

Recent Events

The 25th Conference on Applied Statistics in Ireland, hosted by Queen's University, Belfast, was held on 18-20 May 2005 at The Manor House Country Hotel, Killadeas, Co. Fermanagh. Thanks to Adele Marshall for an excellent meeting.

The 26th Conference on Applied Statistics in Ireland, hosted by University College Cork is being held on 17th – 19th May 2006 at The Hotel Europe, Killarney.

<http://euclid.ucc.ie/pages/casi06/index.html>

A short course on survival and event history analysis based on counting processes by Per Kragh Andersen and Niels Kiedings was held on 2nd – 3rd March 2006 in Trinity College. It was organised by Gilbert MacKenzie and was rated very highly by all attending.

Future Activities

**21st IWSM
International Workshop on Statistical
Modelling
Galway, Ireland:
Monday 3 to Friday 7 July, 2006**

Pre-workshop course: Sunday, 2nd July 2006

www.nuigalway.ie/math/IWSM2006/

A conference on High Performance Computing for Statistical Inference (organised by Simon Wilson) will be held in Trinity College, 23rd – 25th August 2006.

<http://www.tcd.ie/Statistics/hpsi/>

The annual conference of the Royal Statistical Society will be held in Queen's University, Belfast, 10th – 14th September 2006.

<http://www.rss.org.uk/rss2006>

3rd International Conference on Correlated Data Modelling will be held in Limerick in 2007. Dates to be announced.

<http://web.econ.unito.it/wcdm04/>

International Biometric Conference 2008 will be held in UCD.



**The 27th Conference on Applied
Statistics in Ireland**

**will be hosted by the University
of Limerick**

Vacancies in Ireland

SFI Ph.D. Scholarship

A full-time postgraduate research position for a doctoral candidate funded by the SFI under the Research Frontiers Programme 2006 has opened in the UCD School of Mathematical Sciences. The successful candidate will be supervised by Dr. Gabrielle Kelly, Senior Lecturer in the School. The research topic is the change-point problem in regression and will involve the use of stochastic processes and applying theoretical results to practical problems. Applicant should submit a CV, a letter containing a statement of interests and names and contact details of two referees to:

Dr. Gabrielle Kelly, UCD School of Mathematical Sciences, Room L529, UCD, Belfield, Dublin 4.

Phone: +353 1 7167156

Informal inquiries are welcome. Further information is available at

<http://www.ucd.ie/statdept/staff/Gkelly.html>

Closing date: June 6, 2006.

SFI Ph.D. Scholarship

Funding is available for a PhD research student to study Combinatorial Methods in Statistical Graphics under Dr. Catherine Hurley, Department of Mathematics, NUI Maynooth. The project is funded by SFI and the stipend available is about €25,000 p.a.

Student Scholarship for MSc by Research

Applications are invited for this 2 year scholarship funded by Johnson & Johnson. The successful candidate will register for an MSc degree by research commencing on 1st August 2006. The research topic involves statistical modelling of the relationship between

drug dissolution in humans and in laboratory tests.

Applicants should submit a CV and covering letter to Dr. Adrian Dunne, UCD School of Mathematical Sciences, Belfield, Dublin 4.

UCD School of Mathematical Sciences

The disciplines of Statistics and Actuarial Science at University College Dublin (UCD) will be undergoing many changes in the next few years for many reasons, one of them being that several senior statisticians will be retiring soon. UCD is currently promoting an initiative in the Mathematical Sciences (including Statistics and Actuarial Science) and encouraging expressions of interests from potential individuals at all levels!

If you know of anyone who might be interested in helping us further build up Statistics and Actuarial Science at UCD, please pass the message on to them. More details can be found at

<http://www.ucd.ie/person1/html/vacancies/2006/academic/002343.html>

or by contacting anyone in Statistics at UCD.

Items of Interest

Plagiarism

DCU has developed a new algorithm for dealing with plagiarism in electronically submitted assignments. It differs from existing detection systems that use discriminant analysis to form groups of submissions which are suspiciously similar. This new system is able to distinguish with certainty between the original author of the work and the recipients. Since its publication, it has received widespread coverage in national newspapers, in computer magazines, and on radio broadcasts.

Data from hundreds of students using the system have been collected and analysed; some interesting statistical patterns emerge.

Full details can be found in
Daly, C. and Horgan, J.M. (2005)
A Technique for Detecting Plagiarism
in Computer Programming,
The Computer Journal, Vol. 48, No. 6,
pp. 662-666.

ISA Activities

Activities of the Association include:

- Holding an annual conference (CASI) on Applied Statistics in Ireland.
- Encouraging the interchange of statistical knowledge through the promotion of seminars, short courses, training programmes, workshops and discussions.
- Educating interested parties and the public in general about the use of Statistics and the role of the Statistician.

