methods work with relatively simple data sets and how incorrect inferences can be drawn when the predictor points are unevenly scattered. Alternative techniques were presented for standardising residuals in ways that take account of the shape of the predictor set. There are circumstances where plotting residuals versus fitted values can lead to the impression that the model is very poor when in fact it is correct and such plotting techniques provide little evidence to assist in the detection of an incorrect model.

Nonparametric methods such as loss smoothing were briefly described and applied to some examples to illustrate the challenges of selecting an appropriate bandwidth. Examples of various methods of fitting regression splines were reviewed with Bayesian methods that use Gibbs sampling showing great promise.

Overall, the message was that statisticians should not let the primary appeal of such methods (reduced influence of outliers or non-parametric form of regression function) replace careful examination of the underlying assumptions and the context in which the analysis is to be used. In this respect these methods have similar pitfalls to classical methods of analysis.

A very appreciative audience warmly applauded Dr. Sheather for presenting such a lively and interesting talk.

A Stochastic Model for Compartment Fires

Emeritus Professor Abraham Hasofer, of the Centre for Environmental Safety and Risk Engineering (CESARE), Victoria University of Technology, gave a very interesting talk on his work with Professor Vaughan Beck also of CESARE. Along with other organisations CESARE is working on a large project to reform existing building fire codes using Probabilistic Engineering Design.

Existing approaches to modelling fire are either largely arbitrary descriptive approaches or have been implemented using complex computer codes involving fluid mechanics and thermal physics which require detailed knowledge usually not available. The model developed and described in the talk was derived from basic principles, involves just 3 variables satisfying a stochastic differential equation, can be well calibrated with the more complex models and includes statistical variability which is necessary to reflect the intrinsic variability of fire and lack of knowledge of exact conditions.

After describing the model, Professor Hasofer illustrated the model with an example involving four compartments and commented on the performance of the model with more complex configurations.

Annual General Meeting

Minutes of the Annual General Meeting, held in the Hercus Theatre, Melbourne University, 6.15 pm Tuesday, 25 March 1997.

Thirty five people were in attendance. Dr John Carlin and Mr Antony Ugoni sent their apologies.

The minutes of the 1996 Annual General Meeting and the Annual Report had been circulated before the meeting. There being no comments on either of these, they were taken as accepted.

The Treasurer's report was circulated at the meeting. The Treasurer, Dr Neville Bartlett, commented on the report. A question was raised by Dr Bruce Kellett about whether Central Council were still subsidising the Honours Scholarships, the Treasurer replied that they were and there being no further questions the report was accepted. The retiring President, Mr Nick Garnham thanked members of Council for their support during his two year term.

Nominations for the Council for 1997 were: Dr Neville Bartlett, Mr Geoff Bruton, Dr Neil Diamond, Mr Nick Garnham (Past President), Dr Geoff Laslett (President), Mr Mehmet Tat, Mr Antony Ugoni and Associate Professor Ray Watson.

As the number of nominations did not exceed the number of positions, all of the above were declared elected.

The incoming President, Dr Geoff Laslett, presented the 1997 Honours Scholarships to Ms Karlie Speirs, a Statistics and Operations Research student at the Royal Melbourne Institute of Technology, and Ms Kuan Nee Koay, a student in the Department of Econometrics and Business Statistics, Monash University.

Following the close of business at 6.25 pm Assoc. Prof. Andrew Flitman spoke on the topic: Neural Networks: What, How, Where. Details of this very interesting talk will appear in the next edition of this newsletter.

Geoff Bruton

Western Australia

Annual General Meeting

Branch members assembled in the Mathematics Common Room at the UWA to kick off the first meeting of the year with drinks and nibbles, and then the Branch AGM. The following members were elected to the Branch Committee: Dr K Vijayan (President), Dr Jane Speijers (Vice President and Treasurer), Dr Ian Wright (Secretary), Prof Ian James, Mrs Bethy McKinnon & A/Prof Tony Pakes (Ordinary members).

Do You Really Want to Accept the Null Hypothesis?

The gathering then transferred to the Senior Lab to hear Dr Ian Wright's answer to his question "Do You Really Want to Accept the Null Hypothesis?". Ian began by reviewing the principles of hypothesis testing, with particular reference to Type I and II errors. He observed that a significance level is chosen to control Type I error, but that the chances of Type II errors usually are ignored. Too often tests are conducted which have a large probability of Type II errors. On the basis of the commonly drawn analogy between hypothesis testing and criminal trials, he contrasted the notions of acquitting and convicting juries. The former is characterized by high

probabilities of Type II errors; they are likely to decide in favour of the null hypothesis irrespective of the data.

