ROYAL STATISTICAL SOCIETY

3–6 SEPTEMBER 2012

TELFORD INTERNATIONAL CENTRE UK

DIRECTORY

RSS 2012

INTERNATIONAL CONFERENCE

Contents

Supporters and sponsors

We would like to thank the following organisations for their support of the conference:

Winton Capital for sponsoring the Awards ceremony and reception

Google for sponsoring the welcome reception

PSI and the **UK Statistics Authority** for their support of the statistical excellence awards

Select Statistics for sponsoring the internet access for delegates

Atass Sports for their support of the Young Statisticians Section's activities at conference

Mary Sweetland,
Chairman,
RSS 2012 Conference

Chairman's welcome

I'm pleased that so many fellow statisticians have been able to make their way to Telford for RSS 2012. We are looking forward to a stimulating and thought provoking conference in the heart of England. With the International Statistical Institute Congress held in Dublin last year, Council decided to skip a 2011 conference so that we could re-launch the annual events this year. We've reduced the length of the conference, and included the RSS annual awards ceremony as part of the programme.

We are delighted to have Professor Hal Varian, chief economist at Google, join us to give the President's Address on Wednesday. We look forward to hearing why he says that the sexy job in the next 10 years will be statistics.
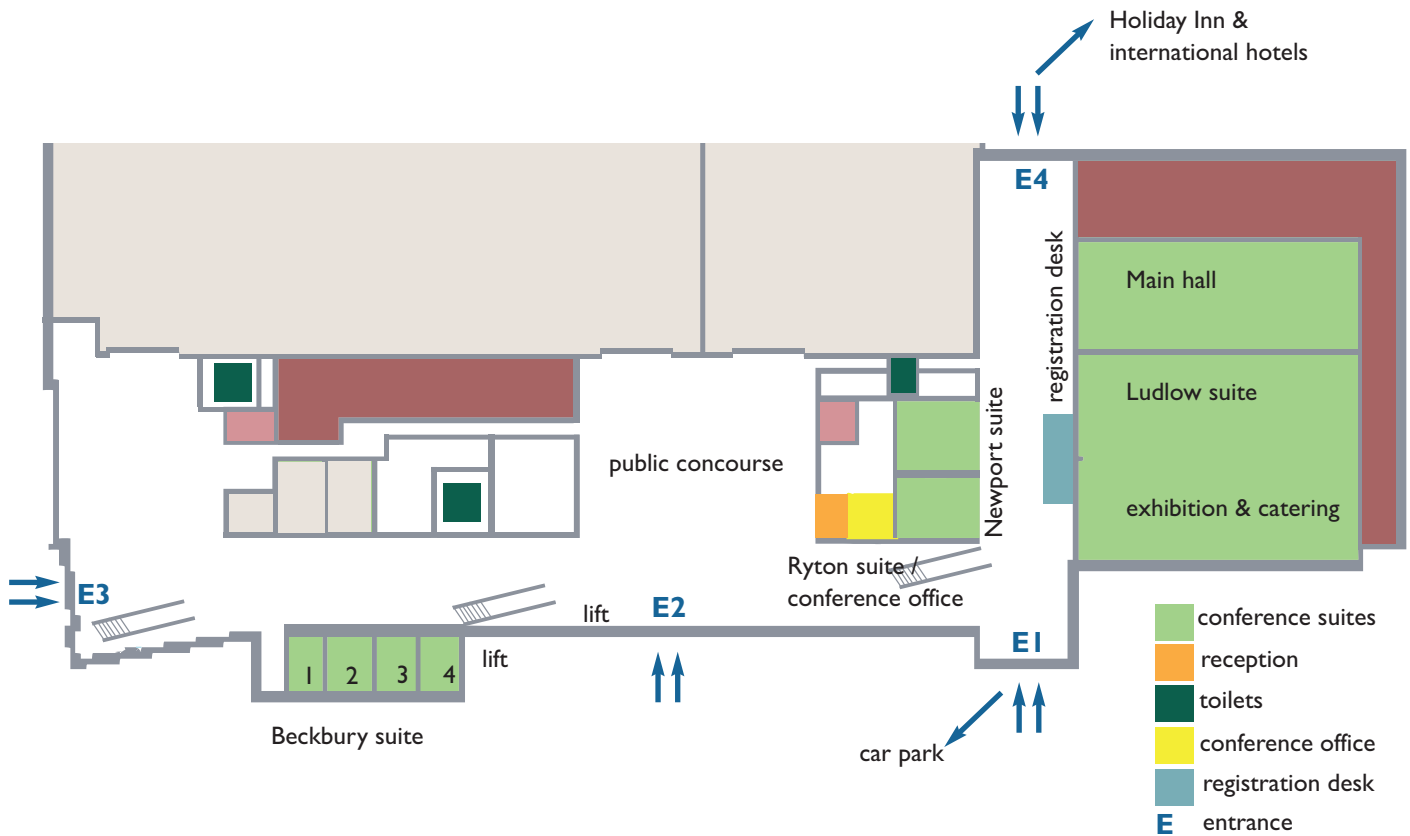
Governments across the world have been grappling with alternative ways to measure a nation's state of health other than GDP. OECD recently completed a report on 'Measuring progress – how's life' and we look forward to Martine Durand, chief statistician at OECD opening the conference on Tuesday.

Meeting old friends and making new ones is an important part of conference. We've a welcome reception on Monday evening in the Holiday Inn, on the Conference Centre concourse, the RSS awards ceremony and reception on Tuesday evening and conference dinner at Ironbridge Museum on Wednesday. We're very grateful to our sponsors and exhibitors for their support, in particular Winton Capital for their continued support of the awards ceremony and reception.

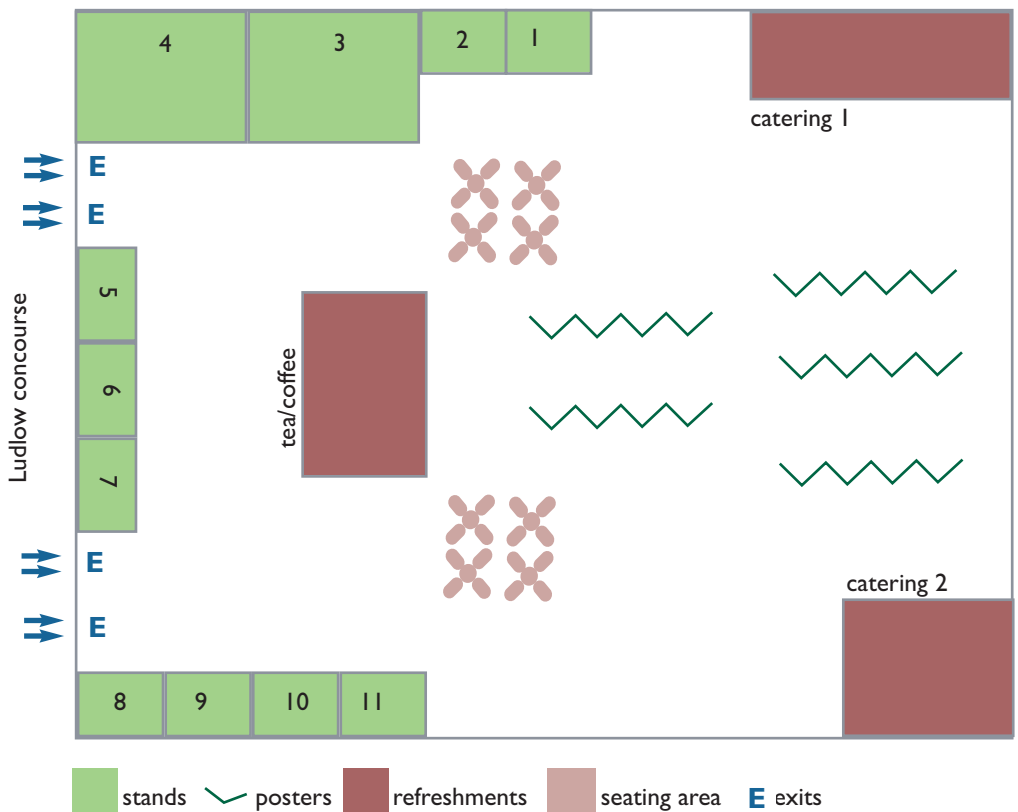I hope you have an enjoyable time here in Telford. Throughout the conferences we'll be looking for feedback and ideas and thoughts for future conference – please speak to Marian Scott, theme director for meetings and conferences or any of the RSS staff team. You'll also find an ideas board beside the RSS stand in the exhibition area where you can post comments.

