

RSS 2013 International Conference

2-5 September 2013

University of Northumbria, Newcastle, UK

www.rssconference.org.uk



Sponsored by



Conference Directory

Welcome

Welcome to the RSS 2013 conference in Newcastle

Newcastle upon Tyne is perched on the edge of England, only 8 miles from the North Sea and surfing beaches of Tynemouth and Whitley Bay. Newcastle was named after the New Castle that was built in 1080 on the North bank of the River Tyne. There are 12 bridges connecting Newcastle and Gateshead including the parabolic shaped Millennium pedestrian and cycle Bridge linking Newcastle Quayside with the Baltic Centre for Contemporary Art and the Sage performance venue in Gateshead.

West from Newcastle the River Tyne passes through stone villages and market towns such as Hexham with its Abbey and 1300 year old Saxon Crypt. Hadrian's Wall extends from Wallsend through Newcastle 84 miles across the country to Carlisle. The Cheviot Hills and the Scottish border are only 50 miles to the North mid way between Newcastle and Edinburgh. Durham with its University and Cathedral both dating back a thousand years are 15 miles to the South.

So this is the perfect, well connected and strategically important place to be for a conference.

I hope you have an uplifting and enjoyable time.

Shirley Coleman, ISRU, School of Maths and Stats,
Newcastle University,
Co-chair of RSS 2013

Sponsors Acknowledgments

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

Accenture as an overall event sponsor

Winton Capital for sponsoring the Conference Dinner

Google for sponsoring the Welcome Reception

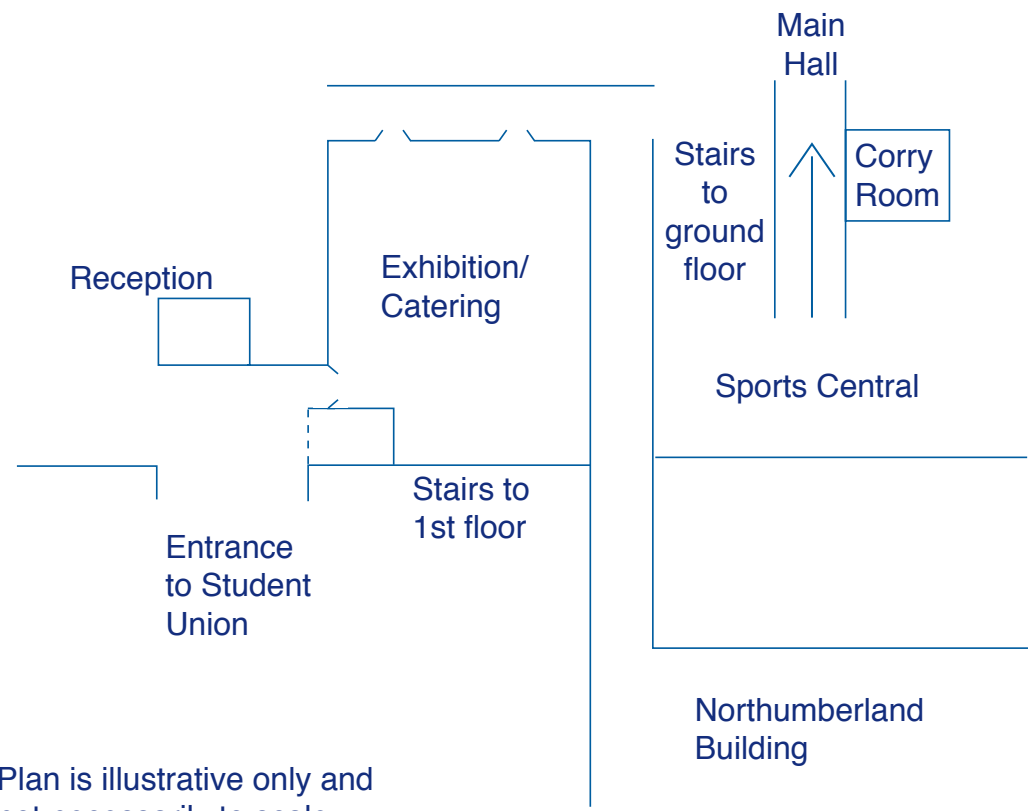
PSI and the **UK Statistics Authority** for their support of the statistical excellence awards

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


High performance. Delivered.



Local Map and Venue Plans



Outline Timetable

MONDAY 2ND SEPTEMBER

09.30am – 05.00pm - Pre-conference short courses and workshops

06.30pm- Welcome Reception (BALTIC Centre)

TUESDAY 3RD SEPTEMBER

09.20am – 10.20am - Contributed sessions (1)

10.30am – 11.20am - Campion (President's Invited) Lecture

11.20am – 11.50am - Refreshment break

11.50am – 01.10pm - Invited/Contributed sessions (2)

01.10pm – 02.30pm - Lunch (including YSS Reception)

01.30pm – 02.30pm - Poster Viewing (A)

02.30pm – 03.50pm - Invited/Contributed sessions (3)

03.50pm – 04.20pm - Refreshment break

04.20pm – 05.20pm - Contributed sessions (4)

05.45pm – 07.15pm - Royal Statistical Society Awards Ceremony

07.15pm – 08.30pm - Awards Ceremony Reception

WEDNESDAY 4TH SEPTEMBER

09.00am – 10.20am - Invited/Contributed sessions (5)

10.00am – 12.30pm - Visit to the Skills Academy for Sustainable Manufacturing and Innovation (SASMI) on the Nissan site

10.30am – 11.20am - Plenary 2

11.20am – 11.50am - Refreshment break

11.50am – 1.10pm - Invited sessions (6)

01.10pm – 02.30pm - Lunch

01.30pm – 02.30pm - Poster Viewing (B)

02.30pm – 03.50pm - Invited sessions (7)

03.50pm – 04.15pm - Refreshment break

04.15pm – 05.15pm - Invited/Contributed sessions (8)

05.25pm – 06.15pm - Plenary 3 - Significance Lecture

07.30pm - Conference Dinner (Great North Museum)

THURSDAY 5TH SEPTEMBER

09.20am – 10.40am - Invited/Contributed sessions (9)

10.40am – 11.10am - Refreshment break

11.10am – 12.30pm - Invited sessions (10)

12.30pm – 01.40pm - Lunch

01.40pm – 03.00pm - Invited sessions (11)