Ian contended that standard packaged hypothesis testing output should quote another number in addition to the *p*-value. This second number is the value of the power function at the estimated parameter value. Moreover, this number should be no less than 0.9 if the statistician is to believe that a decision made on the basis of the *p*-value is informed principally by the data.

Several examples taken from the ecological literature were used to illustrate issues and dangers in making decisions when the Type II error probability is large - see *Ecology* 71 (1990), 2024-27. Discussion during Ian's address was free-wheeling, and it became even more lively after he finished.

Anthony Pakes

Canberra

Double Blind Deconvolution via Quasi-Profile Likelihood and Kernel Smoothing: The Analysis of Postsynaptic Currents in Nerve Cells

Dr Don Poskitt of the Australian National University (ANU) opened the Canberra Branch's meeting schedule for 1997 with a strong contender for the prize for the talk with the longest title. It turns out that postsynaptic currents are tiny electric currents emitted by a nerve cell after a stimulus has been applied to it. Sometimes the cell responds to the stimulus, sometimes not. The analysis focuses on whether the distribution of the amplitudes of these responses is discrete or continuous.

A parametric model is established for the size of the electric current, estimation of which involves the deconvolution of functions. The deconvolution is blind because both functions are unknown, and double blind because the convolution is not observed exactly, but with error. The parameters in the model are estimated using quasi-profile likelihood. Kernel smoothing is then used to separate the amplitudes and errors, thereby extracting the required estimate of the density of the amplitudes of the responses.

Simulations show that this estimation process distinguishes clearly between discrete and continuous distributions, even though simulated data from each case is impossible to tell apart. Real data is never so clear-cut, and in reality the distributions of the amplitudes seem to be a mixture of point masses and continuous parts.

Society members then returned to one of their old haunts in Ainslie for dinner after the talk.

Is the Grass Greener on the Other Side of the Hill?

The AGM of the Canberra Branch was held in March. Following the meeting the outgoing President, Dr Michael Adena of INTSTAT Australia Pty Ltd, spoke on his experiences as a statistical consultant in the private sector. Most Branch members are in the public sector and Michael used his talk to address questions he is often asked about his work.

Michael also described two INTSTAT projects for Government departments. The first concerned the processing of PBS scripts in order to pay pharmacists. INTSTAT's solution involved keying in a sample of the forms, estimating the money due, then adding a certain amount to each payment to ensure that only 5% of pharmacists were underpaid. The second concerned a survey of Aboriginal and Torres Strait Islander housing need. Here INTSTAT carried out a secondary analysis of unit record census data rather than the more obvious (but expensive) option of a special-purpose survey.

The only formula in Michael's talk was "$ a future" in private consulting and his main piece of advice to those considering such ventures was that cashflow is the key. Without actually giving a straight answer to his title question, Michael assured us that private practice is both fun and challenging, and it was clear that the grass is certainly quite tasty on his side.

Dinner at Marinetti's was marked by the large amount of time that the staff gave Branch members to continue discussion of issues raised during the talk.

The State Space Approach to Time Series Analysis and its Potential for Official Statistics

The 1997 Foreman lecture was given by Professor Jim Durbin of the London School of Economics and Political Science. Mr Dennis Trewin of the Australian Bureau of Statistics (ABS) introduced Jim, noting that the Durbin-Watson statistic is only one of Jim's many achievements in Statistics.

Jim opened with a definition of state space models and Box-Jenkins models for time series, then related the development of both kinds of models to the exponential smoothing approach to analysing time series of the 1950s. He then described two of his current pieces of research into state space models, namely adjustments for benchmarks and models for non-normal data. While expressing his admiration for the American inventors of X-11, whose time series models have so thoroughly permeated official statistics, Jim nevertheless saw a bright future for state space models in that field.

Two discussants responded to Jim's lecture. Professor Des Nicholls of the ANU confirmed that the lack of computing packages for state space models was a disadvantage, and expressed a hope that the Foreman lecture will be published, so that the models may become more widely accepted. Mr Geoff Lee of the ABS pointed out that the ABS analyses about 4000 time series a year, and the refined version of X-11 that they use is very effective in getting through the work. However, Geoff did see a useful role for state space model in official statistics, particularly because of their flexibility.

Dinner after the meeting was attended by a large group, including the speaker, the discussants, and Mrs Foreman.

Alice Richardson

UPDATE ON SSAI WEBSITE

The SSAI Website has recently been updated and expanded. One of the new features is the utilization of the comprehensive Web resource "A Guide to the Web for Statisticians" (URL http://www.maths.uq.oz.au/~gks/webguide/index.html) maintained by Gordon Smyth of the University of Queensland.

