

# **THE STATISTICAL SOCIETY OF AUSTRALIA**

**New South Wales Branch Inc.**

Registered number Y1920037

<http://www.geocities.com/statsnsw/>

The next meeting of the New South Wales Branch will be held on

**Tuesday, 21 September 2004**

at the University of Sydney in the Carslaw Building

**Refreshments (6-6.30pm): Level 7, Room 727 (Math. Staff Room)**

**Seminar (6.30-7.30pm): Level 5, Room 535 (Science Seminar Room)**

## **Revealing the riddle of REML**

**Mick O'Neill**

*University of Sydney*

For many years ANOVA was so entrenched in agriculture that it was used to analyse virtually all experimental data. However over recent years the use of REML in linear mixed models has become the standard analytic tool. As an unbalanced but unbiased statistician, it's been an interesting task to get students and staff to appreciate its use. In this talk I initially use Excel to demonstrate how students in various agriculture degrees are introduced to REML – naturally, and with minimum mathematics. I show how linear mixed models (REML) give similar answers to ANOVA when the data are balanced, and why REML is preferred when the data are unbalanced. The talk will be sprinkled with an array of examples, including unbalanced factorials, split-plots, repeated measures and spatial designs.

*Mick O'Neill completed his PhD in Mathematical Statistics at the University of Sydney in the early seventies, and has 30 years experience in teaching in the Faculty of Agriculture, Food and Natural Resources at the University of Sydney. His interests range across multivariate analysis, experimental design, general theory and modelling in various facets of crops science. His interests in linear mixed models (REML) is recent and not expert, so come along for a practitioner's view of this relatively new topic.*

### **Dinner**

*Dinner with the speaker will be held after the meeting at a nearby restaurant. Please tell Caro Badcock at [caro.badcock@covance.com](mailto:caro.badcock@covance.com) if you wish to come.*

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## Getting to the venue

The University of Sydney's Carslaw Building is situated on the south-east side of the central campus, near the northern end of the footbridge crossing City Road from the Wentworth Building.

Visitors may park on campus for a fee of about \$15.00 per day. However, parking spaces are sometimes hard to find.

**Bus** services run along City Road (adjacent to Carslaw) and Parramatta Road (on the other side of the campus). Many buses leave from the Central Business District, go to Railway Square (Central Railway Station), and then continue to the University. Some go along the City Road side of the Camperdown campus (closest to Darlington Campus). Get off at the footbridge. Other buses run alongside the Parramatta Road side of the campus, past the Footbridge Theatre. Again, you can get off at the footbridge (not the same one!) and walk across the campus to Carslaw.

There is a **train** service to Redfern Station which is less than 15 minutes walk away. There are free security buses between Fisher Library and Redfern Station in the evening, stopping in front of Carslaw.

Please check: <http://www.maths.usyd.edu.au:8000/> and see *How to get here*.

## Next meeting

Virginia Wheway will present the talk at the next meeting on Tuesday 19 October, 2004.

## 2004 J. B. Douglas Postgraduate Awards

The 2004 Postgraduate Awards Day and Annual Dinner will be held on Wednesday, 24 November at the Darlington Centre, University of Sydney. The guest speaker will be Professor Sue Wilson from the Australian National University.

<b>Save Us Money!</b>	If you receive this notice by post but you would be just as happy to receive it by email, please tell Jos Beunen by emailing him at <a href="mailto:jos.beunen@abs.gov.au">jos.beunen@abs.gov.au</a>
<b>Don't Go Missing!</b>	Help us keep in touch. Please advise Jos of any change in your contact details.
<b>Early warning:</b>	It will soon be time to call for nominations for next year's Branch Council. For further information, contact the Secretary. Nominations will close 31 October, and a call will be sent out well ahead of that.