INTERNATIONAL CONFERENCE OF THE ROYAL STATISTICAL SOCIETY



Statistics in a changing society

175 years of progress

Conference directory





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Bret Stath.

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Ceud Mile Failte an Dùn Èideann [A hundred thousand welcomes to Edinburgh]

...but you don't need to be bilingual to enjoy the RSS 175th anniversary conference here in Edinburgh.

As well as a packed programme of sessions covering Statistics in a Changing Society over the last 175 years, we have strived to give delegates a taste of our Scottish Heritage.

We start with the reception in Edinburgh Castle with spectacular views out over Auld Reekie [Scots for 'old smoky'], where 450 delegates will be welcomed by the Scottish Minister for Enterprise, Energy & Tourism, Jim Mather. (His portfolio covers Official Statistics).

We end up at the foot of the Royal Mile (and round the corner) at Our Dynamic Earth for the conference dinner. In between we'll have some fun and dance at the ceilidh to Bella McNab Band (guidance provided), a sail on the Forth, tracing Scottish roots at Register House, or one of the many walking tours in the 'auld toon'. Finally, a few words you may hear while at the conference and not be sure what they mean:

Dreich – what the weather is likely to be while we are in the sessions. No chance of an Indian summer this year

Bevied – hopefully few of the young statisticians will get to this state on Wednesday night after partaking of beers, wines and spirits

Stocious – another word for the above state

Birl – twirl your partner in Strip the Willow at the ceilidh

Smashin – awesome – how you'll describe the conference on Friday.

Mary Sweetland Chair, local co-ordinating committee

Local co-ordinating committee members

Mary Sweetland, NHS Scotland, ISD (Chairman) Katy Barratt, Scottish Government Darius Blaszczak, NHS Scotland, ISD Natalia Bochkina, Edinburgh University Anthony Fielding, retired, Birmingham University Alan Forrest, Royal Bank of Scotland Scott Heald, NHS Scotland, ISD Cecilia MacIntyre, General Registrar's Office Scotland Brian Miller, Institute of Occupational Medicine Gillian Raab, Statistical Consultant Jill Sales, Biomathematics & Statistics Scotland Mairi Spowage, Scottish Government Jill Tefer, Statistical Consultant

The Royal Statistical Society acknowledges with thanks the support through sponsorship of the following organisations



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ROYAL Special conference offer! **Become a Fellow** STATISTICAL SOCIETY Join the RSS today for 2010 - and receive the last four months of 2009 free! For just £82.00 (or less!*) you will receive: No further subscription Journal of the Royal Statistical Society fees payable Significance, the Society's guarterly magazine until 2011. • RSS News and RSSeNews, the Society's newsletter Discounts on Society conferences e and many more benefits Please ask at the RSS * reduced rates apply for students, retired and stand for more newly graduated members, and those in information and an application form! **EDA** countries

General information

Badges

Conference attendees are encouraged to wear their badges and lanyards at all times while in the Conference Centre and at the evening social events. Catering staff may not be able to serve individuals who cannot be identified as conference attendees.

Lost badges will be replaced at the discretion of the conference organiser. A replacement fee may be charged.

Getting to social events

As all the main social events are located centrally off the Royal Mile we will not be organising transport for delegates. Members of the organising committee and RSS staff members will be located on route to each venue to help guide you to the correct buildings and entrances. The exception to this will be the Wednesday evening boat trip for which coach transport has been arranged – please see your event ticket for details.

Internet access

The main conference venue Appleton Tower has wi-fi access. Passes will cost £3 per day.

Any delegates resident at Pollock Halls can purchase a 24 hour pass from the main reception there, which can also be used at Appleton.

There will also be a small number of computers in the exhibition and refreshments area - login passes cost £1 per day.

Local information

Members of the local organising committee will be happy to offer help and information on local facilities – they can be identified by their 'Organiser' badges.

The Edinburgh Convention Bureau will also have an information stand in the exhibition area, which will be staffed on Tuesday and Wednesday.

Luggage

We are not able to offer a luggage store at the conference venue – on your day of departure please make arrangements to leave your luggage at your accommodation.

Lunch

Lunch will be served in Teviot Row House – a two minute walk from Appleton Tower. Dessert and tea/coffee will be served back in the exhibition area in Appleton.

Mobile phones

We ask that you switch off your mobile phones when you are in sessions.

Online Tools

The conference blog can be found at *www.rssconference.blogspot.com* and you can also follow proceedings on Twitter: RSSConf2009. The RSSeNEWS site (*www.rssenews.org.uk*) has links to the blog and forums on conference proceedings for members.

Photography

The Society will have a photographer (*www.simonwilliamsphotography.co.uk*) taking photographs in most sessions and at social events. The Society may use photographs taken in publications and in future publicity. If you would prefer your photograph not to be used in this way please contact the conference office.

Sessions

Most sessions will be held in one of the five lecture theatres on the ground and first floor of Appleton Tower. In addition the opening plenary session and a set of parallel sessions on Tuesday will take place in the David Hume Lecture Theatre block next door and on Wednesday and Thursday parallel sessions will also take place in room 2.12 on the second floor in Appleton

Poster presentations, 5pm, Tuesday 8 September

The following presenters will give a two-minute overview of their poster presentation which will be on display at the poster reception which follows at The Hub.

(The final running order will be available in the conference pack.)