Summary of changes:-

- Most Branches now maintain their own Websites. The SSAI home page links to these sites. Other Web Masters who have direct links to Branches as well as the SSAI home page should check that their links are up to date.
- Links for Sections have now been incorporated, in the same way as links for Branches. In the first instance, the link is merely to a page with the contact information for the Section Chair. Sections are encouraged to develop their own Websites, in which case they will be linked to from the SSAI home page as is now the case for Branches who maintain their own sites.
- A link to a page for ASPAI has been established. This site will be developed in consultation with the Journal and Newsletter Editors.
- The "Conference Information" page has, in addition to a shortlist of conferences, a link to the comprehensive listing in "A Guide to the Web for Statisticians" and also a section for Australian Statistics Conference (ASC) Reports.
- The "University Statistics Departments" link from the home page now points directly to the comprehensive listing in "A Guide to the Web for Statisticians".
- A direct link to the home page for "A Guide to the Web for Statisticians" has been added.

Members are encouraged to explore the SSAI Website and to email the Web Master with suggestions for improvement.

Alan Branford
SSAI Web Master
alan@stats.flinders.edu.au

MISCELLANEOUS

Members' News

Congratulations to Professor Sue Wilson of the Australian National University, who has been elected Vice-President of the International Biometric Society.

Alice Richardson

Website on Mixture Modelling

A WWW page has been assembled on mixture modelling:

http://www.cs.monash.edu.au/~dld/mixture.modelling.page.html

David Dowe

SPECIAL INTEREST SECTIONS

Young Statisticians

Workshop for Australia's Young Statisticians 1997 (WAYS97)

presented by the Young Statisticians' section of the Statistical Society of Australia Inc.
The University of Melbourne, Parkville, Melbourne
1 - 3 October 1997

Sponsored by: CSIRO
NRMA
CMA
STATSOFT (http://www.statsoft.com/)

The Workshop

The Workshop for Australia's Young Statisticians (WAYS) is a meeting place for young statisticians from all areas of application to share their common background in an informal environment. The workshop this year will be held in Melbourne, on the 1st - 3rd October. The event has been gaining strength over the last 6 years; previously held in Wollongong, Newcastle, Canberra, Sydney, Coolangatta and Wagga Wagga.

The purpose of the workshop is threefold:

1. To provide young statisticians from different environments with an opportunity to meet and discuss their work or research in an informal and non-threatening environment. Young statisticians fill diverse roles in government, business and academia, and it can be difficult to make or maintain contact with other young statisticians working in different roles. WAYS encourages those people who would otherwise be professionally isolated in their workplace.
2. To further the professional development of young statisticians. Participants can establish a network of people with similar backgrounds which could benefit

their future. In addition, listening to talks by invited speakers and other participants will broaden their scope and possibly encourage further learning.

3. To be the national meeting of the Young Statisticians section of the Statistical Society of Australia Inc.

Meaning of "Young Statistician"

The phrase "young statistician" is used loosely, and is independent of a participant's age. A young statistician is considered to be a person in their professional statistical career, regardless of age.

Format

WAYS97 will run as a series of talks given by invited speakers and participants. All participants are encouraged to give a 20 minute presentation on their work, research or anything of interest to other statisticians. There will be ample time for informal discussion during the workshop. Note that these talks are not technical in nature. Some will be informative about future prospects for the statistician, and in particular the "young" statistician.

The "best" talk at WAYS97 will receive a copy of the high performance statistical software STATISTICA for Windows from STATSOFT PTY LTD (http://www.statsoft.com/); valued at $1495. For information about STATISTICA for Windows and other statistical products phone Melbourne on (03) 9521 4833.

STATISTICA for Windows is a comprehensive graphical statistical system that includes tables, non-parametrics, multiple regression, non-linear estimation, logit, probit, ANCOVA, MANCOVA, SEPath for structural modelling, decriminate analysis, factor analysis and cluster analysis, all with unlimited file sizes. STATISTICA for Windows supports DDE.

Venue

This year's venue is The University of Melbourne, Parkville, Melbourne. The University of Melbourne is five minutes from the Melbourne CBD.

Accommodation

Accommodation will be in single study bedrooms at St. Hilda's College. Also provided is a guest room with tea and coffee facilities, television and newspapers. A Porter is on duty twenty-four hours a day to assist guests.

Alternatively, bookings can be made at Rydges Carlton, Melbourne. Prices are $110 per room (not per person) per night and can accommodate up to two people. Bookings can be made on (03) 9347 7811. To book a room at this reduced price, simply mention that you are attending a conference held at The University of Melbourne.