Mary Sweetland
Conference chairman

Conference venue floor plan

Holiday Inn &
international hotels

E4

registration desk

Main hall

Ludlow suite

exhibition & catering

public concourse

Newport suite

Ryton suite /
conference office

E3

lift   E2

lift

1 2 3 4

Beckbury suite

E1

car park

conference suites

reception

toilets

conference office

registration desk

E   entrance

Exhibition hall and exhibitors

| 4 | 3 | 2 | 1 |

catering 1

E

E

Ludlow concourse

5

6

7

tea/coffee

E

E

catering 2

| 8 | 9 | 10 | 11 |

stands   posters   refreshments   seating area   E exits

Exhibitors:
1 Wolfram
   (Tuesday and
   Wednesday)
2 Winton Capital
3 Royal Statistical
   Society
4 Wiley Blackwell
5 Select Statistics
6 Office for National
   Statistics
7 Oxford University
   Press
8 Postgraduate
   Statistics Centre
   Lancaster
   (Tuesday and
   Wednesday)
9 PSI (Statisticians in
   the Pharmaceutical
   Industry)
10 CRC Press/Taylor
   & Francis
11 Atass Sports
   (Tuesday only)

General information

Badges
Conference attendees are asked to wear their badges and lanyards at all times while in the Conference Centre. Catering staff at the International Centre 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 organisers. A replacement fee may be charged.

Cloakroom
A cloakroom is located on the ground floor near to the Beckbury Suite and will be open on Tuesday 4 and Thursday 6 September. Items may be left there at a cost of £1. The cloakroom is operated by the Centre and not the RSS.

Internet access
The International Centre provides wi-fi access – attendees will find a code in their conference packs. There will also be a small number of computer kiosks with free internet access provided in the exhibition and catering area. We are grateful to the financial support of www.select-statistics.co.uk Select Statistics to be able to provide these facilities.

Mobile phones
We ask that you switch your mobile phones and other hand held devices to silent when you are in sessions.

Online tools
The conference blog can be found at www.rssconference.org.uk and you can also follow proceedings on Twitter: RSSAnnualConf – please use the hashtag #RSS2012

Photography
The Society will have a photographer taking photographs in many 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.

Recording sessions
Please note that the Society will also be recording a number of key sessions during the conference which will be made available from the Society's website in due course.

Refreshments
Lunch as well as tea/coffee on arrival in the mornings, at the mid-morning break and the mid-afternoon break is provided as part of your conference fee. All refreshments will be served in the exhibition hall (Ludlow 1 & 2).

Registration and information desk
The registration and information desk can be found on the main concourse outside the Exhibition Hall.

Session locations
All sessions will be held in one of 7 rooms on the ground floor of the International Centre.

Session timings
The following timings for presentations will normally apply:
● plenary talks – 30-45 minutes plus time for questions and discussion
● invited talks – 20-30 minutes plus time for questions and discussions
● contributed talks –20 minutes including time for questions and discussion.

Shuttle buses
Shuttle buses will be available at the start and close of each day – please refer to the conference website or the information desk for more details on timings.

Social events
When you collect your badge from registration you will be given a letter detailing what is covered by your registration category including which social events. Tickets will be supplied for the conference dinner on Wednesday which include details of the transport arrangements for this event.

Please note that at the reception on Monday evening a hot buffet meal will be served but at the Tuesday evening reception only light canapés are being served.

Speakers table
For speakers wishing to submit their presentations during the conference the speakers table will be located on the main concourse outside the conference office (Ryton Suite).

Thanks and acknowledgements to those responsible for organising the conference

Members of the RSS Conferences and Events Programme Board

Marian Scott (chair and theme director for Meetings & Conferences)
University of Glasgow

Mary Sweetland (vice-chair and chairman of RSS 2012 Conference)

June Bowman
Department of Transport

Paul Clarke
Bristol University

Neville Davies
RSS Centre for Statistical Education

John Disney
Nottingham Trent University

Sara Hughes
ViiV Healthcare

Jamie Kirkham
University of Liverpool

Daphne Kounali
University of Bristol

Andy Lynch
University of Cambridge

Paul Northrop
University College London

Kate Richards
RSS Centre for Statistical Education

Alison Walker

RSS Staff and stewards

Paul Gentry (conference manager), Sarah Barker (short course coordinator), Jack Beeby (web & multimedia manager), Mawreen Chapman (speaker coordinator), Abdel Khairoun (session coordinator), Anna Mair (exhibition manager), Sarah Simpson (awards ceremony coordinator), Charlotte Stovell (registration manager), Toni Young (social events coordinator) and fellow staff at the Society. Also to members of the RSS Young Statisticians Section Committee for their assistance with stewarding.

Production

Rachel Hedley, Linda Mugridge and colleagues at Wild Strawberry Communications (www.wildstrawberry.uk.com) for publication design and production

Paul Arrowsmith and colleagues at Mills Media Group (www.millsmediagroup.com) for AV support and staging

Alex Folkes (alexfolkes@gmail.com) for photography

Venues

Hannah Williams, Diane Austin and colleagues at the Telford International Centre

Wendy Ford and colleagues at the Holiday Inn Telford for the welcome reception

Helen Foster and colleagues at Ironbridge Gorge Museum and the team at Jenkinsons for the conference dinner

Daniel Sweet, Laura Pobjoy and colleagues at First Choice Conference and Events for the accommodation booking service

**Important dates for your diaries:
RSS 2013 International Conference
2-5 September 2013
Northumbria University
Information available soon from
www.rssconference.org.uk/**

Places to eat near Telford International Centre

On-site restaurants
The Olive Tree Restaurant
Holiday Inn Hotel, St
Quentin Gate, Telford (one
minute walk from the
centre) contemporary
restaurant serving A La
Carte, Table d'hote and bar
snacks
01952 527000

Merlots Restaurant
Grays Hotel, Telford town
centre (two minute drive
from the centre) spacious
and comfortable, menus
include: A La Carte, Table
d'hote and a Carvery
01952 425000

**American style
restaurants**
Frankie and Bennys
Unit 5, Telford Forge Retail
Park, TF3 4AG (two minute
drive from the centre)
01952 293902

Oscars American Bar
Odeon Cinema (two
minute drive from the
centre) **01952 200577**

Dragon Den
Telford Town Centre (one
minute walk from the
centre) **01952 219921**

Ho Mei Village
Wellington (10 minute
drive from the centre)
01952 222 767

Minhs
20 Bradford Street, Shifnal
TF11 8AU (five minute
drive from the centre)
01952 463323

**English pubs and
restaurants**
Euston Way Brewers Fayre
Train Station Telford Town
Centre (five minute drive
from the centre)
01952 201075

The Severn Gorge
Telford Town Centre (two
minute drive from the
centre) **01952 290404**

The Old Orleton Inn
Wellington (10 minute
drive from the centre)
01952 255011

Wetherspoons Thomas
Botfield
Central Square, Telford
Shopping Centre, TF3 4BW
(one minute walk from the
centre) **01952 292672**

Chez Maw
The Valley Hotel, Ironbridge
TF8 7DW (10 minute
drive from the centre)
01952 4322247

The White Hart
The Wharfage, Ironbridge
TF8 7AW (10 minute drive
from the centre)
01952 432901

The Malt House
The Wharfage, Ironbridge
TF8 7NH (10 minute drive
from the centre)
01952 433712

The Meadow Inn
Buildwas Road, Ironbridge
TF8 7BJ (10 minute drive
from the centre)
01952 433193

Coalbrookdale Inn
12 Wellington Road,
Coalbrookdale, TF8 7DX
(10 minute drive from the
centre) **01952 433953**

Priors Lodge
Priorslee Telford, TF2 9SW
(five minute drive from the
centre) **01952 299108**

Wickets Inn
240 Holyhead Road,
Wellington, TF1 2EB (10
minute drive from the
centre) **01952 246991**

The Fox
Pave Lane, Chetwynd
Aston, Newport (10
minute drive from the
centre) **01952 815940**

French restaurant
Restaurant Severn
33 High Street, Ironbridge,
TF8 7AG (10 minute
drive from the centre)
01952 432233

**Mediterranean
Restaurant**
The Red Pepper
Mediterranean Bistro
6 Stafford Street, Newport,
TF10 7LT (10 minute drive
from the centre)
01952 813025

Indian restaurants
Pondicherry Restaurant
57 Waterloo Street,
Ironbridge, TF8 7AA (10
minute drive from the
centre) **01952 433055**

Shifnal Balti
20 Broadway, Shifnal, TF11
8AZ (five minute drive
from the centre)
01952 460142

Peppers Balti Restaurant
109a Trench Road, Trench
TF2 7DP (eight minute
drive from the centre)
01952 606555

Royal Balti
1 Charton Street TF1 1ES
(10 minute drive from the
centre) **01952 248417**

Italian restaurants
Da-Vinci Italian Restaurant
26 High Street, Ironbridge,
TF8 7AD (12 minute drive
from the centre) **01952
432250**

Pizzeria Restaurants
Pizza Hut
Unit 12, Telford Bridge
Retail Park, TF3 4PB (two
minute drive from the
centre) **01952 293470**

Thai Restaurants
Siam Cottage
6a Tontine Hill, Ironbridge,
TF8 7AL (10 minute drive
from the centre) **01952
433588**

Plus many more!
*NB: The above list is for information purposes only and the
International Centre is not recommending or endorsing any of
the above establishments*

RSS 2012: Tuesday 4 September, morning programme

from 8.30am **Registration/refreshments** Exhibition (Ludlow 1 & 2)

9.20–10.20am

Newport 1
Introduction to Conference

The RSS Young Statisticians Section will provide a quick introduction to the RSS Conference for those new to the event, along with information about the YSS and how you can become involved.