Faridatulazna Ahmad	Elizabeth Merrall
Qazi Ali	Brian Miller
Paul Askew	Valentin Molina Moreno
Ragab Ayman Fouad	Isabel Natário
Jessica Barrett	Tereza Neocleous
Carlo Giovanni Camarda	Andrea Neri
Ruoling Chen	Angela Noufaily
Frances Denny	Omar Paccagnella
Wendy Dickinson	Krishna Palipudi
Jim Freeman	Michail Papathomas
Rhian Gabe	Jenny Petersson
Carolina Garcia-Martos	Eric Pokem
Ignacio Ruiz Guerra	Athanase Polymenis
Beverley Hale	Mahama Abdul Salam
Hisham Abdel Hamid	María Jesús Sánchez
Marc Henrion	Shah-Jalal Sarker
Martyn Hill	Olanrewaju Shittu
Kenneth Humphreys	Inês Sousa
Shereen Hussein	Koduri Srinivas
Robert Kunst	Rutang Thanawalla
Esther Laird	Francois van Graan
Gareth Lui-Evans	Cristiano Varin
Victor Manuel Martin Lopez	Biatat Viani
Anna & Massimiliano Manca-Mascherini	Ma Xiaojuan
Fiona McElduff (winner, best poster RSC 2009)	Zhengzheng Zhang

LUNCHTIME FRINGE MEETING

Wednesday 9 September, 13.30, Room 2.12 Appleton Tower

> Michelle Carolan Susan Crouch Jamie Tratalos (Dr Foster Intelligence)

Analysis needs of healthcare organisations and professionals

The NHS Next Stage Review led by Lord Darzi, has refocused minds on the challenge of delivering high quality care for all and the need for making the information about the quality of care widely available in order to reveal variations.

We will discuss the varied information needs of healthcare organisations and professionals and the data underpinning them. Ranging from routine reporting to comprehensive programmes aimed to tackle health inequalities.

SCOTSTAT

www.scotland.gov.uk/scotstat

ScotStat is the network for consulting data users, data providers and other stakeholders about official statistics in Scotland. ScotStat has a dedicated website and a register of users.

 ScotStat allows you to:
 register which Scottish official statistics you are interested in

- keep up-to-date with developments
- receive email updates
- let us know what you think about Scottish official statistics
- contact other ScotStat members

scotstat@scotland.gsi.gov.uk

Session timings

Plenary talks

will last for 30-45 minutes plus time for questions and discussion.

Invited talks

will last between 20 and 30 minutes plus time for questions and discussion.

Contributed talks

will last for 20 minutes including time for questions and discussion.

Tuesday 8 September: morning programme

8.30am	Registration opens Appleton Tower foyer [David Hume LT A]	9am Young Statisticians' Networking Breakfast (Venue: Teviot Row House) Come and meet other career young statisticians at the beginning of conference, make new contacts and renew
	(old ones over breakfast
	Opening of conference:	
10.00 to 11.10	Opening Plenary (Plenary 1)	
	Sir David Cox	
	The Royal Statistical Society: past, present and future	

coffee...coffee

	Parallel session A	Parallel session B	Parallel session C
	[Appleton 4]	[Appleton 5]	[Appleton 1]
11.40 to 13.00	<section-header></section-header>	Session 1B Some methodological issues in longitudinal studies (invited) John Bynner (Longview) Longitudinal and life course studies – a new interdisciplinary international journal Harvey Goldstein (University of Bristol) Handling attrition and non- response in longitudinal data Bianca de Stavola (London School of Hygiene and Tropical Medicine, stockholm University and Karolina Institute) Familial and socio-economic influences on foetal growth across three generations: the Uppsala Birth Cohort Multigenerational study, Sweden, 1915-2002	Session 1C General (contributed) 1 David Boniface (University College London) Components of adjustment to regression sums of squares and their representation on a new generalisation of the Venn diagram Charles Jones (University of Toronto) Bootstrap estimation in practice: correcting for sample attrition in Canada's National Longitudinal Survey of Children and Youth Giancarlo Manzi (University of Milan, Italy) Nonlinear principal component analysis with missing data: a forward imputation approach A new method for constructing exact tests without making any assumptions

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Parallel session D [Appleton 2]	Parallel session E [Appleton 3]	Parallel session F [David Hume LT A]
[Appleton 2] Session 1D History of statistics (contributed) Sheila Bird (Medical Research Council Biostatistics Unit) Learning from a random sample of the history of RSS external relations Martin Forster (University of York) Surviving slavery: mortality at Mesopotamia, a Jamaican sugar estate, 1762–1832 Christian Lewin An early statistical framework Peter Sprent	[Appleton 3] Session 1E Health related 1 (contributed) Geoff Jones (Massey University) Identifiability of models for multiple diagnostic testing in the absence of a gold standard George Kafatos (Open University and Health Protection Agency) Estimating seroprevalence: the impact of assay standardisation Jaya Satagopan (Memorial Sloan-Kettering Cancer Center) An efficient sampling scheme for identifying an informative sub-	[David Hume LT A] Session 1F Census (invited) Kevin Schurer (University of Essex) The integrated census microdata project Paul Boyle (St Andrews) Linking the Scottish Longitudinal Study back through time Peter Scrimgeour (General Register Office Scotland) The 2011 Scottish Census: drawing on the lessons of the past
Statistics in Australia – the adolescent era	cohort to measure new risk factors for a continuous outcome	

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	Parallel session A	Parallel session B	Parallel session C
	[Appleton 4]	[Appleton 5]	[Appleton 1]
	Session 2A	Session 2B	Session 2C
14.00 to	Influential read papers (invited)	Statistical education (invited)	Market research (invited)
15.20	Per Kragh Andersen (Department of Biostatistics, University of Copenhagen) The influence of "Regression models and life-tables" Geoff McLachan (University of Queensland) The influence of the EM paper by Dempster et al	Allan Rossman (California Polytechnic State University) Some curriculum initiatives for undergraduate statistics in the US Helen Johnson and Helen MacGillivray (Queensland University of Technology) Constructing environments for early learning of statistical thinking in higher education Irena Ograjensek (University of Ljubliana, Faculty of Economics) Teaching statistics as a university service course: an overview of past experiences, present dilemmas, and future challenges	David Walter (dunnhumby) Market research in practice Anatoly Zhiglivasky (Cardiff University) Mixed Poisson models for modelling consumer purchase behaviour Heiko Grossman (Queen Mary University of London) Experimental designs for conjoint analysis studies Martina Vandebroek (Katholieke Universiteit Leuven, Belgium) Sequential construction of choice sets for estimating the panel mixed logit model

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	[Appleton 4]		
15.50 to 16.50	Plenary 2		
10.50	Sir lain Chalmers (James Lind Library) Controlled trials and the RSS at 175		
17.00 to 18.00	[Appleton 1]	[Appleton 2]	[Appleton 3]
10.00	Poster presentations 1*	Poster presentations 2*	Poster presentations 3*
	The Hub		
19.00	Poster reception		
20.30	Ceilidh		
close of co	onference for the day		