Registration

Participants will be required to fill in a registration form as the event draws near. There will be a registration form in the next SSA newsletter. It will also be available on the WAYS97 web site in early June.

Statistical Society of Australia Inc. Members

Participants whom are members of the Statistical Society of Australia Inc., Victorian branch, will have their registration fees subsidised (amount will be announced at a later date). Members of other state branches of the Statistical Society of Australia Inc. are encouraged to approach their local branch about similar subsidies.

Participants whom are not members of the Statistical Society of Australia Inc. are encouraged to join their local branch. Note, however, that membership is NOT compulsory for attendance at WAYS.

Further Information

Young Statisticians have a World Wide Web address at:

http://www.hutch.com.au/~insure/waays97.htm

This site can also be accessed from the Victorian Branch's web address at:

http://www.maths.monash.edu.au/stats/ssavic.html

For further information please contact:

Section Chair of Young Statisticians' Section of SSA Inc:
Phil Dransfield
NRMA Insurance
Phone: (02) 9292 1531
Email: Phillip.Dransfield@nrma.com.au

or

Victorian Rep of YS & Organiser for WAYS97:
Michael Kunkler
Insureware Pty Ltd
Phone: (03) 9526 6951
Email: inswrerd@world.net

Please encourage other people whom you think might be interested in attending WAYS97, especially employers and undergraduates.

Michael Kunkler

Canberra Branch Young Statisticians.

The effort to contact young statisticians (YS) in the ACT has been quite successful so far with 47 people expressing an interest in the section. The majority of these are from Government Departments which are usually strongly associated with statistics such as ABS, ABARE and CSIRO or the universities, so we still seem to be having some trouble in getting through to those who are more isolated (professionally). However I hope the word will trickle through eventually.

In the meantime, the ACT Young Statisticians held a dinner on 17 April. There was a good showing of 20 people, (although this did cause a few headaches for the restaurant and myself as we were only expecting 15!) and I hope everyone enjoyed the chance to meet other Young Statisticians in their area and do a bit of informal networking.

Anna Poskitt,
ACT YS Representative

Medical Statistics Section

Hierarchical Modelling in Epidemiological Data Analysis

In February, the Medical Statistics section took advantage of the presence of John Witte (Department of Epidemiology and Biostatistics, Case-Western Reserve University, Cleveland, Ohio) as a visitor in the Department of Public Health and Community Medicine, University of Melbourne, to hold a two-day workshop on hierarchical modelling. The meeting attracted a mixed crowd of almost 50 participants, interestingly enough consisting as much of epidemiologists and other non-mathematicians as it did of formally trained statisticians. People came from as far afield as New Zealand, Darwin and Perth to hear a varied series of talks by John and several other speakers.

John trained under Sander Greenland in the Department of Epidemiology at UCLA where he worked on several large studies, which provoked the development of nonstandard approaches to analysis. In particular, a large case-control study of nutrition and breast cancer required the use of hierarchical modelling techniques in order to smooth otherwise very noisy estimates of a large number of parameters representing the effects of various foods on cancer risk. Other speakers took a rather different angle on hierarchical modelling, presenting problems where the emphasis was not on the estimation of multiple parameters but rather on the appropriate modelling of variation and covariation in data possessing a hierarchical structure. The underlying models are quite similar between the two types of application but the focus of the analysis is different and may lead to different estimation approaches, for example the increasingly popular use of sandwich variance estimates and generalized estimating equations to estimate marginal relationships (where the detail of the hierarchical structure is more of a nuisance than of inherent interest itself). The meeting was well grounded by the fact that several speakers presented large datasets for which analysis was still ongoing (or indeed barely begun). Many of these seemed to involve longitudinal elements. There is clearly no shortage of interesting problems for statisticians who want to get involved!

ASC14: Gold Coast, July 1998

Professor Norman Breslow, of the Department of Biostatistics, University of Washington, Seattle, has agreed to be the keynote speaker in medical statistics at next year's conference. Best known for his pair of books with Nick Day (on the analysis of case-control and cohort studies, respectively), Norm Breslow has an extremely broad range of interests and a wealth of experience in biostatistics. We are hoping to capitalize on his presence at the meeting by organising a number of sessions involving him.

One idea is to hold a workshop on two-stage case-control studies. If anyone has an interest in this area or other areas that intersect with Breslow's work and would like to contribute to a session or more, please contact me as soon as possible, e-mail: j.carlin@medicine.unimelb.edu.au.