Beckbury 1

Bayesian sequential sampling for the economic evaluation of health technologies: opportunity or dead end?
Martin Forster (University of York)

Using Bayes to assess the plausibility of new epidemiological findings
Robert Matthews (Aston University)

Growth mixture modelling of child behaviour in a study of children receiving multidimensional treatment foster care in England
Fatima Jichi (King's College London, Institute of Psychiatry)

10.30am

Ludlow 3 (Main Hall)
Opening of conference and plenary session 1

How's Life?
Martine Durand, OECD, France

11.30am **Tea/coffee break** Exhibition (Ludlow 1 & 2)

12 noon

Ludlow 3 (Main Hall)
Inequality in the UK, its effects, and what we think about it

Understanding the effects of inequality in the UK: data from the spirit level
Kate Pickett (University of York)

What the British social attitudes survey tells us about our attitudes to inequality
Alison Park
(Head of Society and Social Change, NatCen)

Newport 1
Statistical genetics

Organised by the RSS Research Section

Assessing tumour heterogeneity: inference using the matrix-variate normal distribution
Simon Tavare (University of Cambridge)

Linear complexity surrogate family haplotype estimation of whole chromosomes
Jonathan Marchini (University of Oxford)

Subset based assessment of high-throughput gene expression data quality in time course experiments
Julia Brettschneider (University of Warwick)

1.20–2.20pm **Lunch** **Exhibition** (Ludlow 1 & 2)

1.20pm

Beckbury 4
Young Statisticians Section welcome reception

Come and meet fellow career-young statisticians (first 10 years in the profession) over lunch – and enjoy some free wine! All welcome, no need to reserve a place. Event kindly sponsored by Atass Sports.

Beckbury 2
Counting the 7 Billion: the future of population and housing Censuses
C Chandramouli (Office of the Registrar General & Census Commissioner, India)
Kris Oswalt (DevInfo Initiative, USA)
Sabrina Juran (United Nations Population Fund (UNFPA), USA)

Measuring uncertainty in local authority population estimates for England and Wales
Rebecca Newell (Office for National Statistics)

A conceptual framework for UK population and migration statistics
Ann Blake (Office for National Statistics)

Newport 2
PSI Read Paper:
Proposed best practice for statisticians in the reporting and publication of pharmaceutical industry-sponsored clinical trials
James Matcham (Amgen)

The presentation will be followed by a proposer and seconded of a vote of thanks and Q&A. Attendees can submit comments in advance to the chair.

The paper can be downloaded from the Pharmaceutical Statistics website at http://onlinelibrary.wiley.com/journal/10.1002/(ISSN)1539-1612

Organised by Statisticians in the Pharmaceutical Industry (PSI)

Beckbury 1
Presenting at conferences
Jenny Freeman (University of Sheffield)

This workshop will give guidance on how to improve your conference presentation skills.

Beckbury 2
Regression modelling with many correlated predictors: a new approach to linear and logistic regression with high dimensional data
Jay Magidson (Statistical Innovations Inc, USA)

Semi-parametric methods for regression under two-phase sampling
Chris Wild (University of Auckland, New Zealand)

Fisherian testing for the 21st century: getting the logic straight and multiple testing
Ian Hunt (London School of Economics)

Beckbury 3
Measurement error in retrospective reports of unemployment
Jose Pina (University of Manchester)

On the loss of accuracy of economic indicators released too early
Jens Mehrhoff (Deutsche Bundesbank, Germany)

Heckman's sample selection model and calibration estimation under nonresponse
Thomas Laitila (Örebro University, and Statistics Sweden)

2.20pm

Ludlow 3 (Main Hall)
Fisher's statistical legacy

Organised by the Fisher Memorial Trust

Randomisation 50 years after Fisher
Rosemary Bailey (QMW)

Inference: Fisher's legacy and beyond
David Cox

Multivariate analysis in the 21st century
David Hand

Newport 1
Measuring what matters: well-being in the UK

Organised by the UK Office for National Statistics

An introductory talk will give an overview of the national well-being programme and set out the dashboard of national well-being indicators.

Glenn Everett (ONS), will chair a 40-minute panel discussion on the issues surrounding the measurements of well-being and presentation of well-being data, followed by 20 minutes of Q&A.

The panel members will be Martine Durand (OECD), Charles Seaford (Nef) and Katherine Trebeck (Oxfam)

Newport 2
Keeping the media honest in covering statistics

The panel will be moderated by David Walker, director of RSS getstats and former journalist with the *Guardian, Times* and BBC. Panel members are Penny Young, director of NatCen, the independent social research organisation, Aleks Collingwood, head of statistics for the Joseph Rowntree Foundation and Naomi Givens, statistics manager with GSK and promoter of the Science Media Centre's Behind the Headlines project.

3.50pm

Ludlow 3 (Main Hall)
Andrew Dilnot
Chair (UK Statistics Authority)

Newport 1
PSI debate:
This house believes that pharmaceutical drug development and regulation should become fully Bayesian

Speakers:
Scott Berry (Berry Consultants)
Rob Hemmings
(head of statistics, MHRA)
Karen Lynn Price
(principal research scientist, AdvAn Hub – Bayesian Expert Team, Eli Lilly and Company)

The strengths and weaknesses of the Bayesian approach in confirmatory trials will be discussed.
Topics include:
● Experiences with the Bayesian approach in confirmatory trials
● What are the advantages?
● What are the disadvantages?
● What are the hurdles?
● What could the future hold?

The three discussants have different backgrounds. One is from regulatory, one from a pharmaceutical company, and one a consultant. This will bring a wide range of experience and lively discussions about using Bayesian Statistics in confirmatory trials.

Newport 2
The Bioinformatics Study Group presents

Statistical challenges in high-throughput sequencing with examples in clinical resequencing
Gerton Lunter
(University of Oxford)

Statistical challenges in flow cytometry with application to cellular signatures for graft-versus-host-disease
Ulrike Naumann
(Kings College)

Statistical challenges in Genome Wide Association Studies with an application to the detection of gene-gene interactions in Crohn's disease
Heather Cordell
(Newcastle University)

5.10pm　**Tea/coffee break**　Exhibition (Ludlow 1 & 2)

5.45pm　**Awards ceremony**　Ludlow 3 (Main Hall)

7pm　**Awards and poster reception**　Ludlow 1 & 2

Beckbury 1
Professional Statisticians Forum

Beating the odds: Successfully managing a rapidly-expanding statistical team
Tim Paulden (Atass Sports)

From talking to action. A personal view on making an impact
Phil Woodward (Pfizer)

Beckbury 2
The impact of study size on meta-analyses: examination of underpowered studies in Cochrane reviews
Rebecca Turner (MRC Biostatistics Unit)

Optimisation of the two-stage randomised trial design with some participants undecided about their treatment preference
Stephen D Walter
(McMaster University, Canada)

Feasibility/pilot studies in the design, conduct and evaluation of complex interventions
Gillian Lancaster (Lancaster University)

A practical approach to sample size calculation using simulation
Richard Hooper
(Queen Mary University of London)

Beckbury 3
The economic benefits of adult apprenticeships: analysis of the Labour Force Survey
Diana Tlupova (National Audit Office)

Evaluating the impact of agricultural credit: a matching approach
Sunil Mitra Kumar (University of East Anglia)

The challenges of monitoring the illegal ivory trade to guide international decisions on elephant conservation
Fiona Underwood (University of Reading)

UK job creation and regional change: a shift-share analysis
Paul Jones (Sheffield Hallam University)

Beckbury 2
Statistics at work in the Midlands: cars, trains and flu

Organised by the RSS West Midlands Local Group

Statistical applications in automobile research
Paul Jennings
(University of Warwick)

Energy saving strategies for the railway
Stuart Hillmansen
(University of Birmingham)

NHS performance: How general is your General Practice?
Andrew Rouse (Heart of Birmingham teaching PCT)

Beckbury 4
Using Dirichlet process partitioning models to assist linear model determination: application to graphical log-linear models
Michail Papathomas (University of St Andrews, School of mathematics and Statistics)

How Nonzero Ties distort Statistical Inference with Rank Tests
Nadine Chlass (Friedrich-Schiller-University, Germany)

Probabilistic index mixed models for clustered data
Fanghong Zhang (Ghent University, Belgium)

Application of Zenga's distribution to a panel survey on household incomes of 15 European member states
Alberto Arcagni (University of Milano, Italy)

Beckbury 3
What is Public Health Intelligence (PHI) ? Why is it critical to the best functioning of the NHS in 2012?
Margaret Eames
(Imperial College)

Statistical guidance on optimal strategies to prevent non-response in longitudinal studies
Ian Plewis
(University of Manchester)

Data.gov.uk: opening the door on open data
Andrew Epps
(National Audit office)

Combining knowledge to estimate the percentage of care workers paid under the national minimum wage in the UK: a Bayesian approach
Shereen Hussein
(King's College London)

Beckbury 1
Joint modelling of goals and bookings in association football matches
Andrew Titman (Lancaster University)

Using interactive eBooks to teach and communicate statistical ideas
Richard Parker
(University of Bristol)

Using the STAT-JR software package for statistical analysis
William Browne
(University of Bristol)

Explaining the significance of p: presenting statistics to non-statistical audiences
Andrew Oliver
(National Audit Office)

Liverpool School of Tropical Medicine

Exciting opportunities for those interested in developing a career as a Medical Statistician

Liverpool School of Tropical is dedicated to working in partnership with International governments and stakeholders globally to deliver a range of research, teaching and technical assistance programmes. We aspire to be recognised as a centre of world class research that is acknowledged internationally for its role in promoting improved health for people in less developed countries in the tropics and sub-tropics.