RSS conference 2009 – directory

Parallel session D [Appleton 2]

Session 2D

Statistics & public accountability (invited)

Alysson Pollock Statistics & public accountability: monitoring and evaluating new services delivery policies in the NHS

Alison MacFarlane (City University London) How did we get here and where are we going: routine health service and public health data

Parallel session E [Appleton 3]

Session 2E

Health-related 2 (contributed)

Jane Warwick (Queen Mary University of London) Mammographic breast density: why the most precise measure may not be the most clinically useful

William D Grant (SUNY Upstate Medical University) The statistician and small clinical trials: tales from the front lines

Nick Steen (University of Newcastle upon Tyne) The role of the patient preference arms in the analysis of a comprehensive cohort study

Chris Roberts (University of Manchester) The design implications of care provider variation for nonpharmacological treatment trials Parallel session F [David Hume LT A]

Session 2F

Statistical challenges in brain imaging (contributed)

Thomas Nichols (GlaxoSmithKline) Statistical opportunities in brain imaging: a case study with neuroimaging meta analysis

John Aston (University of Warwick) Twice the fun-ctional: using functional principal component analysis in functional neuroimaging

Giovanni Montana (Imperial College London) Genomewide multivariate association discovery in imaging genetics studies

...tea



Wiley-Blackwell have kindly provided the prizes for the best poster

*See page 6 for the list of poster presenters

Wednesday 9 September: morning programme

	Parallel session A [Appleton 4]	Parallel session B [Appleton 5]	Parallel session C [Appleton 1]
9.00 to 10.00	PLENARY 2: John Beddington Chief scientific advisor		
	Session 3A Retrospective read paper meeting (invited)	Session 3B International statistics 2 (invited) Sally C Morton	Session 3C Agriculture and environment (contributed) Jon Barry (Cefas)
10.00 to 11.20	Yoav Benjamini (Tel Aviv University) Discovering the false discovery rate	(American Statistical Association/RTI International) Present and future challenges in statistics, and collaborative solutions	A model-based framework for the estimation of species richness from grab samples
		Marie Bohatá (EuroStat) The role of the European Union in mastering the challenges for official statistics	Esben Budtz-Joergensen (Department of Biostatistics, University of Copenhagen) Different approaches to model averaging in environmental risk assessment
			Sebastian Dietz (University of Passau, Germany) A multivariate cointegration approach to the influence of bioethanol and biodiesel on the price levels of certain agricultural commodities
			Alan Kimber (University of Southampton) Ripeness of bananas and manure: a prediction problem using a least squares support vector machine
Breakb	reakbreakbreakbreakbreakbr	eakbreakbreakbreakb	reakbreakbreakbreakbreak
11.40 to 13.00	Session 4A The surveillance society and the role of the statistician (Invited)	Session 4B Statistical image analysis (invited)	Session 4C Agricultural statistics (invited)
	Stephen Penneck (ONS Director of Methodology) Ivor Goddard (former RSS Director General) Andrew Garratt (RSS Press and Public Affairs Officer)	Kanti V Mardia (University of Leeds) Has there been any real impact of statistics on image analysis in the last three decades? Elke Thönnes (Department of Statistics, University of Warwick) Characterising HRCT lung images using integral geometry Gerie van der Heijden (Netherlands) Particle filters for controlling robots	Roger Payne (VSN International) 90 years of research and collaboration by statisticians in agricultural research lain McKendrick (Biomathematics and Statistics Scotland) Statistical models of veterinary diagnostic test characteristics: applying statistics for farmers and policy makers Martin Boer (Biometris, WUR, Netherlands) A mixed-model quantitative trait loci (QTL) analysis for multiple environment trial data

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Parallel session D [Appleton 2] Parallel session E [Appleton 3] Parallel session F [Appleton 2.12]

Session 3D General (contributed) 2

Jian Zhang (University of York) Semiparametric plaid models with applications

Neil Spencer (University of Hertfordshire) Detecting misspecification in the multilevel model using the forward search

Biiman Chakrobarty (University of Birmingham) On a multivariate generalisation of quantile-quantile plot Session 3E Complex interventions in primary care (invited)

Michael J Campbell (University of Sheffield) Patient decision aids in primary care

Nigel Stallard (Warwick Medical School, The University of Warwick) Designing clinical trials of complex interventions – what can we learn from adaptive designs for drug trials?

Toby Prevost (King's College London) *Meta-analysis methods for planning and evaluating behaviour-change interventions*

LUNCHTIME FRINGE MEETING

13.30, ROOM 2.12 APPLETON TOWER

Michelle Carolan Susan Crouch Jamie Tratalos (Dr Foster Intelligence)

Analysis needs of healthcare organisations and professionals

The NHS Next Stage Review led by Lord Darzi, has refocused minds on the challenge of delivering high quality care for all and the need for making the information about the quality of care widely available in order to reveal variations.

We will discuss the varied information needs of healthcare organisations and professionals and the data underpinning them. Ranging from routine reporting to comprehensive programmes aimed to tackle health inequalities.

...break...break...break...break...break...break...break...break...break...break...break...break...break...break

Session 4D Statistical analysis of longitudinal data (contributed)

Dylan Kneale (Institute of Education, University of London) A cross-cohort comparison to examine changing patterns in leaving the parental home in Britain across three decades (1974-2004)

Paola Zaninotto (UCL) Socioeconomic status and age trajectories of health among the older

Jenny Head (UCL) Estimating social inequalities in trajectories of health decline in studies with informative drop-out: a sensitivity analysis

Amanda Sacker (University of Essex) A multiple process latent transition model of poverty and health Session 4E Health-related 3 (contributed)

Stephen Duffy (Barts and the London School of Medicine and Dentistry) Problems and methods in deciding frequency of cancer screening

Marc Saez (GRECS, University of Girona, Spain) Spatial variability in relative survival from female breast cancer

Paddy Farrington (Open University) Self-controlled case series analyses with event-dependent observation periods

Karen J Cairns (Queens University Belfast) Using discrete event simulation to assess the impact of a colorectal screening programme