- Establishing international and European dimensions to Irish Statistics by forging appropriate links with kindred associations and societies.
- Maintaining a Register of Irish Statisticians.

Current executive (2005-2006):

Gilbert MacKenzie (President), John Hinde (Vice-President), Gabrielle Kelly (Hon. Secretary), Kevin Hayes (Hon. Treasurer), Adele Marshall (Hon. Treasurer), Leslie Daly, Gary Keogh, Christoph List, Brendan Murphy, Kingshuk Roy Choudhury, and Nick Sofroniou.

ISA Membership

Membership is open to all who are interested in Statistics and who subscribe to the Aims of the Association. The 3 basic categories of membership and the corresponding annual rates of subscription are as follows:

Ordinary Membership (€15 pa)
Institutional Members (€75 pa)
Student Members (€7.50 pa)

-- or sterling equivalent.

Graduate Training in Statistics with the ISA

The Irish Statistical Association has maintained a long-standing interest in teaching Statistics in Ireland. This area was a particular interest of our first President, Professor Phil Boland (UCD), who it will be recalled, presented several papers at CASI on the topic. The focus of Phil's interest was pre-third level education where important foundations on understanding uncertainty are being laid. A useful reference albeit in a post-14 years, UK, context is Adrian Smith's UK review¹.

Naturally, this is by no means the only area of interest and currently, there is growing concern that in our aspirant, knowledge-based, science-led, economy, the gap between a typical final degree programme in Statistics and entry into the wider internationally competitive research arena is ever-widening. In the UK, a taught Masters is now considered, *de rigueur*, for research in Medical and Biostatistics. The recent International Review of Research in Mathematics in the UK² highlights, poignantly, the acute training difficulties being experienced there and the potential knock-on effects on the status of the subject, at an international research level. Ireland, is by no immune to these tendencies, although it may be argued that we have avoided some of the worst extremes of *experimentalism* in the pre-third level English education system and have been spared the distortions of research assessment exercises (RAEs). Nevertheless, the choice of taught Master's courses in Statistics in Ireland remains limited and indubitably this impacts on the competitiveness of our post-graduate research community.

Accordingly, against this background, the Executive Committee of the ISA agreed, in 2005, to embark on expanding its educational role in this arena by running a number of two-day training courses. The plan is to cover strategic areas of statistical methodology not covered, or at least not covered uniformly, at graduate level in Ireland. A number of topic areas have now been identified and these further training packages are designed to have broad appeal. Our objective is to have world experts provide a sound introduction to each subject area in order to strengthen foundational issues and provide a firm basis for improved practice and further study. In this way we hope to attract post-graduate students, graduate statisticians in industry and researchers to the courses. The ISA has a history of organising successful CASI conferences and one-day workshops but this is the first time it has embarked on two-day events, which necessarily are more costly to organise. Nevertheless, having identified the need for this more advanced training the ISA decided to proceed with its plans.

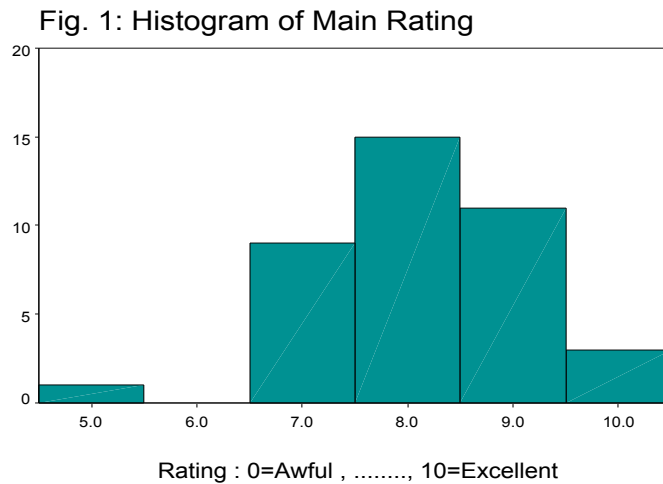
In March 2nd-3rd of this year the first two-day "Survival & Event History Analysis by Counting" was delivered in TCD, Dublin, by Professors Per Andersen & Niels Keiding of the Biostatistics University of Copenhagen. The course attracted 44 total and Table 1 shows their country of affiliation. majority of participants were from the Island (32, ISA was delighted by the course's wider appeal, quarter of the audience had been attracted from the be hoped that subsequent courses will maintain or outreach. No doubt this was occasioned by the reputations of the speakers, who did an excellent job throughout, and were especially adept at keeping the audience on-board when presenting technically difficult sections of the material. Springer, too, played its part by providing a very generous discount on the course book – reducing it from €70 to €40 – all 40 of which were sold. This discount coupled with the modest course fees meant that the course was internationally competitive.