John Carlin

Industrial Statistics

Preliminary Notice of Conference on Industrial Statistics under auspices of Statistical Society of Australia Inc.

2nd Australian Conference on Industrial Statistics (ACIS2)

Dates: 28-30 September 1997

The first session will be a mixer on the evening of Sunday 28th. The final session will finish mid-afternoon on Tuesday 30th.

Location: King Village Resort, Wantirna, Melbourne

Main Target Audience: Practitioners of statistics in Australian and New Zealand industry

Objectives

Provide a forum for practitioners of industrial statistics to:

- share experiences in applying statistics in industry, and ideas for doing this more effectively;
- learn about new developments in statistical methodology of importance in industrial applications;
- discuss non-statistical issues affecting the practice of industrial statistics in Australia;
- make new contact and enhance current contacts in industrial statistics;
- develop their sense of professional identity.

Content

This conference will focus on industrial case studies. Speakers will be strongly encouraged to give warts-and-all accounts of real industrial projects in areas such as chemical processing, mineral processing, manufacturing and business decisions. Review or theory papers should be linked to case studies. Some of the case studies may be presented in an extended format involving audience discussion of alternative approaches to the posed problems. Prizes may be made for the best case study presentations.

The conference has two major themes - communication and recent technical developments. These themes are complementary in that a successful industrial statistician needs skills in both areas. Subthemes may include the ones listed below. The final choice will depend on the case studies submitted.

Communication

- Describing our value to industry
- Describing technical statistical work to non-statisticians
- Being sensitive to the nature of real problems and to the views and expertise of other people
- Understanding how senior managers think, and thereby helping them to make the best use of statisticians

Recent Technical Developments

- Graphics for data analysis and for presentation
- Data organisation and management

- Data mining (i.e. analysis of large and complex data sets)
- Applying Bayesian thinking in industry
- Time series
- Experimentation

We are interested in hearing from you about:

- names of speakers who may be prepared to discuss industrial case studies (even if confidentiality poses problems, we'd still be keen to hear from you to discuss what may be possible),
- areas of technical development in which you are interested,
- names of potential speakers on recent technical developments,
- names of industrial statisticians, or other interested people, who are not members of the Statistical Society of Australia.

If you can help with ideas on any of the above, or if you would simply like to register your interest in the conference, please contact the organisers:

Teresa Dickinson
E-mail: teresa.dickinson@cmis.csiro.au
Phone: (03) 9545 8013, Fax: (03) 9545 8080

Geoff Robinson
E-mail: geoff.robinson@cmis.csiro.au
Phone: (03) 9545 8014, Fax: (03) 9545 8080

Geoff Robinson

ACCREDITATION

The accreditation committee will be meeting for the first time in early June. Information from the committee will be sent to branches. Full information about accreditation, including the criteria for accreditation are given in the SSAI Regulations, of which each branch has a copy. However for the convenience of members, an information "package" has been sent to branches, or can be obtained from the President or Secretary of the Society.

Helen Macgillivray

AUSTRALASIAN CONFERENCES

CONFERENCE SUMMARY

New Zealand Statistical Association 48th Annual Conference, 9-11 July 1997, University of Auckland.
Information: Assoc. Prof. David J Scott, Depart-ment of Statistics, Tamaki Campus, The University of Auckland, PB 92019, Auckland, New Zealand; tel. +64 9 373 7599; fax: +64 9 373 7177; email: d.scott@auckland.ac.nz or dscott@scitec.auckland.ac.nz. (Further details in Newsletter 78.)

National Research Symposium: Statistical Methods in Genome Research, 14-18 July 1997, Australian National University, Canberra
Information: Bob Griffiths (Monash); Kerrie Mengersen (QUT); Terry Speed (Berkeley/Melbourne); Sue Wilson (ANU), Sue.Wilson@anu.edu.au; or on website http://www.maths.anu.edu.au/~sue/Symposium.

2nd Australian Conference on Industrial Statistics, 28-30 September 1997, near Melbourne.
Information: Teresa Dickinson tel. (03) 9545 8013; email Teresa.Dickinson@cmis.CSIRO.au and Geoff Robinson tel. (03) 9545 8014; email Geoff.Robinson@cmis.CSIRO.au. For both, fax (03) 9545 8080; postal address CSIRO, Mathematical and Information Sciences, Private Bag 10, Clayton 3169. (Further details in Newsletter 78 and this issue.)

Workshop for Australia's Young statisticians - Ways '97, 1-3 October 1997, University of Melbourne, Parkville, Victoria.
Information: Michael Kunklet, c/o Insureware Pty Ltd, 22 Wellington St, St Kilda VIC 3182; tel (03) 9526 6951, fax (03) 9529 2663, email inswrerd@world.net, http://www.hutch.com.aw/~inswrems/ways97.htm. (Further details in Young Statisticians Section of Newsletter 78 and this issue.)