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Session 4F Census and crime (contributed)

Jane Naylor (Office for National Statistics) Balancing risk and utility - statistical disclosure control for the 2011 UK Census

Elizabeth Merrall (MRC Biostatistics Unit) Multi-modal sentencing – potential for reduced pressure on the prison system and an in-built randomised controlled

and an in-built randomised controlled trial to assess impact on re-incarceration rates and costs

Wednesday 9 September: afternoon programme

	Parallel session A	Parallel session B	Parallel session C
	[Appleton 4]	[Appleton 5]	[Appleton 1]
14.00 to	Session 5A	Session 5B	Session 5C
15.20	Scotland in statistics (invited)	Future Bayesian computation (invited)	Out of the archives: using primary sources in the digital age (invited)
	Anne Cameron (Centre for History of Medicine, University of Glasgow) The establishment of civil registration in Scotland Michael Anderson (University of Edinburgh) Scotland's multiple demographies: past and present Frank Popham (University of St Andrews) A 'Scottish effect' for health? Dette Cowden & Mairi Spowage (Scottish Government) The new approach to Government: challenges and opportunities for statisticians	Mark Beaumont (University of Reading) Inference from complicated to complex systems: prospects for approximate Bayesian computation Gareth Roberts (University of Warwick) Some recent developments on auxiliary variables, perfect simulation, and importance sampling	Janet Foster (Royal Statistical Society) Revealing the RSS archives Vanessa Carr (Head of academic liaison, The National Archives) We have what you need!': research sources in the public records for social scientists Matthew Woollard (University of Essex) The census and the archive, 1801–1931 and beyond
teatea 15.40 to 17.00	tea.tea	ateateateateateatea Session 6B Bio-informatics (invited) Richard Durbin (Wellcome Trust Sanger Institute) Simon Tavare (University of Cambridge) I spy with my little eye: applications of tracking for Drosophila behavioural genetics Leonardo Bottollo (Department of Epidemiology and Public Health, Imperial College London) Partial exchangeable hierarchical models with an application to	Session 6C Longitudinal studies (contributed) lan Plewis (Social Statistics, University of Manchester) Growth curves for educational attainments Nikos Tzavidis (Social Statistics, University of Manchester) M-quantile random effects models for multilevel and repeated measures data Mark Tranmer (Social Statistics, University of
		models with an application to proteomics Quantitative Trait Loci (pQTL)	Manchester) Networks of action and events over time: analytic designs for continuous-time longitudinal network data
17 00 to	Plenary 4: Significance		

18.00

Plenary 4: Significance John Haigh The Kieran Fallon trial – before and after Helen Joyce The use of charts, graphs and data in journalism

Parallel session D [Appleton 2]

Session 5D General (contributed) 3

David Firth (University of Warwick) Do journal rankings reflect research quality?

John Copas (University of Warwick) One hundred years of goodness of fit tests: time to ask what they are for?

Dankmar Bohning

(University of Reading) Evaluating the accuracy of diagnostic systems by means of meta-analysis

Joseph Gastwirth

(George Washington University) Using a latent class screening test model to estimate the fraction of fake art offered for sale on eBay: application to the works of Henry Moore

Parallel session E [Appleton 3]

Session 5E Health-related 4 (contributed)

Paul Baxter (University of Leeds Biostatistics Unit) Statistical issues for the assessment of inequalities in cardiac care across England and Wales

Evangelos Kontopantelis (National Primary Care R&D Centre) Investigating the impact of the Quality and Outcomes Framework on the quality of primary care

David Reeves

(National Primary Care R&D Centre) Uses and abuses of Interrupted Time Series to evaluate national programmes: an example using the Quality and **Outcomes Framework in England**

James P Bentham

(Imperial College London) Assessing results produced by a text mining algorithm

Parallel session F [Appleton 2.12]

Session 5F **Bioinformatics (contributed)**

Matthew Sperrin

(Lancaster University) Direct effect testing: a two-stage procedure for effect size and importance with correlated binary predictors of a binary response

> **Christopher Fallaize** (University of Leeds) Hierarchical Bayesian modelling of pharmacophores

Alexey Koloydenko

(Royal Holloway, University of London) An asymptotic theory for improving inference in Hidden Markov Models

Michael Schimek

(Medical University of Graz and Danube University Krems, Austria) An inference procedure for random degeneration of paired rank lists and its application in bioinformatics

Session 6D History of statistics (invited)

Eileen Magnello

(University College London) The early-Victorian statistical societies and the establishment of the Statistical Society of London

Chris Pritchard (McLaren High School, Callander / Scottish Mathematical Council) The early history of the Ogive

Session 6E Health-related 5 (contributed)

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Dilip Nath (Gauhati University) Equality in safe delivery and Its determinants in India

Mona Kanaan

(University of York) Effect of doctors' training in interpersonal and communication skills on women's satisfaction at labor and delivery: a stepped wedge cluster randomized trial in Damascus, Syria

Krista Gile

(Nuffield College, University of Oxford) Using a network model for prevalence estimation from respondent-driven sampling in hard-to-reach populations

Krista Fischer

(MRC Biostatistics Unit, Cambridge) Effects of blinding in a randomised trial on postmenopausal hormone therapy