Table 1: Participant Affiliation

		Frequency	Percent
Valid	DK	1	2.3
	IRL	28	63.6
	UK-NI	4	9.1
	UK	11	25.0
	Total	44	100.0

course on Processes" Kragh Department, participants in While the 72.7%), the noting that a UK. It is to expand on this international

Overall, the level of participation is similar to that achieved by League Tables workshop organised by Nick Sofroniou in 2005, but, of course, a Workshop is not a training event. Accordingly, the size of the turnout is encouraging, as it clearly demonstrates a market for this type of training; the more so, too, since the Counting Processes approach to Survival & Event History Analysis is, arguably, a rather difficult topic area.



A new feature introduced for two-day training events is the course evaluation form. Participants were asked to rate the course organisation, delivery and content. Some 39 responses were received in total (88.6%), with missing values in some variables. Figure 1 shows the histogram for the overall course satisfaction rating (0=awful, ..., 10=excellent). The mean is a credible 8.1 and only one person, who found the course technically difficult, gave a low rating. In relation to organisation, eight questions were asked. The first question asked about the Length of the course: 1 Too Short (5, 12.8%), 2 About Right (34, 87.2%) or 3 Too Long (0, 0%). The results for questions two to seven are shown in Table 2. Finally, Question 8 enquired about Value for money: 1 Expensive (0, 0%), 2 About Right (22, 56.4%) or 3

Table 2: Response to Organisation Questions (2-7)

	Good		Adequate		Poor	
	Count	%	Count	%	Count	%
Q2. Handbook	25	64.1%	13	33.3%	1	2.6%
Q3. Supp Materials	26	70.3%	11	29.7%	0	.0%
Q4. Time-tabling	29	74.4%	9	23.1%	1	2.6%
Q5. Continuity	31	79.5%	8	20.5%	0	.0%
Q6. Subject Balance	28	71.8%	10	25.6%	1	2.6%
Q7. Room	1	2.6%	19	48.7%	19	48.7%

Cheap (17, 43.6%).

With the exception of the room the course organisation seems to have been acceptable to most participants. Clearly some improvement in the production of the handbooks and supplementary materials is required and this will have to be addressed for future courses. The lecture room in question is one that has been used before by the ISA for Workshops, but it is clearly unsuitable as two-day teaching venue and we should seek a comfortable amphitheatre, instead.

Setting course costs in a new market requires some intelligent guesswork. The ISA's main aim is to train statisticians and not to regard training as a revenue generating activity. That said, these events must pay their way and generate some income to re-invest in the training programme with a view to making it self-sufficient in the longer-term. This first event made a provisional profit of c€500 – the accounts have yet to be finalised. In the run-up to the course, when the full participation figures were unknown, it was not completely clear that any profit would accrue. With hindsight, it arguable, that the basic course fees (€95 for students, €125 for ISA members and €145 for non-ISA members) might reasonably have been set at a higher level (see Q8 above). Some organisations levy courses and organisers might prefer

to have a definite, per capita, sum to return to the ISA. Certainly this organiser would have been more comfortable with a net profit of c€1000 (i.e., an effective ISA levy of €25 ea). No doubt the Executive can discuss this matter.

Other questions (scored out of 10) included: Dublin as a venue (mean = 8.7), Attending another Dublin-based course (mean = 9.2) and Attending a non Dublin-based course (mean = 7.4). When asked if they would prefer a venue outside Dublin only 20% of the participants responded affirmatively. Dublin-based islanders all preferred Dublin, other islanders preferred to be outside of Dublin and visitors also preferred Dublin, although some of the latter would consider attending other venues.

The evaluation form also allowed for comments and many participants took the time to comment thoughtfully on the course. Among many good ideas, were: (a) organising a mini-mixer on the first night, (b) organising lunches and including the cost in the course fee, (c) using a microphone when the audience is over 30 and inevitably (d) using a bigger and more comfortable lecture theatre. Organisers of future events will find these suggestions helpful.

This is our first two-day training event. It has demonstrated that a market, with an international dimension, exists for advanced training in Statistics. The ISA is encouraged by the positive evaluation of the course and would like to thank the participants. We also thank Professor John Haslett (TCD) and his helpful administrative staff, the Research Office in TCD and the community of statisticians in Ireland for their continuing support of ISA activities. A second course, on Hierarchical Bayesian Models (with Winbugs) is in the process of being organised. In view, however, of the many Statistical events taking place in Ireland in 2006, it has been scheduled for March 2007. We look forward to seeing many of you there!

Professor Gilbert MacKenzie
Organiser
Limerick,
21st April, 2006.

