



Statistical Society of Australia Inc.

Victoria Branch Newsletter: August/September 2006

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1) August Meeting

The August meeting of the Victorian Branch was held at 6:15 p.m. on Tuesday 22nd August at the University of Melbourne, Parkville Campus. The venue was the AMSI seminar room, ICT Building, 111 Barry Street, Carlton.

Speaker: Professor Stephan Morgenthaler from EPFL in Switzerland

Title: John Tukey's One Degree Of Freedom For Non-Additivity (ODOFFNA)

Abstract: In One Degree of Freedom For Non-Additivity (Biometrics, 1949, pp. 232). John Tukey put forward a method for extracting an interaction term from the residuals of an additive fit to a data table. This simple method has proven to be highly effective in many applications.

Being a PhD student of John's, I was aware of his strong interest in the analysis of two-way tables and of his habit to revisit topics he had worked on previously. But I was still a bit surprised when, in preparation of a sabbatical spent with John Tukey at Princeton University in 1994, he proposed that we collaborate on ODOFFNA and generalizations of it.

In my talk I will tell you more about what came up with during this visit.

The meeting was preceded by light refreshments at 5:45 p.m. Members and guests joined the speaker for dinner at a nearby restaurant after the meeting.

A report of this talk will appear in the next newsletter.

2) May Meeting : Talk Summary



The May meeting of the Victorian Statistical Society was held at the Caulfield campus of Monash University. The speaker was Dr Melanie Bahlo from the Bioinformatics Division at the Walter and Eliza Hall Institute of Medical Research. Melanie graduated from Monash University with a PhD in population genetics in 1989. This was followed by a two year postdoctoral stint at Monash working on migration models with her PhD supervisor Professor Bob Griffiths. She then moved to the Hall Institute to work with Professor Terry Speed in statistical genetics. She now uses statistical methods to analyse DNA data from both human and mice in an effort to identify novel genetic variants.

Her special interests include the localisation of human genes causing diseases such as epilepsy, deafness and muscular neuropathies and MS, and the analysis of data from ENU experiments in mice. The latter was the topic of her seminar: "Using statistics to help map genes in mice".

Much of the human genome remains a mystery. The function of many of the genes that were identified when the human genome was sequenced remains unknown. Inbred laboratory animals such as the zebrafish, mouse, fly or rat are very useful for the identification of genes influencing traits of interest, such as deafness and blood disorders, because they have reduced genetic background variation.

The talk focussed on the statistical methods used for the localization of induced mutations in laboratory mice. Methods such as genetic mapping with hidden Markov models, the Expectation-Maximisation (EM) algorithm and graphical methods were discussed in the context of data arising from such mutants. Three examples of mouse mutants were presented, each with its own set of analysis challenges. Two mutants affected haematological traits such as platelet distribution whilst the third example was a novel mouse deafness mutant. Statistical analysis has helped both with the localisation of the mutant gene and the interpretation of the biological effects of the mutant.

The meeting closed with dinner at a nearby Malaysian restaurant.

3) September Meeting

This meeting will be held jointly with the Department of Econometrics and Business Statistics, Monash University at 6.15 pm on Tuesday, September 12 at the Caulfield Campus Monash University, 900 Dandenong Road, Caulfield East. The exact room location will be placed on the website <http://www.statsoc.org.au/Branches/VIC/meetings.htm> and advised by email prior to the meeting. The Caulfield Campus map can be found at <http://monash.edu.au/campuses/caulfield.html>

The meeting will be preceded by light refreshments at 5:45 p.m. Members and guests are invited to join the speaker for dinner at a nearby restaurant after the meeting.

Speaker

Professor Clive WJ Granger,
2003 Nobel Prize Laureate in Economics,
Department of Economics,
University of California, San Diego, USA
<http://www.econ.ucsd.edu/~cgranger/>

Title: Building Policy Models for the Amazon Rain Forest

Abstract:

The Amazon rain forest is the largest in the world and is of considerable importance to global warming issues and is of economic importance to Brazil; however, it is being deforested at a rapid rate. This paper will discuss how to build an econometric model linking important variables measuring the forest with socio-economic, physical, and policy variables using a panel data set of mixed quality. The quality of the land under the forest is of particular importance.

The problem of how to effectively introduce policy variables will be given particular consideration. Results from an initial study will be included but recent consideration suggest that a different model is required.

4) Belz Lecture and Dinner

The 2006 Belz Lecture which will be held on Tuesday 24th October 2005 in Old Geology Theatre 1, University of Melbourne. The lecture commences at the earlier time of 6.15 p.m., with dinner commencing shortly after the lecture, at approximately 7.30 p.m.

The Parkville Main Campus map is available at:

<http://www.pb.unimelb.edu.au/propertyandbuildings/whereis.php3?subcat=8>.

Speaker:

Rob J Hyndman, Professor of Statistics, Monash University. Rob is Editor-in-Chief of the International Journal of Forecasting and Director of the Monash University Business & Economic Forecasting Unit. He has a long involvement with the Statistical Society of Australia including a period as Secretary of the Victorian branch and several years as Theory & Methods Editor of the Australian & New Zealand Journal of Statistics. More information is on his home page at <http://www.robhyndman.info>

Topic

Forecasting and the importance of being uncertain

Abstract

Forecasters had an inauspicious beginning, dabbling with divination, sheep's livers and vapour-ridden caves in the mountains of Greece. Then there was a time when forecasters could be charged with vagrancy! Their reputations are still tarnished, but their tools are rather more effective. Professor Rob Hyndman will argue for the importance of statistical modelling in forecasting, and demonstrate the dangers that occur when uncertainty is ignored. In particular, he will consider the importance of prediction intervals in providing forecasts, and the dangers of "what-if" scenario projections that are popular in business and government. He will also show that several popular data mining methods ignore uncertainty leading to unrealistic expectations. Finally, he will provide a forecast of the future of statistics.

Belz Dinner

The dinner will be held at the University Café, Lygon Street, Carlton. The cost for the dinner is \$50 per head for members and guests, for a three-course dinner and drinks (soft drink, beer and wine). A booking form is attached, and should be returned with payment by 6 October 2006. The form is also on the website at <http://www.statsoc.org.au/Branches/VIC/meetings.htm>

Vegetarians, vegans, or others with special dietary requirements can be catered for. Please indicate any special requirements on the booking form.

Please get in early and register for the dinner ASAP, application form below.

For further information please contact the secretary or Treasurer, Geoff Laslett
Geoff.Laslett@CSIRO.au

5) 28-29 November Bayesian Workshop, full details will be available soon, refer to website <http://www.statsoc.org.au/Branches/VIC/>

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Statistical Society of Australia Inc.
Victoria Branch

**Belz Dinner
Application Form**

Tuesday 24 October 2006

University Café, 257 Lygon St Carlton, from 7.30 p.m.

Names of persons attending: _____

Contact telephone number: _____

Total cost (\$50 per person): _____

Please debit my: Bankcard Mastercard Visa

Name on card: _____

Card number: _____

Expiry date: _____

Signature of card holder: _____

OR

Please accept my enclosed cheque made payable to —
Statistical Society of Australia (Vic Branch)

Please indicate any special dietary requirements:

Return this form by 6 October 2006 to:

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