Due to the recognised success and impact of our work we have new opportunities available within the School for talented graduates that would like to develop a career as a Medical Statistician in an environment that is experiencing an exciting period of growth. We can offer exceptional MSc Graduates the ability to work on unique and diverse range of projects including; epidemiological studies, clinical trials (RCT) and laboratory experimental work. In addition to this you will gain international experience by supporting the work undertaken in a number of different countries.

If you would like to the opportunity to develop your potential within a supportive high-quality research environment, please contact:
Catherine Hignett-Jones, Human Resources **chignett@liverpool.ac.uk**
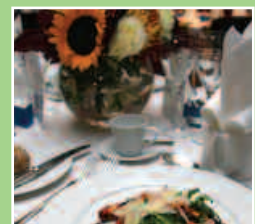
Input into the RSS's future strategy

RSS is conducting a review of its future strategy. Help shape your Society's direction. Come to the Strategy interactive discussion session and give your views on what the Society should be doing in the future – and perhaps what it should stop doing.

The discussion meeting will be on:
Wednesday from 12–1.20pm in Beckbury 2.

errol street ec1
VENUE HIRE AT THE ROYAL STATISTICAL SOCIETY

a light airy and versatile venue in the heart of the City

● 020 7614 3910   ● errolstreet@rss.org.uk
● www.rss.org.uk/venuehire

Tuesday 4 September 5.45pm
Telford International Centre UK

ROYAL
STATISTICAL
SOCIETY

Statistical Honours &
Statistical Excellence Awards
2012

Guy medals

GUY MEDAL IN SILVER
PROFESSOR DAVID FIRTH

David Firth is professor and head of the Department of Statistics at the University of Warwick. He previously worked at Lancaster, Imperial, UT Austin, Southampton and most recently Oxford (where he was Professor of Social Statistics). His research spans from statistical theory and computational methods through to applications in biology, sociology and politics. He has been editor of *JRSS-B,* and chair of the RSS Research Section. In 1998 he was awarded the Guy Medal in Bronze. In 2007 with Heather Turner he received the ASA's John M Chambers Statistical Software Award. He is a Fellow of the British Academy.

GUY MEDAL IN BRONZE
RICHARD SAMWORTH

Richard Samworth read mathematics at St John's College Cambridge, graduating in 1999. He then studied Part III mathematics before undertaking a PhD in the Statistical Laboratory in Cambridge, where he looked at problems related to the bootstrap and spent time as a visiting fellow at the Australian National University in Canberra.

Richard became a research fellow at St John's in 2003, a lecturer in the Statistical Laboratory in 2005, and subsequently in Reader in Statistics in 2010. He has also made extensive research visits in America, Australia and Europe. Nowadays, he studies mainly high-dimensional and nonparametric statistical problems, including variable selection, shape-constrained estimation and classification. He has also worked in various application areas, including oceanography and archaeology, and runs a fortnightly statistics clinic in Cambridge, where anyone in the university can receive free statistical advice.

Richard has served as an associate editor for *JRSS-B* since 2006, and recently began his second term on the RSS Research Section Committee, of which he was honorary secretary for two years. He also joined the RSS Council in January 2012, and was on the 2009 RSS conference programme committee. Richard was awarded the RSS Research Prize in 2008, a Leverhulme Research Fellowship in 2011 and an EPSRC Early Career Fellowship in 2012.

West Medal

IAN MACLEAN OBE

A Cambridge economist with a strong business background and an involvement as well as a keen interest in the role of statistics for decision making. Apart from two years at the Department of Applied Economics he has always worked in the private business sector for multi national companies until 1986 when he set up he set up his own company to take over from Customs and Excise the dissemination of the monthly UK trade statistics to manufacturers and traders worldwide, since extended to cover over 50 other countries. He has been closely involved with official statistics since the early 1960s when he joined the Census of Production Advisory Committee and formed the Industrial Marketing Research Association which worked closely with the DTI in totally revising business statistics and setting up of the BSO. He joined the Statistics Users Council in 1974 and then ran it as secretary and chairman from 1978 to 2004 organising annual conferences covering a different aspect each year, education, health, the environment etc, and setting up 16 sector user groups with a combined membership of over 2000 individuals. In 1978 he wrote his and the first paper on the need for statistics legislation and 2004 prepared a paper for the Treasury with the same title! On the international scene he is a past vice president of the International Association for Official Statistics and was the UK representative on the EU Statistics Advisory Council for eight years.

Official Statistics Award

FUEL POVERTY STATISTICS TEAM – DEPARTMENT OF ENERGY AND CLIMATE CHANGE

The Hills Review Team, led by Professor John Hills at the London School of Economics comprised two GSS statisticians from DECC, Damon Wingfield and Chris McKee. They were responsible for leading all angles of the statistical work. They were also supported by Laura Williams and Alison Colquhoun from the Fuel Poverty Statistics team in DECC, who had individual tasks within the work programme. Damon has since left DECC, moving to work on Crime Statistics at the Home Office.

Everybody contributing towards the analytical component of the Hills Review enjoyed the challenge, demands (including late nights!) and opportunity to stretch the imagination to provide innovative options and graphical representations of the challenge facing Government in addressing fuel poverty.

The DECC statistics team is responsible for producing a number of National Statistics on all forms of energy and beyond, and provides crucial information for the policy teams combating climate change.

ANALYTICAL SERVICES – MINISTRY OF JUSTICE

The Ministry of Justice statistics team work on a range of issues covering court appearances, prison, probation, re-offending, civil and family justice. The team who undertook the work on the public disorder came from across a range of teams in order to support the Ministry of Justice's response to the disorder. This also meant others from across the team had to take on additional work to cover for those doing the disorder work.

Excellence in the Pharmaceutical Industry

HARRY SOUTHWORTH

Harry Southworth gained his BSc in Economics and Statistics from Leeds University, his MSc in Probability and Statistics from Sheffield University, and his PhD in Statistics from Leeds. After a brief period working for the Department of Social Security, Harry joined Zeneca (now AstraZeneca) as a statistician in 1998. Having worked in the central nervous system, cardiovascular and infection therapy areas for several years, Harry developed an interest in statistical approaches to drug safety data. Having pioneered the use of interactive graphs for the review of clinical trial safety data, he also developed methods for data mining adverse event data to identify potential associations with treatments. Harry's current focus is on the use of extreme value modelling of clinical trial safety data.

Awards for statistical excellence in journalism

PRINT: WINNER

CHRIS GILES, *FINANCIAL TIMES*

Chris Giles has been economics editor of the *Financial Times* since 2004. He writes on international and domestic economic issues and is also a columnist for the newspaper. Previously, Chris was a leader writer on the *FT* and he has also worked at the BBC, Ofcom and the Institute for Fiscal Studies. He is a graduate of Cambridge and Birkbeck College, London.

PRINT: COMMENDATION

CHRISTOPHER COOK, *FINANCIAL TIMES*

Chris Cook is the education correspondent at the *Financial Times*. He joined the *FT* in 2008 as a Peter Martin Fellow, and worked for two years as a leader writer, where he won the Harold Wincott prize for young financial journalists.

Before joining the newspaper, Chris worked for David Willetts MP, helping him write his book, 'The Pinch'. He studied modern history at Trinity College, Oxford, before taking a masters degree in economic and social history at the same institution.

SPONSORS:
Winton Capital – Awards ceremony and reception

PSI and the UK Statistics Authority – statistical excellence awards

BROADCAST: WINNER
BBC TV NEWS, FOR THE BROADCAST
'POPULATION – THE WORLD AT 7 BILLION'

TONY DOLCE

Tony joined the BBC in 1984 and started work as a studio electrician, progressing to sound-recordist and then eventually 19 years ago to lighting cameraman. Over the years he has worked for children's programmes Newsround and Blue Peter and is currently working in News as a shoot/edit.

DAVID GORDON

David is an award-winning senior creative designer who has worked with the BBC in a number of key areas over more than 20 years, including television News and Current Affairs, Science and Factual, plus a significant period developing BBC Online. An unusual combination of science and arts via a Masters in Physics and a BA in Three-Dimensional Design allows him to apply multidisciplinary thinking to a variety of creative problems and their solutions.