03.00pm – 3.20pm - Refreshment break

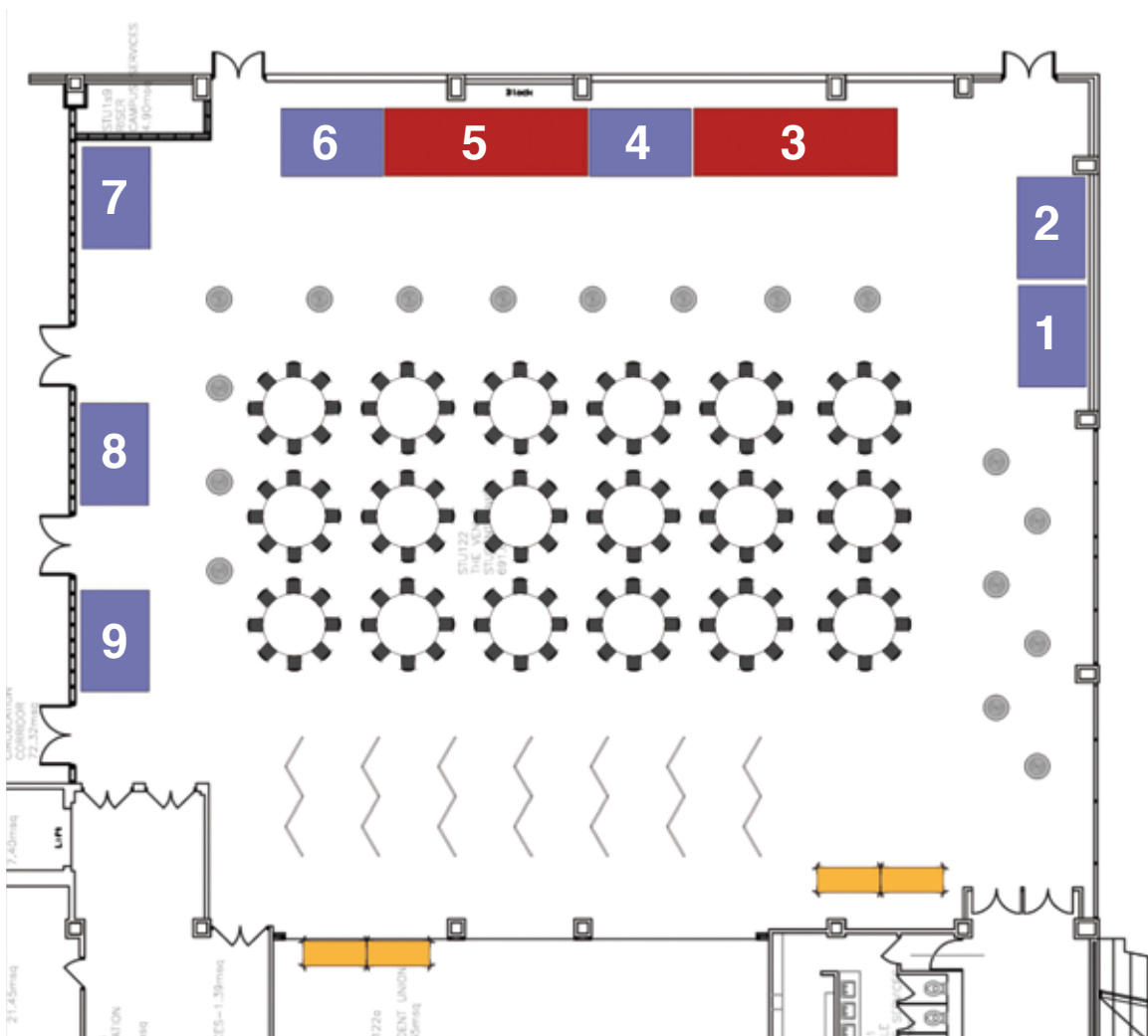
03.20pm – 04.20pm - Plenary 4

04.20pm - Close of conference

YSS Tuesday night social (Tuesday from 8pm)

Join the Young Statisticians Section on Tuesday evening for a social drink or three in some of Newcastle's finest watering holes. Meet from 8pm onwards at Pacific House, just a two minute stroll from the conference - we'll be there till at least 10pm before moving on. All welcome!

Exhibition Plan and Information



Exhibition Plan Key

- 1 - Accenture
- 2 - CRC Press
- 3 - Royal Statistical Society
- 4 - Significance
- 5 - Wiley Blackwell
- 6 - Winton Capital
- 7 - PSI
- 8 - Oxford University Press
- 9 - Springer

General Information

Badges

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

Internet Access

The University provides wi-fi access – attendees will find a code in their conference packs.

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 #RSS2013

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 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 on the first floor of the Students' Union.

Registration and information desk

The registration and information desk can be found on the first floor landing outside the exhibition area in the Students' Union.

The Registration desk will open at the following times:

| Date | Opening Times |
|-----------------------|-----------------|
| Monday 2 September | 3pm – 5.30pm |
| Tuesday 3 September | 8.30am – 6pm |
| Wednesday 4 September | 8.30am – 5.30pm |
| Thursday 5 September | 8.45am – 3pm |

Session locations

Plenary sessions will be held in the main hall in the Sports central building. All other sessions will be held in one of 7 rooms on the first, third and fourth floors of the Northumberland Building. You should allow at least 5 minutes to walk from the exhibition hall to the rooms on the third and fourth floors.

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

Social events

If you have booked to attend one of the social events during the conference when you collect your badge from registration you will be provided with tickets for the relevant events (welcome reception and conference dinner)

Please note that at the reception on Monday evening a BBQ 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 first floor of the Students' Union in the Escape area.



Full Programme

TUESDAY 3RD
SEPTEMBER

**1.1 Contributed
(Communicating Statistics)
9.20am - 10.20am
Room 442,
Northumberland Building**

EMOS- The European Master in Official Statistics
Markus Zwick
Eurostat, Luxembourg

Making Data Accessible - JRF DATA. The new data initiative of the Joseph Rowntree Foundation
Aleks Collingwood
Joseph Rowntree Foundation, UK

Census for all: Dissemination of the 2011 Census Microdata Products
Paul Waruszynski
Office of National Statistics, UK

**1.2 Contributed
(Methods & Theory)
9.20am - 10.20am
Room 314,
Northumberland Building**

Simultaneous Confidence Bands for a Percentile Line in Linear Regression with Application to Drug Stability Studies
Yang Han
S3RI and School of Mathematics, University of Southampton, UK

On the effects of the Diebold-Mariano test on the selection of prediction models
Robert Kunst
Institute for Advanced Studies, and University of Vienna, Vienna (Wien), Austria

Joint spatio-temporal modeling of bovine TB in badgers and cattle
Gabrielle Kelly
University College Dublin, Ireland

**1.3 Contributed
(Time Series)
9.20am - 10.20am
Room 306,
Northumberland Building**

Quasi-maximum likelihood estimation of periodic autoregressive, conditionally heteroscedastic time series
Florian Ziel
European University Viadrina, Frankfurt, Germany

Big Data impacts on stochastic forecast models: Evidence from FX time series
Sebastian Dietz
University of Passau, Germany

**1.4 Contributed
(Healthcare)
9.20am - 10.20am
Room 449,
Northumberland Building**

Applications of Mixed Models to investigate progression of Chronic Diseases using Routinely Collected General Practice Data: a case study in chronic kidney disease (CKD) in the UK
Zalihe Yarkiner
Kingston University, London, UK

Dealing with non-response in longitudinal analysis of trajectories of frailty and wellbeing in older people
Gindo Tampubolon
University of Manchester, UK

**1.5 Contributed
(Heterogeneity)
9.20am - 10.20am
Room 308,
Northumberland Building**

Modelling Heterogeneous Variance-Covariance Components in Two-Level Multilevel Models with Application to School Effects Educational Research
George Leckie
University of Bristol, UK

Statistical Inference on Networks With Heterogeneous Degrees
Pierre-André Maugis
University College London, UK

A re-analysis of the Cochrane Library data: the dangers of unobserved heterogeneity in meta-analyses
Evan Kontopantelis
University of Manchester, UK

**1.6 Professional Development
The Young Statistician's Guide to the
Conference
9.20am - 10.20am
Room 149,
Northumberland Building**

Organised by the RSS Young Statisticians' Section. This session is designed to help attendees both new and old get to grips with the conference programme, and get a sneak preview of some of the key talks.

**Plenary 1: Campion
(President's Invited) Lecture
10.30am - 11.20am
Main Hall, Sports Central
Chair: John Pullinger**

Sir Mark Walport FRS FMedSci

Sir Mark is the Chief Scientific Adviser to HM Government and Head of the Government Office for Science.

**Tea/Coffee
11.20am - 11.50am
Exhibition Area**

**2.1 Invited
Communicating and interpreting
statistical evidence in the
administration of criminal justice
11.50am - 1.10pm
Room 149,
Northumberland Building
Chair: Colin Aitken**

Organised by the RSS Statistics & the Law working group

Colin Aitken
(University of Edinburgh)
Statistics and the evaluation of evidence

Paul Roberts
(University of Nottingham)
Statistics, probability and the logic of forensic proof

Graham Jackson
(University of Abertay)
The basis of opinions in forensic science

**2.2 Invited
Retrospective Read Paper:
Bayesian Measure of Model
Complexity and Fit
11.50am - 1.10pm
Main Hall, Sports Central
Chair: Alastair Young**

Organised by the RSS Research Section

Speaker:
David Spiegelhalter

Discussants:
Christian Robert
Elias Moreno Bas

Full Programme

2.3 Invited
Data sharing and linking - the methodological, legal and practical issues
11.50am - 1.10pm
Room 442,
Northumberland Building
Chair: Alison Walker

Organised by the RSS Social Statistics Section
 Sponsored by the Open Data Institute

Multiple imputation for linking data
 Katie Harron
 UCL Institute of Child Health,
 London, UK

Improving our evidence base through making better use of existing administrative data: the DWP/HMRC/MoJ data sharing experience.
 Josephine Daniels², Samaira Iniesta-Martinez¹, Melissa Cox¹
¹Ministry of Justice, UK, ²Department for Work and Pensions, UK

2.4 Professional Development - Presenting Skills
11.50am - 1.10pm
Room 306,
Northumberland Building

Presenter:
 Jenny Freeman
 (University of Sheffield)

Improving your presentations: all you need to know in 80 minutes!