Epidemiologic study design and multivariate data analysis, 3-7 November 1997, Hobart.
Information: Ms Wendy Spencer, Executive Officer, Menzies Centre, GPO Box 252-23, Hobart, Tasmania, 7001; fax: (03) 6226 7704; email: W.Spencer@menzies.utas.edu.au. (Further details in Newsletter 78.)

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 Newslettesr 76 and 77.)

Australasian Biometrics Conference, 30 November - 4 December 1997, Adelaide.
Information: Ari Verbyla, Department of Statistics, University of Adelaide, Adelaide SA 5005; tel. (08) 8303-3218; fax. (08) 8303-3696; e-mail biom97@maths. adelaide.edu.au. (Further details in Newsletter 77, 78 and this issue.)

10th Australian Joint Conference on Artificial Intelligence, 2-4 December 1997, Perth, Western Australia.
Information: ai97@cs.curtin.edu.au or (David Dowe) dld@cs.monash.edu.au http://www.cs.curtin.edu.au/~ai97/

14th Australian Statistical Congress, 6-10 July 1998, Jupiter's Casino, Gold Coast.
Information: ASC14, School of Mathematical Sciences, Queensland University of Technology, GPO Box 2434, Brisbane QLD 4001; Email, asc14@qut.edu.au; Facsimile, (07) 3864 2310 (Further details in Newsletter 78.)

There is a list of Australasian statistics conferences for 1997 and 1998 at:
http://www.maths.uq.oz.au/~gks/webguide/conf.html

Australasian Biometrics Conference of the International Biometric Society (Biometrics 97)

November 30 - 4 December 1997
Wirrina Cove Paradise Resort
Second Valley, South Australia

Registration: The registration cost will be $300. This includes all travel to and from Wirrina and the airport, conference materials, welcoming BBQ on Sunday evening, all morning and afternoon teas, all lunches (Monday to Thursday), and the Conference Dinner on Tuesday evening.

Airline: Ansett Airlines are our official carriers, so please support the Conference by using this carrier.

Special rate: 45% off the normal economy airfare, but you need to quote

MC06382 (note: zero NOT o)
Phone: 131300

Accommodation: Single $100, Double $50, Triple $125/3 all include breakfast.

Updated information: Registration form, accommodation form and important dates are now available on the Web site:

http://WWW.adl.dms.CSIRO.AU/biometrics97/

email: biom97@maths.adelaide.edu.au

mail list: To subscribe to the biometrics97 email listemail to

majordomo@maths.adelaide.edu.au

with the following one line message in the BODY of the email (NOT in the subject)

subscribe biometrics97

Up to date information will be sent to you automatically as the details of the conference develop.

Ari Verbyla on behalf of the
Local organising committee.

National Research Symposium: Statistical Methods in Genome Research

14 - 18 July 1997
Australian National University, Canberra

Aim: The aim of the Symposium is to bring together those involved with the organisation, interpretation and use of molecular genetic data to discuss current and future research at the interface between molecular biology/genetics on the one hand, and statistics/mathematics on the other.

Web page: As it becomes available, information on the Symposium is being posted on http://www.maths.anu.edu.au/~sue/Symposium

A tentative list of participants and topics appears there already.

Organisers: Bob Griffiths (Monash); Kerrie Mengersen (QUT); Terry Speed (Berkeley/Melbourne); Sue Wilson (ANU)

Funding: Some funding is available towards accommodation costs. Numbers will be limited to about 30 participants.

Titles and Abstracts: If you wish to contribute to this Symposium, please forward a title, for either a talk or a topic on which you would like to lead discussion, to Sue.Wilson@anu.edu.au

Abstracts are requested for the end of May.

OVERSEAS CONFERENCES

Fourth International Applied Statistics in Industry Conference, 3-5 June 1997, Kansas City, Missouri, USA.
Organised by the International Statistical Applications Institute, this industry-oriented conference features a keynote speech by Stuart Hunter "Quality: Commitment Plus Technical Mastery" and a post-conference tutorial, 5.7 June, conducted by him based on the recent work of George Box and A. Luceno, "Statistical Control by Monitoring and Feedback Adjustment" (Wiley, 1977). Abstracts of papers for presentation at the conference are being accepted. Detailed information for authors and participants may be obtained from Conference Chairman Brad Brown, PO Box 782948, Wichita, KS 67278-2948, tel +1 (913) 841-0473, fax +1 (913) 841-2133, email bjbrown@eagle .cc.ukans.edu.