Thursday 10 September: morning programme

	Parallel session A [Appleton 4]	Parallel session B [Appleton 5]	Parallel session C [Appleton 1]
9.00 to 10.20	PLENARY 5: Presentation of Society awards followed by Campion (President's invited) Lect Stephen Stigler (University of Chicago) Darwin, Galton, and the statistical wnlig	Colonel Clive Fairweather a Rawlins at the opening of P	nd Sir Michael
Breakbre	akbreakbreakbreakbreakbre	eakbreakbreakbreakbreakbr	eakbreakbreakbreakbreak.
10.50 to 11.50	Session 7A History of statistical computing (invited) Roger Payne (VSN International and Rothhamsted Research) 50 years of statistical computing at Rothamsted Gordon Blunt (Gordon Blunt Analytics Ltd) Computers and statistics in business – past and future	Session 7B Changing data sizes (invited) Michael Titterington (University of Glasgow) Discriminant analysis through the decades Jared Tanner (University of Edinburgh) The geometry of compressed sensing	Session 7C Statistics and war (contributed) Colonel Clive B Fairweather Military matters! Mark Hann (University of Manchester) A balanced factorial experiment of clinicians' performance in treating victims of a chemical weapons attack whilst wearing level C personal protective equipment Lucy M Carpenter (University of Oxford) Mortality and cancer morbidity in a cohort of British military veterans included in chemical warfare agent experiments at Porton Down
12.00 to 13.00	Session 8A Best of YSM 2009 (competition winners at the 2009 Young Statisticians Meeting) Gail Hutton (NATS) The application of statistical methods to collision risk modelling in aviation Zoë Lawson (Cardiff University) How consistent are we at assessing bruises? An investigative study Mark Kelly (Cardiff University) The impact of life course events on mental health: a longitudinal analysis of the British Household Panel Survey	Session 8B Financial risk (invited/contributed) Will Cook (Volterra Consulting Limited) Recessions, credit risk and capital Alexander McNeil (Heriot-Watt University) The case for fully integrated models of economic capital Pradip Tapadar (University of Kent) Asset allocation to optimise life insurance annuity firm economic capital and risk adjusted performance	Session 8C Longitudinal studies in health research (contributed) Adam Brentnall (Queen Mary University of London) A method for exploratory repeated measures analysis applied to a breast-cancer screening study Daphne Kounali (Clinical Trials and Evaluation Unit, Bristol Heart Institute, University of Bristol) The cost of pooling: bias-modelling of individual patient longitudinal data pooled across a small number of studies in cardiac surgery Marta García-Fiñana Application of joint modelling to longitudinal data with high rate withdrawal in eye research

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Parallel session D [Appleton 2] Parallel session E [Appleton 3] Parallel session F [Appleton 2.12]

.break...b

Session 7D General (contributed) 4

Juan José Fernández-Durán (Department of Statistics, ITAM, Mexico) *Circular (angular) data*

Markus Zwick (Federal Statistical Office Germany) Business micro data: access and anonymisation

Gang Xu (University of Lancaster) Information flow, volatility measurement and jump prediction Session 7E Health-related 6 (contributed)

Philip Sedgwick (St George's, University of London) Talking about risk: Integrating the teaching of medical statistics with clinical communication

Kimberley Kavanagh (University of Strathclyde) Assessing the risk of infertility in women following chlamydial infection using Bayesian synthesis

Georgious Effraimidis (Vrije Universiteit Amsterdam) A semiparametric test for independence in competing risk models Session 7F Statistics in educational research (contributed)

Caroline Harper (National Audit Office) Statistics on young people not in education, employment or training (NEET)

> Sandra Johnson (Assessment Europe) Quantifying and interpreting assessment reliability

Session 8D Climate change (contributed)

Philip Jonathan (Shell Research) A spatio-directional model for extreme waves in the Gulf of Mexico

> David Thomson (Queens University, Ontario) Spectral analysis of Burgundy pinot noir grape harvest dates

Lynsey McColl (Met Office Hadley Centre) Quantifying the uncertainties of climate change: from global temperatures to local impacts

Session 8E

Exploding myths (contributed)

Rosa Fernandez (SKOPE, University of Oxford) Computers at work: blessing or curse?

Paul Marchant (Leeds Metropolitan University) The evaluation of an area-level crime reduction intervention

Michael Anyadike-Danes (Economic Research Institute of Northern Ireland) Who creates the jobs? Survival and growth of the quarter of the million British firms born in 1998 Session 8F General (contributed) 5

Samuel Peck (University of Leeds) Multiscale imputation of irregular spatial data

> Denise Brown (University of Glasgow) Curve extraction and the analysis of facial shape

Andrew Wood (University of Nottingham) Saddlepoint approximations for transition densities in stochastic differential equations

hch....lunch

Thursday 10 September: afternoon programme

	Parallel session A [Appleton 4]	Parallel session B [Appleton 5]	Parallel session C [Appleton 1]
14.00 to 15.00	Session 9A Official statistics (invited) Sir Michael Scholar UK Statistics Authority: priorities, progress and change	Session 9B Best of RSC2009 (competition winners at the 2009 Research Students Conference) Andrew Simpkin (National University of Ireland Galway) An additive approach to derivative estimation Andrew Smith (University of Bristol) Nonparametric regression on a graph Jennifer Rogers (University of Warwick) Joint modelling of event counts and survival times	Session 9C Climate change 2 (contributed) Simon Gillam (Forestry Commission) Forest inventories – past and present Adrian Roberts (Biomathematics and Statistics Scotland) Comparison of statistical methods for phenology Irina Foss (Environmental Research Institute, North Highland College, UHI Millennium Institute) Eigen techniques as tools to study the decadal variability and predictability of Scottish temperature
	Official Statistics Section AGM, 15.00	(during the tea break) in Appleton 4	teateateateateate
15.30 to 16.50	Session 10A Professional statistical standards (invited) Mady Garrett (Quintiles Limited) Counterbalance – weighing up the need for professional statisticians in a global environment Stephen Penneck (Office for National Statistics) Continuing professional development (CPD) for statisticians in government Merican Statistical Association) Professional development and the American Statistical Association	Session 10B Statistics In educational research 2 (invited) Rebecca Pillinger (University of Bristol) Measuring ethnic segregation in schools: a model-based approach David J Bartholmew (London School of Economics) Reflections on the measurement of ability Linda Croxford (University of Edinburgh) Governing by numbers – performance management in school education	Session 10C Climate change (Invited) Roger Street (UKCIP) Users' perspectives on UKCP09, the latest set of climate projections for the UK David Sexton (Met Office) Making probabilistic climate projections for the UK Jonathan Rougier (University of Bristol) The role of low-order stochastic climate models
17.00 to 18.00	Plenary 6 David Wishart The flavour of whisky – a talk and tutored tasting		

ence dinner at Our Dynamic Earth....Evening: conference dinner at Our Dynamic Earth...Evening: conference dinner......