Have you ever felt nervous before a presentation; lost concentration during a presentation; wondered afterwards if you could have done better? If the answer to any or all of these then this workshop is for you. In less than an hour and a half we will look at what makes for an effective, memorable presentation and help you develop some strategies for improving what you do.

Lunch
1.10pm - 2.30pm
Exhibition Area, Students' Union

Young Statisticians' Section Reception
1.15pm - 2.30pm
Corry Room, Sports Central

Lunch and wine provided!
 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.

Poster viewing
1.30pm - 2.30pm
Exhibition Area, Students' Union
See listing on page 27

3.1 Invited - Big Data Revolution
2.30pm - 3.50pm
Main Hall, Sports Central

Speakers:
 Giovanni Montana (Imperial College)
 Big Data in science and medicine

Giles Pavey (Dunnhumby)
 Big Data in retail and commerce

Rajen Shah (University of Cambridge)
 Big Data & high dimensional statistical methods

3.2 Invited
George Casella, his life and work
2.30pm - 3.50pm
Room 149,
Northumberland Building
Chair: Christian Robert

Organised by the RSS Research Section

Convergence analysis of the Gibbs sampler for Bayesian general linear mixed models with improper priors
 Jim Hobert
 University of Florida,
 Gainesville, FL, USA

Consistency issues in variable selection
 Elias Moreno
 University of Granada,
 Granada, Spain,

3.3. Invited
Statistical challenges in quantitative finance
2.30pm - 3.50pm
Room 449,
Northumberland Building
Chair: Kostas Triantafyllopoulos

Organised by the RSS Business & Industrial Section

Modelling bubbles and crashes in housing and stock markets
John Fry
University of Sheffield, Sheffield, UK

Conditional Alphas and Realized Betas
Valentina Corradi
University of Warwick

3.4 Contributed
Meta analysis
2.30pm - 3.50pm
Room 314,
Northumberland Building

Meta-analysis of time-to-event outcomes from randomized trials using restricted mean survival time: application to individual participant data
Yinghui Wei
MRC Clinical Trials Unit Hub for Trials Methodology, London, UK

Using meta-analysis of phase II trials to inform potential phase III trial results
Danielle Burke
MRC Midland Hub for Trials Methodology Research, and University of Birmingham, both Birmingham, UK

Multivariate meta-analysis using individual participant data, with application to continuous, survival and surrogate outcomes
Richard Riley
University of Birmingham, UK,

Estimating the power of a meta-analysis using individual participant data
Joie Ensor
University of Birmingham, UK

3.5 Invited
Britain: what are we thinking and feeling?
2.30pm - 3.50pm
Room 442,
Northumberland Building
Chair: Hetan Shah

Bobby Duffy (Managing Director, Social Research Institute, Ipsos MORI)

Alison Park (Head of Society and Social Change, NatCen)

3.6/4.6 Professional Development
Improving graphs & tables
2.30pm - 5.20pm
Room 306,
Northumberland Building

includes break at 3.50pm

Presenter:
Jenny Freeman (University of Sheffield)

Well designed tables and graphs are essential for communicating with an audience, either in a presentation, report or scientific paper. However, good display does not always happen in practice and when done poorly, it can convey a misleading or confusing message. The purpose of this workshop is to give participants hands-on experience of designing tables and graphs that are easy to read, contain all the essential information necessary and are thus effective tools for communication.

Tea/Coffee
Tuesday 3 September
3.50pm - 4.20pm
Exhibition Area



Full Programme

TUESDAY 3RD
SEPTEMBER

4.1 Technology Forum
Open Data Institute/UK Data Service
4.20pm - 5.20pm
Main Hall, Sports Central

Ulrich Atz, Open Data Institute
Jo Wathan, UK Data Service

4.2 Contributed
Methods & theory
4.20pm - 5.20pm
Room 314,
Northumberland Building

The evaluation of evidence for autocorrelated data with an example relating to traces of cocaine on banknotes

Colin Aitken
The University of Edinburgh, UK,

Direct Semiparametric Estimation of Fixed Effects Panel Data Varying Coefficient Models
Alexandra Soberon Velez
University of Cantabria,
Santander/Cantabria, Spain

Nonparametric predictive inference for ordered three-class ROC analysis with continuous measurements

Tahani Coolen-Maturi
Durham University Business School,
Durham, UK

4.3 Contributed
Business & Finance
4.20pm - 5.20pm
Room 449,
Northumberland Building

Small and Medium Sized Enterprises and the Financial Crisis

Jake Ansell
University of Edinburgh, UK

Ensemble models: theory and applications

Silvia Figini
University of Pavia,
Pavia, Italy,

The Invers of Autocovariance Matrix method for a better space-time modeling

Utriweni Mukhaiyar
Institut Teknologi Bandung,
Bandung, Indonesia

4.4 Contributed
Medical: scanning & surveillance
4.20pm - 5.20pm
Room 149,
Northumberland Building

Estimation of Seasonal Influenza Vaccine Effectiveness (SIVE) in Scotland

Kimberley Kavanagh
University of Strathclyde,
Glasgow, UK,

Causal effects of changes in brain structure on behavioural and cognitive measures accounting for age-effects

Simon White
MRC Biostatistics Unit,
Cambridge, UK

Correcting for rater bias in scores on a continuous scale, with application to breast density

Matthew Sperrin
University of Manchester, UK

4.5 Contributed
Communicating Statistics
4.20pm - 5.20pm
Room 442,
Northumberland Building

Back to Basics. Helpful concepts for Reasoning and Arguing that you might not have learned in your statistics course.

Ulrike Naumann
Institute of Cancer Research,
Sutton, UK

The Use of Interactive E-Books for teaching Bayesian Statistical Modelling and Missing Data Methods Using the Stat-JR package

William Browne
University of Bristol, UK

Communicating interactions - an alternative graphical view

Neil Spencer
University of Hertfordshire,
Hatfield, UK

WEDNESDAY 4TH SEPTEMBER

4.6 Contributed Sports & Gaming 4.20pm - 5.20pm Room 308, Northumberland Building

A comparison of sporting heroes: Bayesian modelling of Test match cricketers
Pete Philipson
Northumbria University, Newcastle upon Tyne, UK

Comparison of Machine Learning and Statistical Models with Application in Rugby Fitness Tests
Matthew Revie
University of Strathclyde, Glasgow, UK

Statistical Analysis of Player Behaviour of Online Freemium Games Leading to Business Models
Anusua Singh Roy
Edinburgh Napier University, and Games Analytics, both Edinburgh, Midlothian, UK

Royal Statistical Society Awards Ceremony
Tuesday 3 September
5.45pm - 7pm
Main Hall
Chair: John Pullinger, RSS President

See centre pages for details

Awards Ceremony Reception
Tuesday 3 September 7pm - 8.30pm
Exhibition Area

5.1 Contributed Medical/Clinical Trials 9am - 10.20am Room 449, Northumberland Building

A review of statistical methodology for recurrent events, with application to major trials in heart failure
Jennifer Rogers
London School of Hygiene and Tropical Medicine, UK

Flexible joint modelling of longitudinal and time-to-event data: a semiparametric regression approach with exact likelihood.
Jessica Barrett
MRC Biostatistics Unit,
Cambridge, UK

Quantifying the bias in estimated treatment effects if an early stopping rule is used in clinical trials: an analytic assessment.
Stephen Walter
McMaster University, Hamilton, Ontario, Canada

Use of historical information to supplement a future study: opportunity and difficulty
Nicholas Galwey
GlaxoSmithKline, Stevenage, UK

5.2 Invited RSS medal/prize winners & contributed (methods & theory) 9am - 10.20am Main Hall, Sports Central

Guy Bronze medal winner
Piotr Fryzlewicz

RSS Research Prize winner
Haeren Cho

Estimation and Hypothesis Testing in High-Dimensional Transposable Data
Anestis Touloumis
EMBL-European Bioinformatics Institute, Hinxton, UK, and Cancer Research UK Cambridge Institute, Cambridge, UK

Society Honours

Guy Medal in Gold: Sir John Kingman



Sir John Kingman FRS was the third director of the Isaac Newton Institute for Mathematical Sciences, serving from October 2001 to September 2006. During that period he was the first N.M. Rothschild & Sons Professor of Mathematical Sciences.