Longitudinal Data Analysis, 10-14 June 1997, University of Missouri-Columbia, USA.
Information: Paul L. Speckman, tel +1 (573) 882-6376, email speckman@stat.missouri.edu; http://www.stat.missouri.edu .longitudinal.html.

Third International Conference on Financial Econometrics, 13-15 June 1997, Juneau, Alaska, USA.
Information: Full details and electronic submission forms may be found at the conference Web site at http://web.uvic.ca.econ.jeneau.html.

19th International Conference Information Technology Interfaces, 17-20 June 1997, Pula, Croatia.
Information: ITI '97, Sveucilisni Racunski Centar, University Computing Centre, Josipa Marohnica bb, 10000 Zagreb, Croatia

12th International Workshop on Statistical Modelling, 7-11 July 1997, Biel/Bienne, Switzerland.
Information: Workshop Website http://stat.uibk.ac.at/iwsm or from Myint-Bietenholz, Institut fur Sozial und Praventivmedizin der University Bern, Finkenhubelweg 11, CH-3012 Bern, Switzerland; tel +41 31 631 3514 or 3510; fax +41 31 631 3520.

International Conference on Combinatorics, Information Theory and Statistics, 18-20 July 1997, University of Southern Maine, Portland, Maine, USA.
Information: Sat Gupta, Chair Local Organising Committee, Dept. Math/Stat, University of Southern Maine, PO Box 9300, Portland, Maine 04104-9300; email rxm381@usm,maine.edu, fax +1 (504) 482-1561, website http://macweb.acs.usm.maine .edu/math/cis/pann.html.

Burning Issues in Medical Statistics Conference, 22-25 July, Leicester, England.
Information: Briony Teather, Executive Secretary BIMS '97 Conference, Department of Medical Statistics, School of Computing Sciences, De Montfort University, The Gateway, Leicester LE1 9BH England, fax +44 (0)116 257 7480, email bte@dmu.ac.uk.

8th International Conference on Quantitative Methods for the Environmental Sciences, 4-8 August 1997, Innsbruck, Austria.
Information: Abdel H. El-Shaarawi, National Water Research Institute, PO Box 5050, 867 Lakeshore Road, Burlington, Ontario, Canada L7R 4A6; fax +1 905 336 4989; abdel.el-shaarawi@cciw.ca; or Reinhart Viertl, Institut fur Statistik, Technische University Wien, Wiedner Hauptstrasse 8/107, A-1040 Wien, Austria; fax +43-1-586 8093.

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

International Conference on Applied Statistics in Medical Science, 12-14 August 1997, Middle East Technical University, Ankara, Turkey.
Information: M. Ahsanullah, Dept of Management Sciences, Rider University, Lawrenceville, NJ 08648-3099, USA; fax +1 (609) 5304; email ahsan@genius.rider.edu; or Fetih Yildirim, Dept. of Statistics, Middle East Technical University, 06531, Ankara, Turkey; tel +90 312-210-5319; fax +90 312-210-1285; email fetihy@rorqual.cc.metu.edu.tr.

The Third International Conference on Knowledge Discovery and Data Mining (KDD-97), 11-17 August 1996, Newport Beach, California, USA.
Information: Program Co-Chair Daryl Pregibon, AT&T Labs, Murray Hill NJ 07974 USA; daryl@research.att.com or http://www-aig.jpl.nasa.gov/kdd97/.

10th European Young Statisticians Meeting, 18-22 August 1997, Warsaw, Poland.
Information: W. Florczak (florczak@impan.impan.gov.pl), Institute of Mathematics, Polish Academy of Sciences, ul. Kopernicka 18, PL-51617 Wroclaw.

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; email: gad@olive. mscc.huji.ac.il or Susan Linacre, Australian Bureau of Statistics, PO Box 10, Belconnen ACT 2615, fax: (06) 252 5239, email: sisd.exec@abs.telememo.au

International Society for Bayesian Analysis, Fifth World Meeting: ISBA97, 16-18 August 1997, Istanbul, Turkey.
The Fifth World Meeting of the International Society for Bayesian Analysis (ISBA) will be held in Istanbu,l Turkey during August 16-18, 1997 as a satellite meeting to the 51st Session of the International Statistical Institute (ISI) in Istanbul.
Information: Dr David Dowe, Department of Computer Science, Monash University, Clayton, Vic 3168; email dld@cs.monash. edu.au; fax: (03) 9905-5146; http:// www.cs.monash.edu. au/~dld/; Hamparsum Bozdogan, Department of Statistics, The University of Tennessee, Knoxville, TN 37996-0532, USA; tel: +1 (423) 974-1635 fax: +1 (423) 974-2490; email: bozdogan @utk.edu or Refik Soyer, Department of Management Science, Monroe Hall 403, The George Washington University' Washington, DC 20052, USA; tel: +1 (202) 994-6445; fax: +1 (202) 994-4930; email: soyer@gwis2.circ.gwu.edu