RSS conference 2009 – directory

Parallel session D [Appleton 2]

Session 9D Bayesian 1 (contributed)

Oliver Ratmann (Department of Public Health and Epidemiology, Imperial College, London) Approximate Bayesian computation under model uncertainty

Craig Reed (Brunel University) Partially collapsed Gibbs sampler for Bayesian quantile regression

Parallel session E [Appleton 3]

Session 9E Health-related 7 (contributed)

Sofia Dias (University of Bristol) Methods for assessing consistency in mixed treatment comparisons meta-analysis

Andrew Titman (Lancaster University) Accounting for a non-ignorable tracing mechanism in a retrospective breast cancer cohort study

Stephen Walter (Clinical Epidemiology and Biostatistics, McMaster University, Canada) Estimating treatment effect from clinical studies with missing data at baseline: relative efficiency of adjusted and unadjusted analyses Parallel session F [Appleton 2.12]

Session 9F General (contributed) 6

Gianluca Baio (University College London) A decision-theoretic framework for the application of cost-effectiveness analysis in regulatory processes

lan Morton (Scottish Government) The use of hot decking and propensity score matching in comparing student outcomes

> lan Hunt What are you inferring?

a...tea

Session 10D History of statistics 2 (contributed)

Philip J Watson (Retired chief statistician, International Rubber Study Group) Rubber statistics – their history and value

Frank Nolan (Office for National Statistics) State figures – review of the 1984 reflections of Claus Moser and John Boreham

lan MacLean Post war development of detailed business statistics – the decline and fall of detailed production statistics

> **Gillian Lancaster** (Lancaster University) How statistical literacy and official statistics shaped social enquiry in the 19th century

Health in Scotland (contributed) Sarah Barry (Robertson Centre for Biostatistics)

Session 10E

The Scottish Health Informatics Programme (SHIP): how can electronic patient records support clinical trials? Amanda Weir

(Health Protection Scotland) Modelling the impact of a general practice based screening intervention on the economic burden of chronic hepatitis C in Scotland

Ken Nicholson (Information Services Division – National Services Scotland) Informing staffing levels in Scottish Care Homes using DEA, linear regression, CHAID

David McLernon (University of Aberdeen) The prediction of liver disease diagnosis and all-cause mortality following liver

function testing in primary care patients using accelerated failure time models

Session 10F GLAM: array methods in statistics (contributed)

> lan Currie (Heriot-Watt University) An introduction to GLAM

Dae-Jin Lee (University Carlos III de Madrid, Spain) Space-time modelling of air pollution with array methods

Maria Durban (University Carlos III de Madrid, Spain)

Paul Eilers (Department of Biostatistics, Erasmus Medical Centre) Seasonal models for life tables

Friday 11 September: morning programme

[Appleton 4]

Session 11A

Hot topic: swine flu (Invited)

Chair: Sir John Savill (Chief scientist, Scottish Government Health Directorates)

> Christophe Fraser (Imperial College London)

> Chris Robertson (University of Strathclyde)

[Appleton 5]

Session 11B General (contributed)

Jake Ansell (University of Edinburgh) Experimenting with modelling default of small and medium sized enterprises (SMEs)

Alessandro Cardinali (University of Bristol) Costationarity and stationarity tests for locally stationary time series with application to stock index returns

Carolina Garcia-Martos (Universidad Politécnica de Madrid) Seasonal dynamic factor analysis and bootstrap inference: application to electricity market forecasting

Break...break...break...break...break...break...break...break...break...break...break...break...break...break...break

11.00 to 12.00

9:40 to 10:40

> Session 12A Improving Official Statistics – critical friends (Invited)

Jim Cuthbert (Independent statistician) Do Official Statistics provide an adequate basis for the debate about the UK economy?

Margaret Cuthbert (Independent economist) Do Official Statistics provide an adequate basis for debate about Scottish Independence

Jill Leyland (RSS vice-president and chair of the National Statistics Working Group) Improving Official Statistics – what the RSS is doing

[Appleton 4]

Plenary 7 Panel discussion – the future of statistics and the RSS

Karen Dunnell (Former National Statistician) Perspective from Official Statistics

Sara Hughes (Director of Statistics, GSK and PSI outgoing chair) Perspective from the pharmaceutical industry

Denise Lievesley (King's College London)

David Leslie (University of Bristol) The role of the emerging generation Session 12B Missing data in repeated measures studies (contributed)

Mouna Akacha (University of Warwick) Analysing the rate of change in a longitudinal study with missing data, taking into account the number of contact attempts

Shona Fielding

(University of Aberdeen) How useful is a reminder system in collection of follow-up quality of life data in clinical trials?

Jane Hutton

(University of Warwick) Modelling health scores with the multivariate skew normal

Close of conference, 'lunch to go' available.....Close of conference, 'lunch to go' available.....Close of conference, 'lunch to

12:10 to

13.30

[Appleton 1]

Session 11C Bayes (contributed)

David Elston (Biomathematics and Statistics Scotland) Prior influence plots

Svetlana Tishkovskaya (Postgraduate Statistics Centre, Lancaster University) Bayesian estimation with optimal quantising of data

George Streftaris (Heriot-Watt University) Bayesian inference for stochastic epidemic models with non-exponential tolerance to infection

[Appleton 3]

Session 11D Health 9 (contributed)

Neil Hawkins (University of York) You can run but you cannot hide: data analysis and decision-making in a resource limited healthcare system

Adele Marshall

(Queen's University Belfast) Classification and phase-type modelling of patient emergency admissions in hospital

...break...break...break...break...break...break...break...break...break...break...break...break...break...break

Session 12C General (contributed)

Peter Green (University of Bristol) Sensitivity of inferences in forensic genetics to assumptions about founding genes

Kevin Hayes (University of Limerick) Simultaneously testing means and variances from pairedsamples

> Valerie Isham (University College London) Rumours and epidemics on random networks