Now working in the area of Visual Journalism, David is currently helping the BBC produce innovative ways to engage audiences through multi-dimensional storytelling, and with visualisation of information at its core. He is therefore very proud to be able to add this award from the Royal Statistical Society to his pedigree.

ANNA-MARIE LEVER

Anna-Marie started at the BBC in 2007 as a runner on Horizon, she moved into news doing hideously early shifts on Breakfast TV, before advancing into the science and health team – a place she always aspired to after achieving a biology degree and masters in science communication. She works across online, radio and television: writing, producing, self-shooting and editing – as well as broadcasting.

FERGUS WALSH

Fergus began working for the BBC in 1984 and has reported on health, science and medicine for nearly 20 years. He has reported for the BBC from around the world on topics such as stem cells, obesity, HIV/AIDS, malaria, TB, polio and swine flu. He appeared in a BBC drama with Julie Walters. He didn't win any awards for his acting – but has won several for his journalism and is honoured to be able to add this Royal Statistical Society one to his CV.

BROADCAST: COMMENDATION
BBC RADIO 4'S MORE OR LESS,
RICHARD KNIGHT, PRODUCER

More or Less is the BBC Radio 4 programme which explains, explores – and sometimes debunks – numbers in the news, and in life. More or Less was created in 2001 by Andrew Dilnot and Michael Blastland. Tim Harford has presented the programme since 2007. More or Less also broadcasts a global edition year-round on the BBC World Service. The producer is Richard Knight and the editor is Richard Vadon.

ONLINE: WINNER
SIMON ROGERS,
THE *GUARDIAN*

Simon Rogers is editor of the *Guardian's* Datablog and Datastore, an online data resource which publishes hundreds of raw datasets and encourages its users to visualise and analyse them – and probably the world's most popular data journalism website. He is also a news editor on the *Guardian*, working with the graphics team to visualise and interpret huge datasets. He was closely involved in the *Guardian's* exercise to crowdsource 450,000 MP expenses records and the organisation's coverage of the Afghanistan and Iraq Wikileaks war logs. He was also a key part of the Reading the Riots team which investigated the causes of the 2011 England disturbances.

Previously he was the launch editor of the *Guardian's* online news service and has edited the paper's science section. He has edited two *Guardian* books: *How Slow Can You Waterski* and *The Hutton Inquiry* and its impact. In 2010, Simon received a special commendation from the Royal Statistical Society in its awards for statistical excellence in journalism. His Factfile UK series of supplements won a silver at the Malofiej 2011 infographics award and the Datablog won the Newspaper Awards prize for Best Use of New Media, 2011. Among other awards, in 2011, Simon was named Best UK Internet Journalist by the Oxford Internet Institute, Oxford University and won the inaugural XCity award from City University. Simon is author of *Facts are Sacred: the Power of Data*.

Awards and Poster reception Exhibition (Ludlow 1 & 2)

The following posters will be displayed in the exhibition hall during the conference:

Subjective well-being: a beginner's guide
Fola Ariyibi (Office for National Statistics (ONS))

Welsh index of multiple deprivation – an overview
Rebecca Gillard (Welsh Government)

A coupled hidden Markov model for disease interactions
Tatiana Xifara (Lancaster University)

Investigation of the effects of life course events and decisions over the long term on the physical and mental health of older people
Riza Momin (Kingston University)

Using administrative data to set plausibility ranges for population estimates
Ann Blake (ONS)

New approaches to response chasing in ONS
Ann Langford (ONS)

Dental patients, public and the dental professionals: attitudes to regulation
Guy Rubin (General Dental Council)

Global sensitivity analysis: local polynomial estimation of total sensitivity indices
Matieyendou Lamboni (Institute for Environment and Sustainability, Italy)

Longitudinal modelling for monitoring progressive chronic diseases in computerised GP records: a case study in Chronic Kidney Disease(CKD)
Rosie O'Neil (Kingston University)

Measuring the number of international visits to UK during London 2012: how the International Passenger Survey is adapting its design
Roger Smith (ONS)

Estimating density and hazard functions through kernel and wavelet smoothers
Paraskevi Peristera (Stockholm University, Sweden)

Investigate the pattern of Chlamydia incidence in England using space-time models
Man Ying Edith Cheng (Southampton University)

Statistical analysis of patients' waiting time in the hospital
O M Olayiwola (Statistics Department, Federal University of Agriculture, Nigeria)

Cross-national measurement equivalence in latent variable modelling: sensitivity and model selection
Jouni Kuha (London School of Economics)

Modelling fatigue-life failure distribution
Kishore Das (Gauhati University, India)

Bootstrapping method to confirm presence or absence of outlier subject in a standard bioequivalence study
Vinayak Deshpande (Sankhya Analytical Research Pvt Ltd, India)

Community effects on Infant Mortality Rate in Rural India: a multilevel model
Sada Nand Dwivedi (All India Institute of Medical Sciences (AIIMS), India)

Bandwidth matrix selectors for multivariate kernel density estimation
Ivana Horova (Masaryk University, Czech Republic)

Effectiveness of keep-in-touch-exercises on response evidence from the Wealth and Assets Survey (WAS)
Martina Aumeyr (ONS)

What makes for a good missing value imputation? New algorithmic approaches in PCA and random forests-based techniques
Giancarlo Manzi (University of Milan, Italy)

Comparative health-education output and economic growth in Nigeria
Timothy Olabisi Olatayo (Olabisi Onabanjo University, Ago-Iwoye, Ogun State, Nigeria)

Have the more restrictive abortion laws in the Republic of Ireland and Northern Ireland improved the health of Irish women since 1968? Have the more restrictive abortion laws in the Republic of Ireland and Northern Ireland improved the health of Irish women since 1968?
Celia Chambers

Improving the adequacy of multilevel models in the face of outliers and error-prone random coefficient predictors
Michael Imande (Benue State University, Makurdi, Nigeria)

Imprecision and Robustness in Bayesian Experimental Design
Noorazrin Abdul Rajak (Newcastle University)

How many subjects do I need in a pilot RCT to estimate the variance of the outcome with a reasonable degree of precision?
Neil Shephard (University of Sheffield)

Iterative bandwidth selector – extension to kernel regression
Jan Kolacek (Masaryk University, Czech Republic)

Sensitivity of simultaneous equation techniques for application in forest growth modelling
Oluwafemi Oyamakin (Forestry Research Institute of Nigeria)

Dam models for expected amount of overflow allowing any number of emptiness
M Venkateswaran (Sri Venkateswara University, India)

Calibration estimation under non-response and missing auxiliary information
Lisha Wang (Örebro University, Sweden)

Myopic decision rules using the regret-regression method with application to Warfarin data
Nur Anisah Mohamed (Newcastle University)

Medical decision support systems by statistical scale measures through stochastic modelling
B N Naveen Kumar (Sri Venkateswara University, India)

How big should a pilot trial be? A case for binary outcomes in randomised controlled trials
Munyaradzi Dimairo (ScHARR, University of Sheffield)

Pseudo-Bayesian optimum designs for nonlinear models using standard functions in R
Ronaldo Silva (UNESP Univ Estadual Paulista, Brazil)

Statistical analysis of the economic performance of the directorate of water development. Case study of Wakiso and Kiwunya sub stations
Resty Nansubuga (Institute of Statistics and applied Economics, Makerere University, Uganda)

NIH Stroke Scale as a common predictor of short term functional status, length of hospital stay and survival – cohort study within the South London Stroke Register (SLSR)
Shah-Jalal Sarker (Division of Health and Social Care Research, King's College London)

Adaptive clinical trials – a review of statistical methodology and current status
Nicky Wright (BioSigma Ltd, UK)

Optimal designs for the estimation of five variance components in a linear random effect model
Oluwole Nuga (Bells University Of Technology, Nigeria)

Statistical perspective on measuring the signal-to-noise ratio for history event data in neural systems
Gabriela Czanner (University of Liverpool)

Modelling and estimation of a joint longitudinal model for multiple repeated measures and multiple recurrent events processes
Samuel Manda (South African Medical Research Council, University of Kwazulu-Natal, South Africa)

Bayesian non-parametric modelling in measurement error using a polya tree distribution
Reem Al-Jarallah (Kuwait University)

Inference for the Fractional Heston model using the auxiliary particle filter
Muhannad Al-Saadony (University of Plymouth)

Statistical properties of the convoluted beta-Weibull distribution
Alfred Akinsete (Marshall University, USA)

Evaluation of removable statistical interaction for binary traits
Jaya Satagopan (Memorial Sloan-Kettering Cancer Center, USA)

The analysis of ultra-high frequency financial data via particle filters
Golnaz Shahtahmassebi (Plymouth University)

Two forms of attrition in a longitudinal health study involving ageing participants, and their predictors: analysis of Whitehall II
Robert Grant (Kingston University / St George's, University of London)

Observations on the design of sensory profiling trials for a back-cross population of potato varieties
Ian Nevison (Biomathematics and Statistics Scotland)

A treatment of ties in rank correlation
Ilaria Lucrezia Amerise (University of Calabria, Italy)