Sir John works on the theory and applications of probability and stochastic analysis, including operational research and population genetics. He has written five books and about a hundred papers on these and related areas of mathematics. He has been President of the Royal Statistical Society, the London Mathematical Society and the European Mathematical Society. He was elected to the Royal Society in 1971, and received its Royal Medal in 1983. He is also Foreign Associate of the US National Academy of Sciences.

He gained his degrees at Cambridge, as a scholar and later Fellow and Honorary Fellow of Pembroke College. After teaching in Cambridge he became a professor at Sussex in 1966 and then at Oxford in 1969. From 1981 he was Chairman of the Science and

Engineering Research Council (SERC), before becoming Vice-Chancellor of the University of Bristol, a post he held from 1985 to 2001. In 2000 he set up the Statistics Commission, to oversee the quality of official statistics in the UK, and was its Chairman until 2003.

Sir John is married with two children, one a senior civil servant and the other a consultant obstetrician and gynaecologist. His wife Valerie Cromwell was Director of the History of Parliament from 1991 to 2001. He has served on a wide range of national and international bodies, including the British Council, the British Technology Group, the Parliamentary and Scientific Committee and the boards of IBM UK and SmithKlineBeecham. In 1988 he chaired the committee which produced the government report on the teaching of the English language.

His knighthood came in 1985 for his work with the SERC, and he holds honorary degrees from English, Russian and Canadian universities. He is Officier dans l'Ordre des Palmes Académiques, and an Honorary Senator of the University of Hannover.

Guy Medal in Silver: Professor Brian Ripley



Brian Ripley has been Professor of Applied Statistics at the University of Oxford since 1990. He holds MA and PhD degrees from Cambridge and previously held academic positions at Imperial College and the University of Strathclyde. He is the author of six books, two with Bill Venables, with 'Modern Applied Statistics with S' running to four editions and 90,000 sales. He is a long-standing member of the R Core Team.

Guy Medal in Bronze: Piotr Fryzlewicz



Piotr Fryzlewicz received his MSc in Mathematics from Wroclaw University of Technology, Poland, in 2000, and PhD in Statistics from the University of Bristol in 2003. Between 2003 and 2009, he worked as Chapman Research Fellow at Imperial College London, Lecturer and Senior Lecturer in Statistics at the University of Bristol, and Researcher at Winton Capital Management. Since 2009, he has been Reader and then Chair in Statistics at the London School of Economics.

His research interests lie in multiscale modelling in statistics, time series (especially nonstationary time series), nonparametric modelling, adaptive estimation, high-dimensional statistical inference and dimension reduction, statistical learning, and applications of statistics in finance.

Piotr's past service to the Society includes Associate Editorship of the Journal of the Royal Statistical Society Series B (2006-2010) and his service as Secretary of the Research Section (2011-2012).

Bradford Hill Medal: Paddy Farrington



I was born in France of Irish parents. I studied pure mathematics at Aberdeen, Oxford and Leeds, where I got my PhD in 1980. Then I lived in Hanoi, Vietnam for 2 years where I worked as a translator for the Foreign Languages Publishing House. After coming back to the UK, I was for several years circulation manager of the political magazine Marxism Today. My first job as a statistician was at the Communicable Disease Surveillance Centre in London, now part of Public Health England, from 1987. As I'd never studied statistics, I thought I'd better learn some, so I followed an evening course at Birkbeck College, and got an MSc in Statistics and OR in 1988. I moved to the Open University in 1998, and was appointed professor in 2004. I served as RSS Vice President for Academic Affairs in 2011. My research is primarily in infectious diseases and pharmacoepidemiology.

Haeron Cho: Research Prize



After doing BSc in Statistics in the Department of Statistics at Seoul National University in South Korea, I came to UK and received PhD in Statistics at London School of Economics. I will start working as a lecturer in the Department of Mathematics at the University of Bristol in September 2013. My research interests include nonstationary time series modelling, high-dimensional data analysis and electricity data modelling.

Greenfield Industrial Medal: Professor Ron Kenett



Professor Ron Kenett, Chairman and CEO of the KPA Group, Research Professor, University of Torino, Torino, Italy, International Professor Associate, Center for Risk Engineering, NYU-Poly, NY, USA, President of the Israel Statistical Association (ISA) and Past President of the European Network for Business and Industrial Statistics (ENBIS). Editor in chief of the Wiley Encyclopedia of Statistics in Quality and Reliability, member of the advisory editorial board of Quality Technology and Quantitative Management, the Italian Journal of Applied Statistics, the Electronic Journal of Applied Statistical Analysis: Decision Support Systems and Services Evaluation, the Journal of Methodological and Applied Statistics, Applied Stochastic Models in Business and Industry and past associate editor of the Journal of the Royal Statistical Society (Series A).

He has worked in a wide range of statistical applications including industrial statistics, biostatistics, design of experiments, operational risks, customer surveys, systems and software process improvement, multivariate quality control, health care, quality management and machine learning methods such as Bayesian Networks and Association Rules.

In the 1980s Ron held the position of Director of Statistical Methods in a large telecom corporation. He also held positions at the University of Wisconsin, Madison Wisconsin, Bell Laboratories, New Jersey, the State University of New York in Binghamton and Tel Aviv University. Ron authored and co-authored over 160 papers and 9 books published by Willey, Taylor and Francis and Duxbury Press. He is now working with S. Zacks and D. Amberti on a second expanded edition of Modern Industrial Statistics, with applications using R, MINITAB and JMP to be published by Wiley. He has been a consultant for companies in Europe, the US, the Middle East and the Far East in electronics, semiconductors, software, healthcare, banking and education systems. The company he created in 1994, is focused on creating insights through analytics with tailored projects and web based technologies on a global scale. Among the customers of KPA on finds multinational companies such as hp, 3M, SanDisk, Intel, Cisco, Amdocs, Perrigo, Teva and Roche. Ph.D. in Mathematics (1978) from the Weizmann Institute of Science, Rehovot, B.Sc. in Mathematics (1974) from Imperial College of Science and Technology, with first class honors, London University, London, UK. Ron is a Fellow of the Royal Statistical Society and an Associate of the Royal College of Science.

Awards Winners

Award for Statistical Excellence in the Pharmaceutical Industry

Jointly awarded by the Society and Statisticians in the Pharmaceutical Industry (PSI).



Björn Bornkamp obtained his PhD in Statistics from Dortmund University of Technology in 2009. His dissertation was on the topic of Bayesian nonparametric shape constrained inference. In 2010 he joined the Novartis Statistical Methodology group in Basel where he works as an Expert Statistical Methodologist.

He started collaborating with the Novartis Statistical Methodology group in 2005, and worked jointly with Frank Bretz and José Pinheiro (now at J&J) on the development of new methods for dose-finding and their computer implementation, resulting in several articles on this topic in peer-reviewed journals. In addition > 20 Novartis studies have by now used the developed methods.

During 2006 to 2010 Dr Bornkamp was an active contributor to the PhRMA working group on adaptive designs.

He is the main developer and maintainer of the DoseFinding R package.

Awards for Statistical Excellence in Official Statistics

Supported by the UK Statistics Authority

The overall winner is the HMRC Overseas Trade Statistics Team

HM Revenue & Customs (HMRC) Trade Statistics unit operates uktradeinfo.com alongside the main HMRC website for the purpose of publishing information about UK import and export trade statistics. These statistics record the movement of goods between the UK and both EU and non-EU countries. EU statistics are collected from the Intrastat survey and non-EU from Customs import and export entries.

The team members attending this evening all played an active role in the re-development of the site, web publishing, user engagement and customer service support.