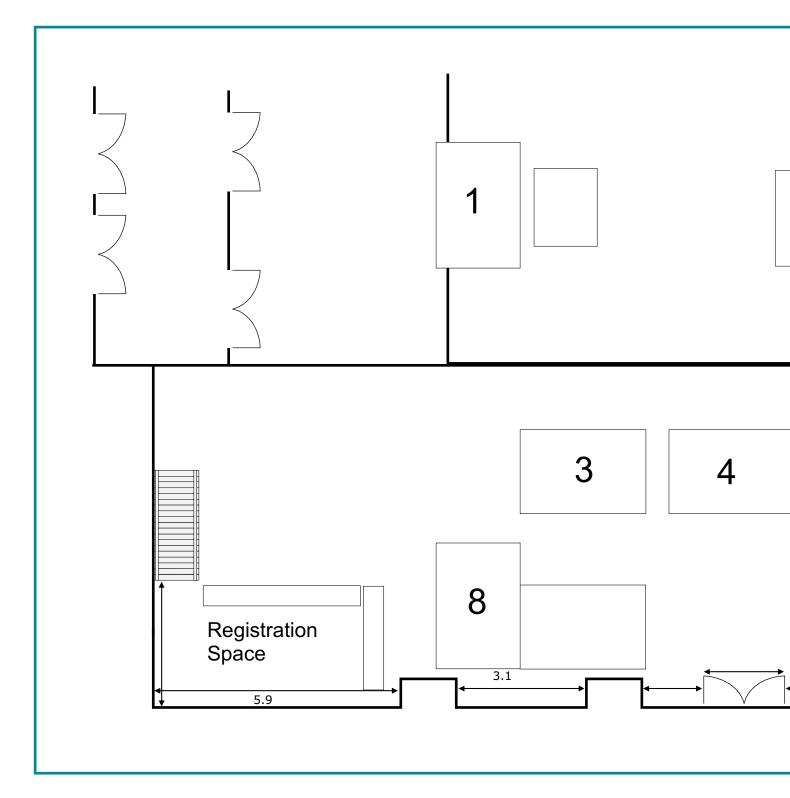
Session 12D Health-related 10 (contributed)

Irina Chis Ster (University College London, MRC Centre of Epidemiology for Child Health) Estimating the force of infection of chickenpox in young children in the UK

> Denis Mollison (Heriot-Watt University) Small worlds and giant epidemics

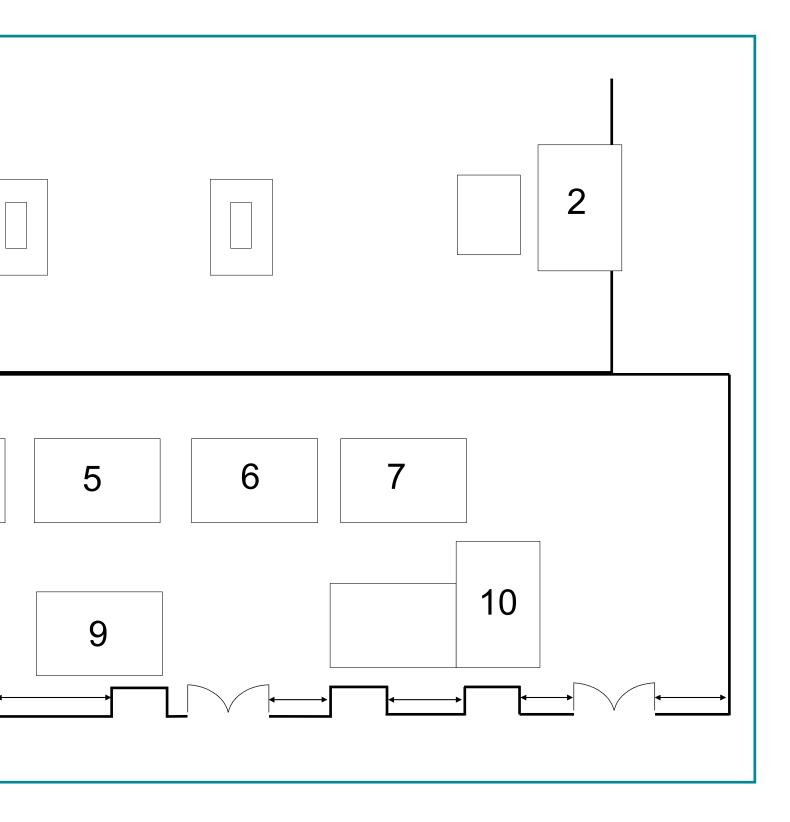
James P Scanlan (Attorney at Law) Measuring health inequalities by an approach unaffected by the overall prevalence of the outcomes at issue

o go' available.....Close of conference, 'lunch to go' available.....Close of conference, 'lunch to go' available....



Key to exhibitors

- 1 Edinburgh Convention Bureau (local information)
- 2 Taylor & Francis
- 3 Minitab
- **4** Oxford University Press

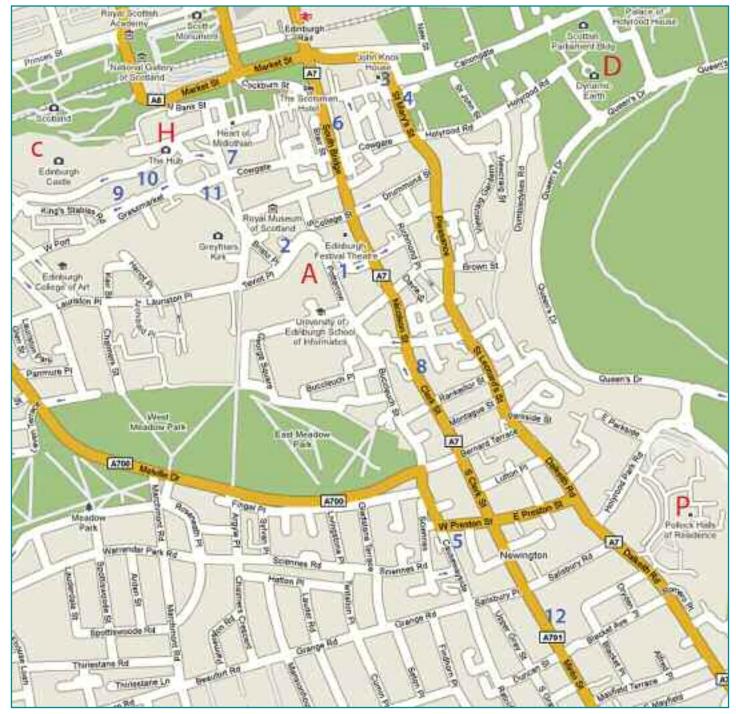


5 • ESRC Census Programme (Tuesday only)
• UK Statistics Authority (Wednesday & Thursday)