Statistical analysis of pre-menopausal and menopausal age of women with dietary intake and BMI as predicting factors
OlaOluwa Yaya (University of Ibadan, Nigeria)

Construction and validation of the Physiological Emotions Friendship Scale (PhEFS) through a multidisciplinary approach
Sandra De Francisci (IULM University, Italy)

Robustifying the Least Squares estimate of parameters of variance model function in nonlinear regression with heteroscedastic variance
Hossein Riazoshams (Statistics Department, Stokholm university, Sweden)

A typical quasi-semi-Latin square design: combinatorial structures and application
Polycarp Chigbu (University of Nigeria, Nsukka)

Logistic regression estimator for Warner's randomized response model
Leonardo Truillo (National University of Colombia)

Jittered phase diagrams for seasonal patterns in time series
Robert M Kunst (Institute for Advanced Studies / University of Vienna, Austria)

Determination of broiler chickens' maximum weight with respect to age and feeding rate
O M Olayiwola (Statistics Department, Federal University of Agriculture, Nigeria)

What's going on with the road accident fatal trend?
Louise Lloyd (Transport Research Laboratory, UK)

On the innovation of the family of multivariate higher-order hybrid polynomial kernels
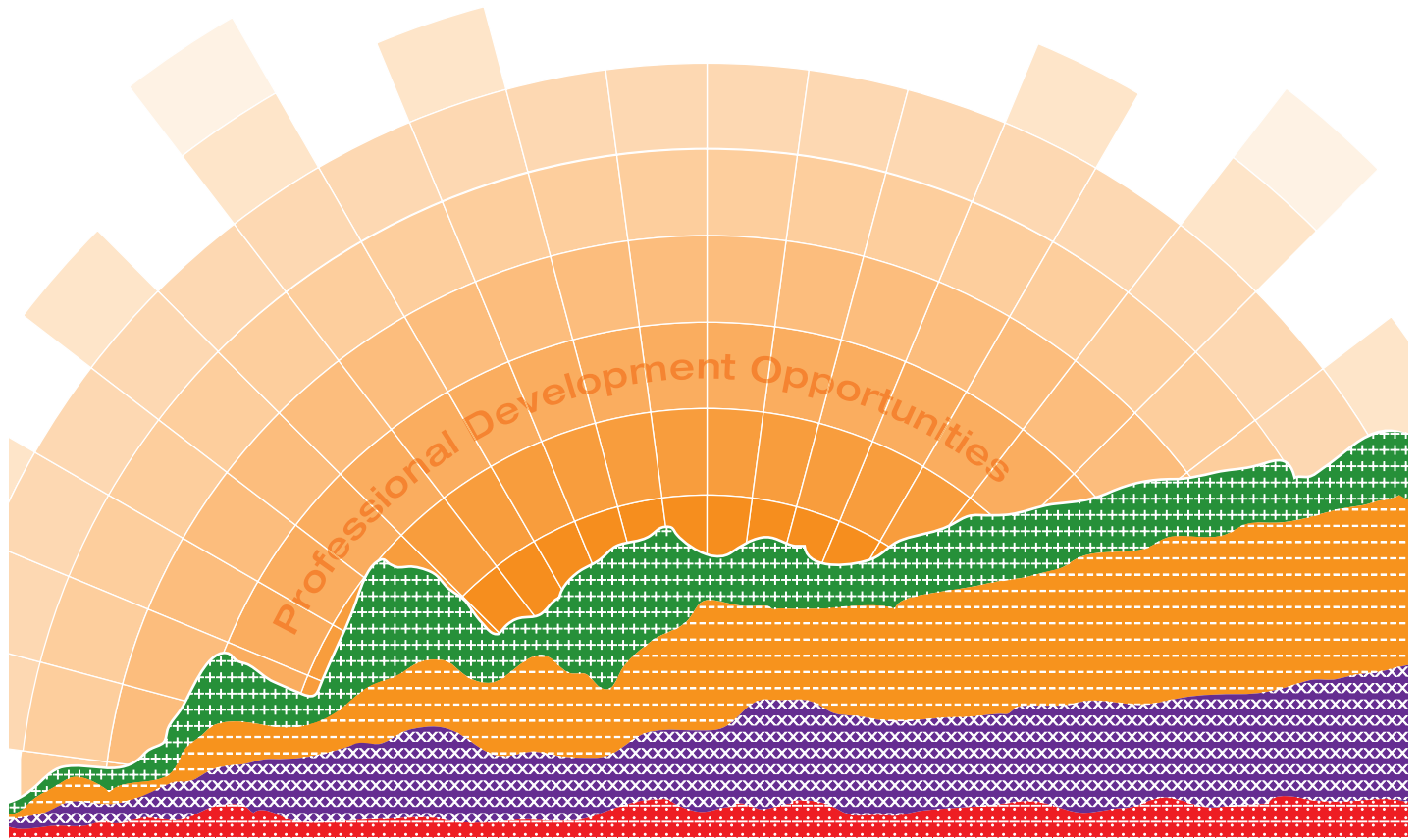Benson Ade Afere (Adekunle Ajasin University, Nigeria)

Diffusion of innovations in dynamic networks
Charlotte Greenan (University of Oxford)

The prevalence rate of work related stress, anxiety and depression in Great Britain 2001/02-2010/11
Paul Buckley (Health and Safety Executive)

The prevalence rate of work related musculoskeletal disorders in Great Britain 2001/02-2010/11
Paul Buckley (Health and Safety Executive)

Monitoring of an industrial process using adaptive multi-block partial least squares
Bothinah Altaf (Newcastle University)

Details correct at time of going to print

Professional Development Opportunities

Lancaster Postgraduate Statistics Centre
Short Courses 2012-2013

Continuing Professional Development Courses in Statistics

Lancaster Postgraduate Statistics Centre is the only HEFCE funded Centre of Excellence for Teaching and Learning that uniquely specialises in postgraduate statistics. Courses are taught by members of the Statistics Group within the Department of Mathematics and Statistics.

What do we offer?

We offer a wide range of statistics courses and a variety of ways to learn. The following courses run regularly each year. Please check our website for the most up-to-date information.

For more information including fees or to book on a short course, please visit our website **www.maths.lancs.ac.uk/psc** or email us at **psc@lancaster.ac.uk**.

LANCASTER UNIVERSITY

Postgraduate Statistics Centre

Statistics for Scientists, Social Scientists and Health Professionals

Introductory short courses

Statistical Methods	16-17 October 2012
Introduction to Statistics (SPSS I)	14-15 November 2012
Secondary Data Analysis	29 November 2012
Questionnaire Design, Reliability and Validity	3 December 2012
Sampling Design	4 December 2012
Atlas.ti	15 February 2013
Statistical Modelling (SPSS II)	7-8 March 2013

Going further with statistics

Statistical Inference	23-24 October 2012
Using R software	1-2 November 2012
Generalised Linear Models	7-9 November 2012
Duration (Survival) Analysis	23-24 January 2013
Data Mining Techniques	21-22 February 2013
Using STATA	28 February - 1 March 2013
Bayesian Methods	4-5 March 2013
Quantifying and Evaluating Forensic Evidence	18-19 March 2013
Structural Equation Modelling using AMOS	21-22 March 2013
Multi-Level Models	24-25 April 2013
Methods for Missing Data	1-2 May 2013
Quantitative Criminology	15-16 May 2013

MSc/PgDip/PgCert in Quantitative Methods: Study a selection of courses full-time or part-time and get a postgraduate qualification (eg. 6 courses for a PgCert). Optional MSc pathways include scientific research methods, social and crime statistics, statistical methods for health research or teaching statistics.

Specialist Topics in Medical and Pharmaceutical Research

Pharmacological Modelling	11-14 February 2013
Survival and Event History Analysis	25-28 February 2013
Adaptive and Bayesian Methods in Clinical Research	11-14 March 2013
Genomics: Technologies and Data Analyses	15 March 2013

(registration deadline is 31 January 2013 for this workshop)

Designing Early Phase Clinical Trials	10-11 June 2013

MSc in Statistics: Choose optional pathways in medical, pharmaceutical or environmental statistics. Study advanced techniques. For those with a background in mathematics or statistics.

RSS 2012: Wednesday 5 September, morning programme

from 8.30am   **Registration/refreshments**   Exhibition (Ludlow 1 & 2)

9–10am

Ludlow 3 (Main Hall)
Have the cutbacks in statistical budgets undermined the statistical base?

The National Statistician's assessment of the effect of the cuts across the whole of the Government Statistical Service
Jil Matheson (National Statistician)

Maximising value from statistical budgets
Richard Alldritt (UK Statistics Authority)

The radical statistics view of the effect of the cuts on government statistics and their use
Ludi Simpson (Radical Statistics)

Newport 1
Getting your point across: dos and don'ts and guidance
This session offers practical advice on putting together stories, releases, presentations and public offerings around statistical themes – the products of research or findings.