21st IWSM
International Workshop on Statistical Modelling
Galway, Ireland:
Monday 3 to Friday 7 July, 2006

Pre-workshop course: Sunday 2 July

www.nuigalway.ie/math/IWSM2006/

The International Workshop on Statistical Modelling is an annual conference organised by the Statistical Modelling Society. The workshop concentrates on the various aspects of statistical modelling, including theoretical and methodological developments, applications and computational methods.

The scientific programme is characterised by having no parallel sessions and is made up of invited lectures, contributed papers, and posters, and a pre-workshop tutorial.

Invited Speakers

- Gerda Claeskens (K U Leuven, Belgium)
 - *On Focussed and Less Focussed Model Selection*
- Garrett Fitzmaurice (Harvard School of Public Health, Boston, USA)
 - *Methods for Handling Dropout in Longitudinal Data Analysis*
- John Haslett (Trinity College Dublin, Ireland)
 - *Bayesian Palaeoclimate Reconstruction*
- Leonhard Held (LMU, Munich, Germany)
 - *Quantitative assessment of probabilistic forecasts with applications in epidemiology*
- Byron Morgan (University of Kent, UK)
 - *New methods for including covariates in models for the survival of wild animals.*

Short Course: Sunday 2 July

Statistics for Microarrays: a one-day tour by Ernst Wit (Lancaster, UK)

Venue: National University of Ireland, Galway

Registration Fees

Full fee: €380 (includes membership of *Statistical Modelling Society* and subscription to ***Statistical Modelling***)

Student fee: €200 (includes membership of *Statistical Modelling Society*)

Short Course: €80

Social Programme

The workshop will feature a full social programme including a complimentary welcome reception, excursion to Connemara and conference dinner.

Excursion: €40; Conference Dinner €40

Further information

Details about registration for the workshop, accommodation, and further information are available on the workshop homepage

www.nuigalway.ie/math/IWSM2006/

Contact details:

Professor John Hinde
Department of Mathematics
National University of Ireland, Galway
Galway, Ireland

Tel: +353 91 492043
Fax: +353 91 494542
email: john.hinde@nuigalway.ie

Short Course

Statistics for Microarrays: a one day tour

Ernst Wit (Lancaster University, UK)

Sunday 2 July 2006 from 9am to 5pm

Registration Fee: €80

To Register contact:

Dr. Noreen Quinn

Dept. of Mathematics

National University of Ireland, Galway

Ireland

Fax: +353 91 494542

Email: noreen.quinn@nuigalway.ie

Brief Description

Microarray experiments have become a model for how new breakthroughs in high-throughput biotechnologies will call upon computational scientists for help. Data from such experiments are high-dimensional, noisy, but form at the same time a highly structured system, about which other related information (sequence data, gene ontology, proteomic data, metabolic data) is available. Statistically inclined scientists are the type of computational scientist ideally suited to deal with these types of experiment.

In this one-day course we will focus on a range of statistical issues that come up in the design and analysis of microarray data:

- **Design**
 - How to make efficient microarray designs?
 - How do real microarray experiments compare with optimal microarray designs?
 - What is RNA pooling and is it helpful?
 - How to analyze a designed microarray experiment?
- **Normalization**
 - How can artefacts be removed before analyzing the data?
 - How to integrate data from multiple experiments?
- **Inference**
 - What does it mean to find differentially expressed genes?
 - How to control the False Discovery Rate?
 - How to find genes that predict class membership?
- **Modelling**
 - Can microarray data play a role in modelling molecular biological processes?
 - An example of how to model regulatory motifs and to infer post-translational modification from microarray data.

General Information

The course is a one day course with breaks for morning and afternoon tea and lunch. The course will commence at 9:00am and finish at 5:00pm. As we will be installing software for the course, participants are strongly encouraged to bring a laptop and arrive at 8:30am to allow time for distribution of course material, software and other relevant files. Participants are welcome to bring their own datasets to try out the software and exchange ideas. There may be time at the end of the course to work on these either individually or at a group level.

ABOUT THE PRESENTER:

Prof. Ernst Wit is a Chair of Biometrics in the Maths and Stats Department at Lancaster University (UK). Ernst's main research interests are in the statistical modelling of molecular biological processes. One particular interest is the design, analysis and inference of microarray experiments. He has worked on optimal design, multivariate analysis, hierarchical modelling and mixture models. Ernst is a member of the Research Committee of the Royal Statistical Society and an

associate editor of *Applied Statistics* and *Biostatistics*. He also has a thinly disguised interest in Philosophy and foundational issues in statistics.

Ernst Wit is an author of the book *Statistics for Microarrays: Design, Analysis and Inference*, together with John D. McClure (Wiley 2004).