Sandra Tudor (Head of HMRC Trade Statistics)

Don Priest (previously Head of Compilation, currently on secondment to Eurostat)

Richard Batterham (Head of Outputs & Delivery)

Dave Belcher, Natalie Harris & Steve Wilson (Outputs & Delivery team)

There are two joint runners-up:
The Welsh Government for My Local School project
and the ONS for 2011 Data Visualisation.

Welsh Government - Knowledge and Analytical Services and Department for Education.

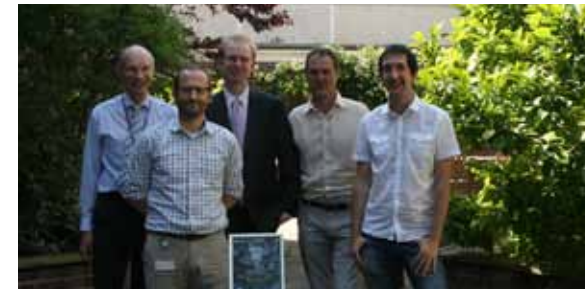
Glyn Jones, Andy Milne, Jon Ackland, Alun Lee, Bill Oates and Tim Spiers

The team that delivered MyLocalSchool comprised experts in Statistics, Education, Technology and Project Management, from 3 different departments of Welsh Government. The technical lead was provided by the Geography & Technology team in the Welsh Government's Knowledge and Analytical Services function. This team provide a digital delivery capability for statistics and data products, utilising open source, open standards and cloud technologies. The team relies heavily on agile approaches to delivery, and MyLocalSchool was typical of this approach, with five phases of releases to stakeholders ahead of the full launch of the site.

ONS

Alan Smith, Robert Fry, John Nixon, Martyn Hill, Bruce Mitchell.

The interactive data visualisations were a centrepiece of the 1st and 2nd 2011 Census releases (available online at <http://bitly.com/ONSDataVis>). They were designed to support a wide variety of users and uses, from interactive exploration, through to compelling narratives and even small area local area detail. These graphics exploited ONS expertise and statistical insight and built on the world class reputation for interactive visualisations which ONS Data Visualisation Centre has developed in recent years.



The graphics were designed to appeal to a very broad range of users, as a hook for engaging with the census, without dumbing the data down. To reach a wide-ranging audience we offered these interactive visualisations direct to a huge variety of mainstream media organisations (e.g. BBC, Guardian, Telegraph) who embedded the ONS content directly in their own reporting of the Census data. This impact this had was enormous, opening up the visualisations to large audiences (>500,000). The visualisations generated a lot of discussion - conversations observed on social media showed that the visualisations were used by a wide range of people including academics, government, politicians, journalists and the general public.

Awards for Statistical Excellence in Journalism

Information about the winners of these awards was not available at the time of going to press – an announcement will be included in the delegate packs

Full Programme

5.3 Invited

**RSS Medal winner & Contributed -
Design of experiments**
9am - 10.20am
**Room 442,
Northumberland Building**

Greenfield Industrial medal winner
Ron Kenett

On doing fine work in statistics
Ron S. Kenett
(KPA Ltd., Raanana, Israel; Univ. of
Torino, Torino, Italy; Center for Risk
Engineering, NYU Poly, New York,
USA)

Optimal Designs for Two-Parameter
Nonlinear Models with Application to
Survival Models
Alan Kimber
University of Southampton,
Hampshire, UK

Bayes linear kinematics in the design
of experiments
Malcolm Farrow
Newcastle University, Newcastle upon
Tyne, UK

5.4 Invited

YSM 2013 Prize winners
9am - 10.20am
**Room 149,
Northumberland Building**

Rolling Markov Chain Monte Carlo
Din-Houn Lau
Imperial College London, London, UK

X-11 Versus SEATS: A comparative
study of revisions on short time series
Folasade Ariyibi
Office for National Statistics, Newport,
UK

Modelling benefits and harms of
mammographic screening for breast
cancer using a Bayesian cohort
simulation model
Necdet Gunsoy
Institute of Cancer Research, Sutton,
Surrey, UK,

5.5 Contributed

Census & Surveys
9am - 10.20am
**Room 314,
Northumberland Building**

Quality and compromise: what is
the use of census?
Thomas King
Newcastle University, Newcastle
upon Tyne, UK,

Estimating the population from
aggregated administrative counts:
initial findings on how models
perform over time
Domenica Rasulo
Office for National Statistics,
London, UK

Re-thinking households - Using
administrative data to count and
classify households with some
geographical applications
Gill Harper
Cass Business School, and
gecreate Ltd, both London, UK

5.6 Professional Development

**RSS PDC: how we can help those
providing and sourcing training**
9am - 10.20am
**Room 306,
Northumberland Building**

5.7 Contributed

Data Science
9am - 10.20am
**Room 308,
Northumberland Building**

Power calculations for N-of-1 studies
Sharon Xiaowen Lin
Southampton Statistical Science
Research Institute, University of
Southampton, Southampton, UK

A new class of models for rating data
Marica Manisera
University of Brescia, Brescia, Italy

A multiple imputation approach to
remove residual confounding through
coarse data models
Robert Grant
St George's, University of London,
London, UK

Plenary 2 - Is statistics good for your health? Minding your Ps and Rs
10.30am - 11.20am
Main Hall, Sports Central
Chair: Marian Scott

Doug Altman
Centre for Statistics in Medicine in Oxford

Visit to the Skills Academy for Sustainable Manufacturing and Innovation (SASMI)
10.30am - 12.30pm
Sunderland

Advanced booking is required
Visit host will be Josey Wardle who is Infrastructure Manager of Zero Carbon Futures, a wholly owned subsidiary of Gateshead College.

Tea/Coffee
11.20am - 11.50am
Exhibition Area

6.1 Invited
Quantile Regression
11.50am - 1.10pm
Main Hall, Sports Central
Chair: Angela Noufaily

Organised by the RSS General Applications Section

Simple thoughts on simple quantile regression
Chris Jones
The Open University,
Milton Keynes, UK

From LMS to GAMLSS – 25 years of semiparametric quantile regression
Tim Cole
UCL Institute of Child Health,
London, UK

Transformations in quantile regression
Marco Geraci
University College London,
London, UK

6.2 Invited
Probabilistic Analysis of MCMC
11.50am - 1.10pm
Room 449,
Northumberland Building
Chair: Andrew Wade

Organised by the RSS Applied Probability Section

Variance bounding and geometric ergodicity of Markov chain Monte Carlo kernels for approximate Bayesian computation
Anthony Lee
University of Warwick, Coventry, UK

A General Metric for Riemannian Manifold Hamiltonian Monte Carlo
Michael Betancourt
University College London,
London, UK

6.3 Invited
Evidence-based support for ecosystem management
11.50am - 1.10pm
Room 442, Northumberland Building

Organised by RSS Panel on Statistics of Ecosystem Change

RSS Panel on Statistics for Ecosystem Change and the INQUEST project
Ron Smith
Centre for Ecology and Hydrology, Edinburgh, UK

How should regional biodiversity be monitored?
Stephen Buckland,
University of St Andrews, UK,

Role of environmental regulation in environmental management and valuation
Marian Scott
University of Glasgow, UK

Scale and uncertainty in the evaluation of natural capital and ecosystem services: case study within Cairngorm National Park
Jan Dick
Centre for Ecology and Hydrology, Edinburgh, UK

Full Programme

6.4 Invited

Beyond 2011 - future production of population and socio-demographic statistics

11.50am - 1.10pm

Room 149,
Northumberland Building
Chair: Ron Smith

Organised by the UK Office for National Statistics

Beyond 2011 - future production of population and socio-demographic statistics - an overview

Jane Naylor
Office for National Statistics,
Hampshire, UK

Population estimation from administrative data-based models

Becky Tinsley, Cal Ghee
Office for National Statistics,
Fareham, UK

Integrating surveys and administrative data to estimate population characteristics

Neha Agarwal
Office for National Statistics,
Newport, UK

6.5 Professional Development Writing for a non-statistical audience

11.50am - 1.10pm

Room 306,
Northumberland Building

Presenter:
Julian Champkin (Editor, Significance)