10.10–11.30am

Ludlow 3 (Main Hall)
Methodology for longitudinal studies
Organised by the Social Statistics Section

A longitudinal analysis of childhood cognitive ability and family background on adult occupational positions
R Connelly (University of Stirling)

Lifelong socio economic position and biomarkers of later life health: testing the relative contribution of competing hypotheses
George Ploubidis (London School of Hygiene & Tropical Medicine)

Adjusting for selection bias in longitudinal analyses of the relationship between employment transitions and mental health using simultaneous equations modelling
Fiona Steele (University of Bristol)

Adjusting for non-ignorable drop-out in a longitudinal analysis of residential mobility
Paul Clarke (University of Bristol)

Newport 1
Who, what and why? Understanding user needs

Organised by the Statistics User Forum

The challenge of understanding the use of official statistics
Richard Alldritt (UK Statistics Authority)

Meeting user needs
James Tucker (the Statistics User Forum and StatsUserNet)

The experience of the RPI/CPI User Group
Tony Cox

Newport 2
Statistical aspects of networks

Null models for network data
Patrick Wolfe (University College London)

Models and estimators for longitudinal network data
Tom Snijders (University of Oxford and University of Groningen, The Netherlands)

Role analysis in networks using a mixture of exponential random graph models
Brendan Murphy (UCD, Ireland)

11.30am   **Tea/coffee break**   Exhibition (Ludlow 1 & 2)

12 noon–1.20pm

Ludlow 3 (Main Hall)
Making the most of the 2011 Census outputs for England and Wales
Organised by the Office for National Statistics (ONS)

2011 Census statistical releases
Emma White (ONS)

2011 Census – quality assuring the results
Garnett Compton (ONS)

Improving access to Office for National Statistics (ONS) data
Francesca Kay (ONS)

Newport 1
Statistical nous

Statistics and computing are now indelibly linked, but we still need the human brain to check over outputs with the question – does this make sense?
Jenny Church

This session, aimed at career young statisticians, will provide examples of publications where statistical nous was not applied, and some techniques to help you develop the skill of looking at an output and thinking – 'There's something wrong here.'

Newport 2
New developments in clinical trials

An overview of the MRC HTMR Network
Paula Williamson (University of Liverpool)

The TAILoR study – an example of multi-arm multi-stage clinical trials
Thomas Jaki (Lancaster University)

Clinical trial monitoring: towards establishing best practice?
Catrin Tudur Smith (University of Liverpool)

A systematic approach to using animal data to inform clinical trial design
Malcolm Macleod (University of Edinburgh)

Core outcome measures in effectiveness trial (COMET Initiative)
Mike Clarke (Queen's University Belfast)

1.20-2.30pm   **Lunch**   Exhibition (Ludlow 1 & 2)

Beckbury 2

A review of methods for specifying the target difference in randomised controlled trials (DELTA review)
Jonathan Cook (University of Aberdeen)

Sensitivity analysis for departures from the missing at random assumption in randomised trials with missing outcomes
Ian White (MRC Biostatistics Unit)

Estimators for the effect of received treatment in a randomised trial with all-or-none compliance under a Poisson model
Adam Brentnall (Queen Mary University of London)

Beckbury 3

Modelling credit risk of small and medium-sized businesses: evidence from the UK
Jake Ansell (The University of Edinburgh)

Changes to the compilation of UK national accounts and balance of payments statistics
Robert Dunn (Office for National Statistics)

Beckbury 1
Creating interactive web graphs with R: overview and googleVis tutorial

Markus Gesmann

The googleVis package provides an interface between R and the Google Visualisation API to create interactive charts which can be embedded into web pages. The best known of these charts is probably the Motion Chart, popularised by Hans Rosling in his TED talks. This talk will give an overview of the package and explain in detail how the functions can be applied to generate interactive charts for web pages and how it can be used as part of a reproducible research workflow.

Beckbury 2
YSM 2012 prize winners

Analysis of repeat event outcome data in clinical trials: examples in heart failure
Jennifer Rogers (London School of Hygiene & Tropical Medicine)

Modelling interactions in high-dimensional data with Backtracking
Rajen Shah (University of Cambridge)

Regional Variation in the Seasonal Behaviour of Indoor Radon Concentrations
Orlaith Burke (University of Oxford)

Beckbury 3

Understanding probability matching priors
Alastair Young (Imperial College London)

Financial forecasting using the generalised Kolmogorov-Feller equation
Jonathan Blackledge (Dublin Institute of Technology, Ireland)

A Bayesian one-dimensional random field model for ChIP-seq data.
Veronica Vinciotti (Brunel University)

Log-concavity and its application to time series models
Yining Chen (University of Cambridge)

Beckbury 4

Education for all: household and community level determinants of primary and secondary school attendance among children of official school going age in Sierra Leone
Mamusu Kamanda (University of Southampton)

Street lighting and safety
Paul Marchant (Leeds Metropolitan University)

Localised spatial smoothing in Bayesian disease mapping
Duncan Lee (University of Glasgow)

The impact on post-imputation parameter estimation of limiting donor usage in hot deck methods
Dieter William Joenssen (Ilmenau University of Technology, Germany)

Beckbury 1
Stochastic volatility jumps

Organised by the RSS Applied Probability Section

Asymptotic results and statistical procedures for time-changed Lévy processes sampled at hitting times
Peter Tankov (Université Paris-Diderot, France)

Statistical aspects of modelling and prediction for financial time series
Nick Bingham (Imperial College)

Beckbury 2
RSS long-term strategy consultation

Input into the RSS's future strategy
RSS is conducting a review of its future strategy. Help shape your Society's direction. Come to the Strategy interactive discussion session and give your views on what the Society should be doing in the future – and perhaps what it should stop doing.
Chair: Andy Garrett (chair, RSS long-term strategy review)

Beckbury 3

Improving penalised regression models for phenology by using thermal time
Adrian Roberts (Biomathematics and statistics Scotland)

A framework for adapting survey design through time for design-based wildlife population assessment
Fiona Underwood (University of Reading)

Data fusion modelling for archaeological geophysics
Robert Aykroyd (University of Leeds)

Spatio-temporal modelling of wildfires in Catalonia, through log-Gaussian Cox mixed models
Marc Saez (University of Girona, Spain, and CIBER of Epidemiology and Public Health (CIBERESP))

Beckbury 4

Dynamic Bayesian smooth transition autoregressive (DBSTAR) models
Alexandre Santos (The Open University)

A short guide and a forest plot command (ipdforest) for one-stage meta-analysis
Evangelos Kontopantelis (University of Manchester)

Power analysis for generalised linear mixed models using simulations
Paul Johnson (Robertson Centre for Biostatistics, University of Glasgow)

The evaluation of evidence in forensic science for discrete data
Colin Aitken (University of Edinburgh)

1.40pm

Beckbury 2
Funding opportunities workshop
Michael Ball (BBSRC)
Mark Pitman (MRC)
Rachel Tyrell (ESRC)
Vivienne Blackstone (EPSRC)

Chair: Kevin McConway (vice president for Academic Affairs, RSS)

2.30–4.10pm

Ludlow 3 (Main Hall)
Retrospective Read Paper

Organised by the RSS Research Section

Further results on tests of separate families of hypotheses, *JRSS-B* 24, 406-424, 1962
Sir David Cox
(University of Oxford)

Newport 1
Talking to the public about statistics

Organised by the RSS getstats campaign and the RSS Young Statisticians Section

An interactive workshop looking at what the public need to know about statistics, what the public don't know and what we need to tell them.

Newport 2
Big Data challenges

Health records are rich sources of medical information, but there are challenges in drawing casual inference
James Carpenter (LSHTM)

Studying crop disease and soil: evolutionary analyses of agricultural genomic and meta-genomic data
Elisa Loza (Rothamsted Research)

Inferring seabird distribution and behaviour using data from electronic tags
Adam Butler
(Biomathematics and Statistics Scotland)

4.10pm   **Tea/coffee break**   Exhibition (Ludlow 1 & 2)

4.40–5.40pm

Ludlow 3 (Main Hall)
Plenary 2
Campion (president's invited) lecture: Statistics at Google
Hal Varian (chief economist, Google)

7pm   **Conference dinner**   Ironbridge museum

Beckbury 2
Understanding ageing in the 21st century

Cross-national differences in older adults physical functioning: results from HRS, ELSA and SHARE studies of ageing
Paola Zaninotto
(University College London)

The impact of reporting bias on the measurement of socioeconomic health inequalities in the US
Paul Noroski (University At Albany, State University of New York)

The measurement of social networks and their correlates in the older population: Lessons from SHARE and NSHAP
Howard Litwin (Hebrew University, Israel)

Childhood conditions, education and main job
Christelle Garrouste (European Commission – Joint Research Centre, Italy)

Elderly consumers and cognitive age dimensions: the influence of hedonic/utilitarian contextual factors on perceived youthfulness
Gianluigi Guido, Cesare Amatulli, Alessandro M Peluso, M Irene Prete
(University of Salento, Italy)

Beckbury 4
Professional matters

Organised by the RSS Professional Affairs Committee

The message of accreditation
Ron Wasserstein
(ASA)

The role of the professional bodies in building the profession
Ali Orr
(Science Council)