International Statistical Institute, 51st Biennial Session, 18-27 August 1997, Istanbul, Turkey.
This session includes meetings of Bernoulli Society, International Association for Official Statistics, International Association for Statistical Computing, International Association

of Survey Statisticians and the International Association for Statistical Education, Istanbul, Turkey.
ISI Permanent Office, 428 Prinses Beatrixlaan, PO Box 950, 2270 AZ Voorburg, The Netherlands.

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.

Spruce Conference - Statistical Aspects of Health and the Environment (SPRUCE IV), 8-12 September 1997, the ITC, Enschede, The Netherlands.
The fourth SPRUCE international conference, on the theme Statistical Aspects of Health and the Environment will take place at the ITC, Enschede, The Netherlands, from 8 to 12 September 1997. The aim is to bring together statisticians working in the field of health and the environment, to discuss recent progress in this field and to investigate opportunities for future needs. It will cover crucial areas as Toxicology; Epidemiology; Waste Disposal/Remediation; Monitoring, Management and Agriculture and the Food Chain. An international group of speakers will present the state-of-the-art in these areas. Amongst those who have already agreed to speak are: Luisa Bernardinelli, Johan Bouma, Sir David Cox, Sarah Darby, Paul Elliott, Tony Gatrell, Neils Keiding, Suresh Moolgavkar, Andreas Papritz, Sylvia Richardson, Wouter Slob, Richard Smith and Jim Zidek. The proceedings will be published by J. Wiley as a volume of the Statistics for the Environment series.
For further information, registration and request for the second circular including a call for abstracts please contact A. Stein, ITC, P.O. Box 6, 7500 AA Enschede, The Netherlands. email: spruce@itc.nl.

International Meeting on Multidimensional Data Analysis NGUS'97, 10-12 September 1997, Bilbao, Spain.
Information: Kormele Fernandez-Aguirre, Avda, Lehendokari Aguirre, 83 (48015) Bilbao, Spain,; fax 34 4 479 7554; email ngus@bs.ehu.es; internet http://www.et.bs.ehu.es/ngus97.html.

Workshop on Resampling Methods, 14-20 August 1997, CRM, Montreal, Canada.
Information: Louis Pelletier, CRM, Universite de Montreal, C.P.6128, Succ.Centre-ville, Montreal (Quebec) CANADA H3C 3J7 or email activities@crm.umontreal.ca; World Wide Web http://www.crm.umontreal.ca.

Symposium '97: New directions in Surveys and Censuses, 5-7 November 1997, Statistics Canada, Ottawa, Ontario, Canada.
Information: Jack Gambino, statistics Canada, 16th floor RH Coats Building, Ottawa, Ontario, Canada, K1A-0T6; fax +1 (613) 951-3100; internet email sym-pos97@statcan.ca.

Complexity and information - theoretic approaches to biology, 5-9 January 1998, Maui, Hawaii.
This will be held as part of the 3rd Pacific Symposium on BioComputing (PSB-3, 1998).
Information: Dr David Dowe, Dept. Computer Science, Monash University, Clayton VIC 3168; dld@cs.monash.edu.au; fax (03) 9905-5146; http://www.cs.monash.edu.au/~dld/PSB-3/PSB-3.Info.CFPs.html

International Biometric Society (ENAR) Spring Meeting, 27 March - 1 April 1998, Pittsburgh, Pennsylvania, USA.
Information: ENAR Conference Manager, 11250 Roger Bacon Dr., Suite 8, Reston, VA 22090 USA; fax +1 (703) 435-4390.

Seventh International Congress of Ecology, Frontiers of Statistical Ecology with Environmental Statistics, 19-25 July 1998, Florence, Italy.
Information: Prof. Wolfgang Urfer, Department of Statistics, University of Dortmund, D-44221 Dortmund, Germany, tel. +49 231 755-3121, fax +49 231 755-5303, email urfer@ omega, statistik.uni-dortmund.de or Dr Phil M. Dixon, Savannah River Ecology Lab, University of Georgia Drawer E, Aiken SC 29802, USA, tel. +1 803 725-2472, fax +1 803 725-3309, email dixon@ srel.edu.

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