Lunch

1.10pm - 2.30pm

Exhibition area

Poster viewing

1.30pm - 2.30pm

Exhibition area

See listing on pages 27 - 28

Interactive session for Fellows on the RSS strategy 2014-18

1.30pm - 2.20pm

Room 306,
Northumberland Building

Hetan Shah, Executive Director, Royal Statistical Society

John Pullinger, President, Royal Statistical Society

7.1 Invited

Methods for the developing use of electronic medical record databases

2.30pm - 3.50pm

Room 449,
Northumberland Building
Chair: David Reeves

Organised by the RSS Primary Health Care Study Group

Irene Petersen
(University College London)
Dealing with missing data in electronic medical records

Using electronic medical record databases to evaluate drug benefits and harms: are the results valid and replicable?
David Springate
University of Manchester, UK

Implementing cluster randomised trials using electronic health records
Alex Dregan
King's College London, UK

7.2 Invited

Modern Applied Bayesian Statistics

2.30pm - 3.50pm

Main Hall, Sports Central
Chair: Richard Boys

Michael Goldstein (Durham University)
Bayesian history matching for oil reservoirs

Ian Vernon (Durham University)
Galaxy Formation: Bayesian history matching for the observable universe

Bayesian modelling of compositional heterogeneity in molecular phylogenetics
Sarah Heaps
Newcastle University,
Newcastle upon Tyne, UK

7.3 Invited
Anti-fragility and statistical thinking
2.30pm - 3.50pm
Room 314,
Northumberland Building
Chair: Tony Bendell

Organised by the RSS Quality Improvement Section

Tony Bendell, Services Ltd
Nottingham & BPP Business School;
Anti-Fragility & the Statistician

Martin Sewell, Univ of Cambridge;
Philosophy, Anti-Fragility & Statistics

Alex Aisher, University of Sussex;
Anti-Fragility v spirits

Debate on The pros & cons of prediction, "Nate Silver v Nassim Taleb":

Michael Folkson (an Actuary on Sabbatical), Pro Taleb
Nigel Marriott (Marriott Statistical Consulting Ltd), Pro Nate Silver

7.4 Invited - Probability, Uncertainty & Risk in the Environment
2.30pm - 3.50pm
Room 442,
Northumberland Building
Chair: Paul Northrop

The Hazard Impact Model - translating weather forecasts to societal risk
Ken Mylne
Met Office, Exeter, UK

Assessing volcanic eruption intensity from near-field lithic deposits
Jonathan Rougier
University of Bristol, Bristol, UK

Probability and Uncertainty in Seismic Hazard Analysis
Ian Main
University of Edinburgh, UK

7.5 Invited
The RPI and the CPI - where statistical and political issues collide
2.30pm - 3.50pm
Room 449, Northumberland Building
Chair: Jill Leyland

Organised by the RSS National Statistics Advisory Group

Derek Bird (Office for National Statistics)

Jens Mehrhoff (Deutsche Bundesbank)
The CIA (consistency in aggregation) approach - A new economic approach to elementary indices

Tony Cox
Chair, RPI CPI user group

7.6 Professional Development
Building an R package
2.30pm - 3.50pm
Room 306,
Northumberland Building

Presenter: Laurent Gatto (Cambridge)
Writing good code is not a trivial matter; maintaining, re-using and sharing it is certainly not easier. R has a dedicated mechanism for the latter challenges, which we shall investigate and apply. We will explore how to transform code snippets into parametrised functions, craft a fully fledged package and see how to distribute it to the R community. We will also briefly touch on best practices like unit testing, version control, Sweave vignettes and reproducible research.

The course will mainly be hands-on and delegates are invited to bring laptops with a working R installation (see <http://is.gd/Rinstall>) and some of their R code to work with.

Tea/Coffee
3.50pm - 4.15pm
Exhibition area

Full Programme

8.1 Invited
RSS Medal winner & Contributed
(Medical)
4.15pm - 5.15pm
Main Hall, Sports Central

Bradford Hill Medal winner
Paddy Farrington

Modelling Reporting Delays for
Infectious Diseases Using Splines
Angela Noufaily
The Open University,
Milton Keynes, UK

8.2 Invited
RSC 2012 Prize winners
4.15pm - 5.15pm
Room 149,
Northumberland Building

Objective Bayesian survival analysis
using shape mixtures of log-normal
distributions
Catalina Vallejos
University of Warwick, Coventry, UK, and
Pontificia Universidad Catolica de Chile,
Santiago, Chile

Applications of copula regression models
in paediatric research
Eirini Koutoumanou
UCL Institute of Child Health,
London, UK

8.3 Contributed
Copula models
4.15pm - 5.15pm
Room 308,
Northumberland Building

Estimation of Copula Models With
Discrete Margins via Bayesian
Data Augmentation
Michael Smith,
University of Melbourne,
Victoria, Australia

A Regression Model for the
Copula Graphic Estimator.
Ralf Wilke
University of York, UK

Approximate Uncertainty with
Pair-copula Constructions for
Non-Gaussian Directed Acyclic
graph models using minimum
information method
Alireza Daneshkhah
Cranfield University, UK

8.4 Contributed
Industry
4.15pm - 5.15pm
Room 314,
Northumberland Building

Predictive Modelling to Support
Quality by Design in Pharmaceuticals
Development and Manufacturing
Julian Morris
School of Chemical Engineering
& Advanced Materials Newcastle
University, UK

Estimating the occurrence of debris in
nuclear reactors: a Bayesian Monte
Carlo approach
Paolo Mason
EDF Energy, Gloucester, UK

8.5 Contributed Environment
4.15pm - 5.15pm
Room 442, Northumberland Building

Exploring sources of uncertainty in the cloud model MAC3
Jill Johnson
University of Leeds, UK

Investigating species interactions by modelling multivariate time series data
Hideyasu Shimadzu
University of St Andrews, UK

Using Bayesian Methods for Benefit Transfer from Choice Experiments
Jacqueline Potts
Biomathematics and Statistics
Scotland, Aberdeen, UK

8.6 Contributed Population/Migration Statistics
4.15pm - 5.15pm
Room 449, Northumberland Building

Combining Internal Migration data sources in England under a Bayesian framework
Rebecca Newell
Office for National Statistics, Titchfield, UK, and University of Southampton, UK

Two Nations? Trends in UK Residential Segregation since 1991.
Paul Jones
Sheffield Hallam University, UK

A functional data analytic approach for forecasting population size: A case study of United Kingdom
Han Lin Shang
University of Southampton, UK

8.7 Professional Development CStat revalidation - just 'business as usual' for professionals
4.15pm - 5.15pm
Room 306, Northumberland Building
Chair: Trevor Lewis

This session will outline the process for CStat revalidation by the submission of information on continuing professional development and will clarify the support that the Society gives to those professional members undertaking revalidation. The session will be particularly pertinent for Chartered Statisticians with a revalidation date of 1st January 2015, who will be going through the revalidation process for the first time in 2014; but will also be relevant to all Chartered Statisticians and Graduate Statisticians. The session will be adapted to suit the needs of those attending and will include the opportunity to learn more about the RSS online CPD recording system.