6 Palgrave McMillan

7 IOS Press

- 8 Royal Statistical Society
- 9 Postgraduate Statistics Centre (Lancaster University)
- 10 Wiley-Blackwell



Venues

- P Pollocks Halls
- A Appleton Tower
- C The Castle
- H The Hub
- **D** Dynamic Earth

Restaurants, Old Town

(In roughly increasing price order)

1. Double Dutch (café/restaurant)

Great quick bite, a few vegetarian options 27-29 Marshall Street, EH8 9BJ Tel: 0131 667 9997. Open Mon–Sun 9am–8pm.

2. Negociants (café/restaurant)

Students' favourite 45–47 Lothian Street, EH1 1HB Tel: 0131 225 6313. Open 10am until 1am.

3. The Tass (pub)

Great haggis, neeps and tatties. 1 High Street, EH1 1SR Tel: 0131 556 6338. Food served: Mon–Sat noon–4.30pm, 5–9pm; Sun 12.30–4.30pm, 5–9pm.

4. Empire (Turkish)

24 St Marys Street (Pleasance), EH1 1SU Tel: 0131 466 0100 Open daily: Midday – 11pm, no alcohol but can take your own. Live music in the evenings.

5. Hanedan (Turkish)

Great vegetarian selection; 41 Great Preston Street, EH8 9PY, 0131 667 4242. (Closed Monday) Lunch 12–3pm, Dinner: 5.30pm till late.

6. Pizza Express 23 North Bridge

7. Pizza Express

59/63 George IV Bridge

8. Kalpna (Indian vegetarian restaurant) (arguably best in town) 2-3 St Patrick Square, EH8 9EZ Tel: 0131 667 9890.

Lunch (all you can eat): Monday–Saturday: 12pm–2pm, Dinner: Monday–Saturday: 5.30pm–10.30pm, Sunday 6pm–10.30pm

9. Petit Paris (French)

38–40 Grassmarket, EH1 2JU Tel: 0131 226 2442 Food served: Monday–Sunday, noon–3pm, 5.30pm–10pm (until 11pm on Fri/Sat). (2 courses and coffee for £9.99 if seated between 5.30pm and 6.30pm)

10. Maison Bleue (*French and North African*) 36-38 Victoria Street, EH1 2JW Tel: 0131 226 1900.

11. The Outsider (*Brasserie, modern setting*) 15-16 George IV Bridge, Edinburgh, EH1 1EE Tel: 0131 226 3131

12. The New Bell (Modern Scottish, traditional setting. Above a pub called The Old Bell.) 233 Causewayside, EH9 1PH Tel: 0131 668 2868. Early evening menu (Monday to Sunday from 5.30pm to 6.45pm) Two courses £14.50, three courses £17.50.

Thanks and acknowledgements to those responsible for organising the conference

Members of the conference programme committee

Guy Nason, chairman (University of Bristol) Antony Fielding (University of Birmingham) Paul Kiff (University of East London) Ruth King (University of St Andrews) Alison Macfarlane (City University) Adele Marshall (Queen's University, Belfast) Richard Samworth (University of Cambridge) Mary Sweetland (NHS, Scotland/Chair, Local Organising Committee) Ben Torsney (University of Glasgow) Stephen Walters (University of Sheffield)

Members of the local organising committee

Mary Sweetland, chairman (NHS Scotland, ISD) Katy Barratt (Scottish Government) Darius Blaszczak (NHS Scotland, ISD) Natalia Bochkina (Edinburgh University) Anthony Fielding (retired, Birmingham University) Alan Forrest (Royal Bank of Scotland) Scott Heald (NHS Scotland, ISD) Cecilia MacIntyre (General Registrar's Office Scotland) Brian Miller (Institute of Occupational Medicine) Gillian Raab (Statistical Consultant) Jill Sales (Biomathematics & Statistics Scotland) Mairi Spowage (Scottish Government) Jill Tefer (Statistical Consultant)

Staff

Paul Gentry, Teresa Dewane, Sarah Barker, Charlotte Stovell, Mawreen Chapman, Samantha Ballard, Louisa Ashby and fellow staff at the Royal Statistical Society

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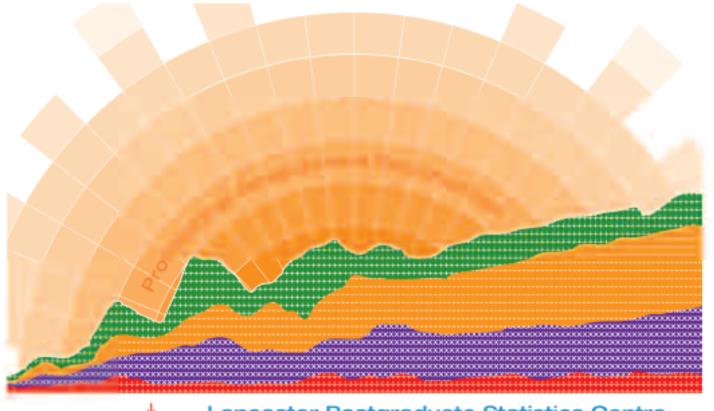
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Atlas.TI	3 December 2009
Questionnaire Design	Date to be arranged
Sampling Design	Date to be ananged
Going further with statistics	
Using R Software	12-13 November 2009
Generalised Linear Models	18-20 November 2009
Duration (or Survival) Analysis	20-21 January 2010
Dista Mining Techniques	3-4 February 2010
Using STATA	17-18 February 2010
Bayesan Methodu	25-26 February 2010
Intermediate SPSS for Windows (SPSS I)	3-4 March 2010
Structural Equation Modeling	17-18 March 2010
Multi-Level Models	21-22 April 2010
Methods for Missing Data	28-29 April 2010
Longitudinal Data Analysis	Date to be arranged
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