The value of continuing professional development
Amanda Rosewarne (Warwick Business School)

Beckbury 3

Ordered categorical predictors: with an application in pharmacogenetics
Stephen Senn (CRP Santé, Luxembourg)

Measuring the impact of heterogeneity in multivariate meta-analyses
Dan Jackson (MRC Biostatistics Unit, UK)

Modelling the diluting effect of social mobility on health inequality
Heather Turner (University of Warwick and freelance statistical/R consultant)

Modelling multiple binary events with applications to concurrences of human papillomavirus infections
Zihua Yang (Wolfson Institute, Queen Mary University of London)

Empirical assessment of the validity of uncontrolled comparisons of the accuracy of diagnostic tests
Yemisi Takwoingi
(University of Birmingham)

Beckbury 4

Statistical modelling of oceanographic time series
Adam M Sykulski
(University College London)

Nonparametric monitoring of high frequency data streams
Gordon Ross
(University of Bristol)

Locating and quantifying gas emission rates using remotely obtained concentration data
David Randell (Shell Projects & Technology, UK, 2MIT Laboratory for Information and Decision Systems, USA)

Peaks over threshold modelling for Irish flow data
Sangaralingam Ahilan
(University College Dublin)

8.30am **Registration/refreshments** Exhibition (Ludlow 1 & 2)

9.20–10.40am

Ludlow 3 (Main Hall)
Statistics and the Olympics (1)

Statistics and the Olympics (1)
Ludlow 3 (Main Hall)

Ultimate 100-m world record through extreme-value theory
John Einmahl (Tilburg University, the Netherlands)

Determinants of success at the Olympics Games
David Forrest (University of Salford)

Newport 1
Statistics and energy

Statistics and energy – challenges and opportunities
Idris Eckley (Lancaster University)

Managing uncertainty in energy networks
Stan Zachary (Heriot-Watt University)

Forecasting nonstationary energy time series
Marina Knight (University of Bristol)

Newport 2
RSS graduate statistician mentoring scheme

This session aims to bring together mentors and mentees from the scheme to share experiences and ideas. Anyone interested in joining the scheme, either as a mentor or mentee are also very welcome to attend. More information can be found at www.rss.org.uk/mentoring

10.40am **Tea/coffee break** Exhibition (Ludlow 1 & 2)

11.10am–12.40pm

Ludlow 3 (Main Hall)
Statistics and the Olympics (2)
Participation and performance at the London 2012 Olympics
Gerard Kuper (University of Groningen, the Netherlands)

Olympic Games: export effect, signal effect?
Wolfgang Maennig (University of Hamburg, Germany)

Newport 1
Recent advances in statistical computing: an introduction to GPU computation

Harnessing many-core architectures using population-based Monte Carlo methods
Anthony Lee (University of Warwick)

Accelerating integrative modelling using GP-GPU computing
Paul Kirk (University of Warwick)

Approximate Bayesian computation with GPUs
Michael Stumpf (Imperial College London)

Experiences from the world of statistical parallel computing – large scale Bayesian factor analysis
Simon Wilson (discussant) (Trinity College Dublin)

Newport 2
Spatio-temporal environmental epidemiology

Detection of spatio-temporal disease clusters
Tom Fanshawe (Lancaster University)

A space-time model for investigating the effect of temperature on mortality: an England and Wales case study
Marta Blangiardo (Imperial College)

Ecological bias in studies of the short-term effects of air pollution on health
Gavin Shaddick (University of Bath)

Organised by the RSS Environmental Statistics Section

12.40pm **Lunch** Exhibition (Ludlow 1 & 2)

Beckbury 1

Statistical analysis of copy number alterations in cancer samples using low-coverage next-generation sequence data
Arief Gusnanto (University of Leeds)

Sparse Gaussian copula graphical model for a genomic breast cancer network
Fentaw Abegaz (University of Groningen, the Netherlands)

Detection of disease change from a biological marker: using CA125 in ovarian cancer as an example
Wendi Qian (University of Cambridge)

Differential heritability and environmentality of intelligence test subscales across socioeconomic status
Rebecca Pillinger (University of Bristol)

Beckbury 2

Beyond 2011 – the future of population statistics
Ann Blake (Office for National Statistics (ONS))

Matching of administrative data to validate the 2011 Census in England and Wales
Louisa Blackwell (ONS)

Using internet search data in the production of official statistics
Daniel Ayoubkhani (ONS)

Driving insight through developing web analytics in the not-for-profit sector
Paul Askew (Chartered Society of Physiotherapy)

Beckbury 3

Volatility graphics for financial time series
Tony Lawrance (University of Warwick)

Implementing bootstrap variance estimation on the ONS Business Register and Employment Survey
Matthew Greenaway (ONS)

Item-by-item sampling for promotional purposes
Neil Spencer (University of Hertfordshire)

Beckbury 1
RSC 2011 and YSM 2011 prize winners

Describing childhood diet with cluster analysis
Andrew Smith
(University of Bristol)

Modelling dependence between extreme values
Jenny Wadsworth (EPFL, Switzerland, and Lancaster University)

Statistical disclosure control for communal establishments in the UK 2011 Census
Joseph Frend
(Office for National Statistics)

Beckbury 2
Revalidation for Chartered Statisticians

Organised by RSS Professional Affairs Committee (PAC)

This session will involve an initial presentation intended to clarify the planned process for revalidation, including responses to FAQs already received. The presentation will also cover what Chartered Statisticians need to be doing now in order to prepare for their first revalidation.

However, the main part of the session will be a Q&A and discussion session with a panel of PAC members responding to questions raised by the audience.

Presenter: Trevor Lewis (chair of PAC)

Panel will include:
Trevor Lewis
Roeland Beerten (RSS director of education and professional affairs)

Beckbury 3

Communication and interpretation of statistical evidence in the administration of criminal justice
Colin Aitken (University of Edinburgh)

Statistical inference in the courtroom: experts getting it wrong?
Ian Hunt (London School of Economics)

The evaluation of evidence relating to traces of drugs on banknotes
Amy Wilson (University of Edinburgh)

Beckbury 4

Longitudinal quality of life in adults with cystic fibrosis
Margaret Hurley (University of Central Lancashire)

Control charts in medicine: An application to management of patients with bipolar disorder
Maria Vazquez-Montes (University of Oxford)

Estimation of spatial spillover effects in cluster randomised trials
Karim Anaya-Izquierdo (London School of Hygiene & Tropical Medicine)

Estimating the treatment effect in a randomised trial with switching using a conditional Poisson model
Zihua Yang (Wolfson Institute, Queen Mary University of London)

1.30pm–2.50pm

Ludlow 3 (Main Hall)
Significance: Alan Turing and Enigma
James Grime (University of Cambridge's Millennium Mathematics Project)

Newport 1
Experimental design challenges in industry

Organised by the RSS Business and Industrial Section

A general class of models for data from mixture experiments
Alexander Donev, Liam Brown (University of Manchester)

Designing real-life industrial experiments: design criteria and challenges
Peter Goos (Universiteit Antwerpen)

Improved split-plot and multi-stratum designs
Steven Gilmour (University of Southampton)

Newport 2
Expert advise

The English libel laws and other obstacles to honesty in medical research
Peter Wilmshurst (Consultant Cardiologist, UK)

3pm–4.15pm

Ludlow 3 (Main Hall)
Plenary 3: Statistics of risk

Environmental extremes and risk
Anthony Davison (EPFL)

Risk in business, and the business of risk
David Hand (Imperial College)

4.15pm   **Refreshments**   Exhibition (Ludlow 1 & 2)

Beckbury 1

Partitioning uncertainty in climate predictions using data from undesigned climate experiments
Paul Northrop
(University College London)

Combining probabilistic temperature forecasts from global climate models and time series models
Siddharth Arora (University of Oxford)

Multidecadal oscillations in multivariate marine ecological datasets
Victoria Harris (University College London)

Using the UKCP09 climate projections to assess uncertainty and variation in projected impacts of climate change on crop yields
Jacqueline Potts (Biomathematics and Statistics Scotland)

Beckbury 2

Injectors' initiation of others to injecting drug use in Scotland 2008–09: who initiates, how often, shared responsibility, and novice replacement-rate
Simon White (MRC Biostatistics Unit, UK)

Examining the performance of a predictive test using multiple studies: beyond meta-analysis
Richard Riley (University of Birmingham)

Combining pooled and individual test data to estimate herd-level prevalence
Geoff Jones (Massey University, New Zealand)

Analysis of proportional admissions/mortality: proposed odds ratio methods to overcome flaws in standard methodologies
Paul Fryers (East Midlands Public Health Observatory)

Beckbury 3

Bayesian estimation of animal movements in heterogeneous environment using data augmentation
Svetlana Tishkovskaya (University of Central Lancashire)

Estimating the oceanic aircraft separation loss distribution under periodic reporting
Jacqueline Civil (NATS, UK)

Adult body mass index trends are levelling off in England: exploration of underlying patterns using a two-component model
Matthew Sperrin (Lancaster University)

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