8.8 Contributed - Modelling
4.15pm - 5.15pm
Room 445, Northumberland Building

Improving analysis of transplant survival data using multiple imputation
Laura Pankhurst
NHS Blood and Transplant, Bristol, UK

How do childhood diagnoses of type 1 diabetes cluster in time?
Colin Muirhead
Newcastle University, Newcastle upon Tyne, UK

Plenary 3 - Significance Lecture - The Bayesian Revolution
5.25pm - 6.15pm
Main Hall, Sports Central
Chair: Julian Champkin

Sharon Bertsch McGrayne

Conference Dinner
7.30pm until late
Great North Museum



Full Programme

THURSDAY 5TH
SEPTEMBER

9.1 Invited
RSC 2013 Prize winners
9.20am - 10.40am
Room 149,
Northumberland Building
Chair: Marian Scott

Spatially explicit capture-recapture with imperfect information on animal location
Ben Stevenson
University of St Andrews, UK

Static-Parameter Estimation in Piecewise Deterministic Processes using Particle MCMC Methods
Axel Finke
University of Warwick, Coventry, UK

Clustering High Dimensional Data Streams by Feature Space Partitioning.
David Hofmeyr
Lancaster University, UK

9.2 Invited
Recent advances
in functional data
analysis
9.20am - 10.40am
Main Hall, Sports
Central

Function-valued traits in evolution
John Moriarty
University of Manchester, UK

Functional Factor Analysis For Periodic Remote Sensing Data
Surajit Ray
University of Glasgow, UK, and Boston University, USA

Regression models over bidimensional manifolds
Laura M. Sangalli
MOX - Department of Mathematics, Politecnico di Milano, Milano, Italy

9.3 Contributed
Bioinformatics
9.20am - 10.40am
Room 314,
Northumberland
Building

Evolutionary links between multiple species
Stuart Barber
University of Leeds, UK

Evaluation of Trans-ethnic Meta-analysis Approaches for Fine-Mapping
Jennifer Asimit
Wellcome Trust Sanger Institute, Hinxton, Cambridge, UK

Bayesian Protein Structure Alignment
Christopher Fallaize
University of Nottingham, Nottingham, UK

9.4 Contributed
Data Science
9.20am - 10.40am
Room 308,
Northumberland
Building

Statistical inference: always valid but often fragile
Ian Hunt
EDHEC Risk Institute, Nice, France

A Framework Understating Statistical Performance
Paul Askew
Chartered Society of Physiotherapy, London, UK

9.5 Contributed
Official Statistics
9.20am - 10.40am
Room 442,
Northumberland Building

Measuring the volume of International Development Assistance; lessons from National Accounting.
Matthew Powell
Oxford Policy Management, Oxford, UK, and Office for National Statistics, Newport, UK

Measuring gender equality: an index for Europe
Anne Laure Humbert
European Institute for Gender Equality, Vilnius, Lithuania

A new approach to Statistical Computing at the UK Office for National Statistics
Gareth James
Office for National Statistics, Newport, UK

Improving small-area employment estimates produced by ONS business surveys
Matthew Greenaway
Office for National Statistics, Newport, South Wales, UK

**9.6/10.6 Professional Development
Peer Review Workshop
9.20am - 12.30pm
Room 306,
Northumberland Building**

Organised by Voice of Young Science

Peer Review: The nuts and bolts - a Sense About Science workshop

This event is aimed at early career researchers (PhD students, post-doctoral fellows or equivalent in first job) in all sciences.

Find out about peer review
Debate challenges to the system
Discuss the role of peer review for scientists and the public.

Should peer review detect plagiarism, bias or fraud? What does peer review do for science and what does the scientific community want it to do for them? Should reviewers remain anonymous? Does it illuminate good ideas or shut them down?

Speakers include:
Eva Amsen (F1000Research Outreach Director)
Sheila Bird (MRC Biostatistics Unit)
Christopher Greenwell
(Publishing Director, Elsevier Ltd)
Victoria Murphy (Sense About Science)

**9.7 Professional Development
Statistical skills: supply,
demand and need
9.20am - 10.40am
Room 449,
Northumberland Building**

The profession on statistician has become increasingly important in today's data-rich world. Data are ubiquitous, and there is an ever-growing need for statistical skills in the workplace, not just at a basic level, but also in highly specialised environments. This panel discussion looks at the future demand for statistical skills in higher education and the workplace, and asks whether the current supply can match what is needed. Does our current school system provide the rights skills to ensure highly qualified professional statisticians? And if there is a mismatch, what role should the RSS play in the advocacy of statistical science (and creating the next generation of statisticians) with funders/government/industry, using its knowledge of the deficiencies in supply vs. the demand of today and that projected for the future.

**Tea/Coffee
10.40am - 11.10am
Exhibition Area**

**10.1 Invited
Visualising Multivariate data
11.10 - 12.30pm
Room 449,
Northumberland Building
Chair: Neil Spencer**

Organised by the RSS Statistical Computing Section

Bringing together geovisualisation, time geography and computational ecology: using space-time density of trajectories to visualise dynamics in animal space use over time
Urška Demsar
University of St Andrews, Fife, Scotland, UK

Looking at multivariate outcomes of designed experiments in Canoco
Cajo ter Braak
Biometris, Wageningen University,
Wageningen, The Netherlands

Harnessing the Power of Maps for Data Visualisation
James Cheshire
UCL, London, UK

**10.2 Invited
Developments in
Density Estimation
11.10 - 12.30pm
Room 314,
Northumberland
Building**

A comparative study of new cross-validated bandwidth selectors for kernel density estimation
Jens Perch Nielsen
City University London,
UK

On log-concave densities and bi-log-concave distribution functions
Lutz Duembgen
University of Bern, Bern,
Switzerland



Full Programme

THURSDAY 5TH
SEPTEMBER

10.3 Invited
The Cancer Research UK ICGC Prostate and Oesophageal Projects
11.10 - 12.30pm
Room 149, Northumberland Building

Andy Lynch (Cambridge)

Mike Smith (Cambridge)
Re-pairing reads - identifying and correcting image registration issues in Illumina sequencing data

Ludmil Alexandrov (Wellcome Trust Sanger Institute)
Signatures of mutational processes in prostate and oesophageal cancers

David Wedge (Wellcome Trust Sanger Institute)
Molecular palaeontology of multifocal and metastatic prostate cancers

10.4 Invited
Statistics of paleoclimate and paleo-environment
11.10 - 12.30pm
Room 442, Northumberland Building
Chair: Marian Scott

Jonty Rougier (Bristol)

Bayesian estimation of radiocarbon calibration curves for palaeoenvironmental chronology construction
Caitlin Buck
University of Sheffield, Sheffield, UK

Estimating periodicities from time-uncertain and irregularly spaced palaeoclimate data
Andrew Parnell
University College Dublin, Ireland

Abrupt changes in Greenland Ice Sheet runoff and sea water temperature since 1821 recorded by coralline algae
Nicholas Kamenos
University of Glasgow, UK

10.5 Invited
Measuring Child Poverty
Main Hall, Sports Central
Chair: Hetan Shah

Organised by DEMOS/LSE
Panel discussion:

Peter Matejic, Child Poverty Unit, London, UK

Matthew Tinsley, Policy Exchange, London, UK

Matt Barnes, NatCen, London, UK

John Veit-Wilson, Newcastle University, Newcastle, UK

10.7 Professional Development Mentoring
11.10 - 12.30pm
Room 308, Northumberland Building
Chair: Mary Sweetland

Lunch

Research funding workshop
12.50pm - 1.40pm
Room 308, Northumberland Building
Chair: Kevin McConway

This session will be an opportunity to share information about funding sources for statistical research in universities. Information about funding sources will be presented, representatives from funding bodies will be present, and there will be opportunities to ask questions and pass on information to colleagues.

11.1 Invited
Room 101: Use and abuse of statistics
1.40pm - 3.00pm
Main Hall, Sports Central
Chair: Tim Paulden

Organised by the RSS Young Statisticians' Section

Panel of speakers including the Society's current President, John Pullinger; President Elect, Peter Diggle; Sheila Bird and the author Sharon Bertsch McGrayne

11.2 Invited
Papers from the journal of the Royal Statistical Society
1.40pm - 3.00pm
Room 149, Northumberland Building
Chair: Adam Butler

Organised by the RSS Publications Network

A model based framework for air quality indices and population risk evaluation. With an application to the analysis of Scottish air quality data.
Francesco Finazzi
University of Bergamo, Bergamo, Italy

Spatial Spline Regression Models
Laura M. Sangalli
MOX - Department of Mathematics, Politecnico di Milano, Milano, Italy

A mixed effects model for identifying goal scoring ability of footballers
Ian McHale
The University of Salford, Greater Manchester, UK

11.3 Invited

An introduction to the Omics revolution
1.40pm - 3.00pm
Room 314,
Northumberland
Building

Organised by the RSS
General Applications
Section

The Omics revolution
and the statistical
challenge it poses
Sarah Lewis
The University of Bristol,
Bristol, UK

Data analysis issues in
epigenetic epidemiology
Caroline Relton
MRC Integrative
Epidemiology Unit,
University of Bristol, UK,
and Institute of Genetic
Medicine, Newcastle
University, Newcastle
upon Tyne, UK

11.4 Invited

Energy Statistics
1.40pm - 3.00pm
Room 442,
Northumberland
Building
Chair: Idris Eckley

Modelling extreme
events in power system
reliability analysis
Chris Dent
Durham University,
Durham, UK

Forecasting Locally
Stationary Series with
Energy Applications
G Nason
University of Bristol, UK

Multidimensional
covariate effects
in spatial and joint
extremes
Philip Jonathan
Shell Projects and
Technology, Chester, UK

11.5 Invited

**Evidence and measures of progress
in international development**
1.40pm - 3.00pm
Room 449,
Northumberland Building
Chair: Hetan Shah

This session will also launch
the Society's new International
Development Working Group

Speakers:

Neil Jackson
(Chief Statistician, Department for
International Development)

Alex Cobham
(Research Fellow, Centre for Global
Development)

Suman Seth (Oxford Poverty and
Human Development Initiative)

11.6 Professional Development

**Leadership in a non-statistical environment -
why our statistical background matters**
1.40pm - 3.00pm
Room 306,
Northumberland Building

Presenters:

Karen Facey
Non-Executive Director, NHS Health Scotland and
Evidence Based Health Policy Consultant

Martin Gibson
Owner, AQUIST Consulting

Good leadership is a blend of many things:
skills, experience, vision and a desire to drive an
organisation forward. Statisticians can certainly
be effective leaders, but for those contemplating
future leadership roles, identifying good role
models is not always easy. In this session two
experienced statisticians who have experience
of leading in very different settings share their
thoughts on leadership, and describe how
they have led successfully in non-statistical
environments.

Tea/Coffee

Plenary 4
**Changing face of
statistics**
3.20pm - 4.20pm
Main Hall, Sports
Central
Chair: Shirley Coleman

Sheila M. Bird
(MRC Biostatistics
Unit, CAMBRIDGE)

**CLOSE OF
CONFERENCE**
Thursday 5 September
4.20pm

Poster Listing

Posters will be on display throughout the conference in the exhibition and catering area with two viewings scheduled for the Tuesday and Wednesday lunchtimes when the poster presenters listed below have been asked to stand by their posters to answer any questions.

Tuesday 3rd September:

UK Biobank as a resource for identification of spatial variation in hearing impairment and its treatment
Mark Edmondson-Jones
NIHR Nottingham Hearing Biomedical Research Unit, Nottingham, UK

Hypertension and the risk of cardiovascular disease mortality in an elderly male population: a competing risks approach
Joanna Moschandreas
University of Crete, Crete, Greece

Modelling population psychometric function in a speech-in-noise task: Using UK Biobank to explore links between cognition and listening
Mark Edmondson-Jones
NIHR Nottingham Hearing Biomedical Research Uni, Nottingham, UK

Bayesian Inference for Probability of Chronic Non-communicable Diseases in Nagaland: A Remote Hill State of India
Labananda Choudhury
Gauhati University, Guwahati, Assam, India

Timothy O Olatayo
Olabisi Onabanjo University, Ago-Iwoye, Ogun State, Nigeria

Covariate shift adaptation from a viewpoint of missing data problems
Masayuki Henmi
The Institute of Statistical Mathematics, Tokyo, Japan

Gaussian Tree Graphical Models for Discrimination
Guillermina Eslava-Gomez
National University of Mexico, Mexico, D.F., Mexico

Comparison of Prediction Capabilities of Partially Replicated Central Composite Designs in Cuboidal Region
Polycarp Chigbu
Univ. of Nigeria, Nsukka, Nigeria

A New Family of Gamma Distributions
Kishore Das
Gauhati University, Guwahati, Assam, India

Cohort Analysis to study wastage of Manpower of the Employees in Dhubri District of Assam, India
Kishore Das
Gauhati University, Guwahati, Assam, India

The UK Statistical Policy Landscape Infographic
Paul Askew
Chartered Society of Physiotherapy, London, UK

A Greedy Algorithm for Representative Sampling: re-sample in Stata
Evan Kontopantelis
University of Manchester, Manchester, UK

A new model for estimating district life expectancy at birth in India with special reference to Assam (2001, 2010)
Labananda Choudhury
Gauhati University, Guwahati, Assam, India

The variance: a New Equivalent Formula. The Double Variance of the Normal Distribution
Muawia Abdelsalam
University of Gezira, Medani, Gezira State, Sudan

Wednesday 4th September:

Normal approximation of the Maximum Likelihood Estimator using Stein's method
Andreas Anastasiou
University of Oxford, Oxford, UK

Comparing Sources of Welsh Language Statistics
Sophie Larcombe
Welsh Government, Cardiff, UK

Generalizing smooth transition autoregressions
Emilio Zanetti Chini
University of Rome "Tor Vergata", Rome, Italy

Do improvements to car safety save lives?
Caroline Reeves
TRL, Wokingham, Berkshire, UK

Rank Estimation in Regression
Yuankun Wang
Lancaster University, Lancaster, UK

Efficiency of Neyman Allocation
Procedure over Equal and Proportional
Allocation Procedures in Stratified
Random Sampling
Olaniyi Mathew Olayiwola
Federal University of Agriculture,
Abeokuta, Nigeria

Statistics in BAE Systems Munitions
Robert Langford
BAE Systems Munitions, Glascoed, UK

Development and validation of a model
for longitudinal survey optimum response
O.M. OLAYIWOLA1,
Federal University of Agriculture,
Abeokuta, Ogun State, Nigeria,

Bayesian bandwidth estimation for a
nonparametric functional regression
model with mixed types of data and
unknown error density
Han Lin Shang
University of Southampton,
Southampton, UK

Semi-parametric predictive inference for
bivariate data using copulas
Noryanti Muhammad
University of Durham, Durham, UK

A penalized quality index for identifying
number of clusters
Marika Vezzoli
University of Brescia, Brescia, Italy

Consequences of ignoring clustering in
linear regression
Georgia Ntani
MRC Lifecourse Epidemiology
Unit, University of Southampton,
Southampton, UK

Local community awareness and use
of wetland resources in Kyeizooba sub
county Bushenyi district – Uganda
Dorothy Mubuuke
Makerere University, Kampala, Uganda

Quality of Midwifery Care in Uganda.
Case Study Soroti District
Resty Nansubuga
Makerere University, Institute of Statistics
and Applied Economics, Kampala,
Uganda

Sub-state Life Expectancy Estimation
Using the Methodology for Small
Population
Prasanta Barman
Kohima Science College, Jotsoma,
Kohima, Nagaland, India

A Model of Neonatal Mortality in
Republika Srpska
Rainhard Bengez
TU Muenchen, Muenchen, Germany,
and National University of Taipei, Taipei,
Taiwan

Evaluation of an Enhanced Model of
Partnership Working to Support Universal
Speech and Language Provision in the
Early Years
Thomas King
Newcastle University, Newcastle upon
Tyne, UK

Stochastic Hybrid Modeling of the cell
decisions leading to bone formation
Rodrigo Assar
Fondecyt 3130762, Centro de
Investigaciones Biomédicas, Facultad
de Ciencias Biológicas and Facultad
de Medicina, Universidad Andrés Bello,
Santiago, Chile, Fundación INRIA Chile,
Santiago, Chile

How Robust is the Linear Logistic
Test Model when the Q-matrix is
Misspecified?
George MacDonald
University of South Florida,
Tampa/FL, USA

Dynamic Process Monitoring Using
Partial Least Squares and Extensions
Bothinah Altaf
Newcastle University, Newcastle upon
Tyne, UK

Please note this listing is provisional – a final
listing with poster board numbers allocated will be
available at the conference

Thanks and Acknowledgements

Thanks and acknowledgements to those responsible for organising the conference:

Members of the RSS Conferences & Events Programme Board

Chair: Marion Scott
(University of Glasgow/Theme Director for Meetings & Conferences)

Deputy Chair (2013 Programme Chair): Shirley Coleman
(ISRU, University of Newcastle)

Paul Clarke (University of Bristol/General Applications Section)
John Disney (Nottingham Trent University/Quality Improvement Section)
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