The Open University Statistics Group

2011 Report

1. Membership

Professor P.H. Garthwaite (Head of Group)
Dr K. Anaya (to July)
Professor F. Critchley
Dr A.E. Faria
Professor C.P. Farrington
Dr D. Gragn (from March)
Dr R.M. Hilliam (from November)
Dr G.E. Iossif
Professor M.C. Jones
Professor K.J. McConway
Dr A. Noufaily (from March)
Dr C.M. Queen
Dr N.T. Trendafilov
Dr S. Unkel
Dr S.K. Vines
Dr H.J. Whitaker
Mrs J.E. Williams

Long-term visitors

Dr K. Anaya [Visiting Research Fellow] (from July)
Professor J.C. Gower [Visiting & Emeritus Professor]

Full–time research students

Mr O. Anacleto
Mr T.E. Collins [joint with Computing] (to September)
Mr F. Elfadaly
Mr D. Gragn (to February)
Ms L. Gunn [joint with Earth Sciences] (from October)
Ms A. Noufaily (to February)
Mr O. Oyebamiji [joint with Earth Sciences] (from October)
Mr A.J. Santos
Ms S. Villers (from October)
Mr Y.G. Weldeselassie

Part–time research students

Mr N. Calleja
Mr G. Kafatos (to June)
Mr A. Owen (to January)

Support staff

Mrs S. Frain, Group Secretary (to March)
Ms E. Howard (from March)

Visitors

Dr N. Al-Kandari (University of Kuwait)
Dr R. Kuhnert (Robert Koch Institute, Berlin, Germany)
Professor P.K. Marriott (University of Waterloo, Canada)
Ms C. Monteiro (Pontificia Universidade Católica do Rio de Janeiro, Brazil)
Professor H. Oja (University of Tampere, Finland)
Dr M. van de Velden (Erasmus University, Rotterdam, Netherlands)

2. Introduction

2011 was another extremely busy and successful year for Statistics at the Open University in both research and teaching.

It was the final year of production for both our new web-based module M347 *Mathematical Statistics* and the revision of M343 *Applications of Probability*. The Group's four modules in presentation attracted a total of over 1800 students in 2011.

In the course of the year, members of the Group published a book and many papers in refereed journals (see Section 6). Pre-publication papers can be found in our technical report series, at http://statistics.open.ac.uk/technical_reports. Members of the Group gave many presentations and took part in numerous international conferences. We also added the 24th instalment to our long-standing series of Open University conferences in Statistics. PhD students graduated in record numbers.

Congratulations to Paddy Farrington for his achievement in obtaining a highly prestigious *Royal Society Wolfson Merit Award*. Paddy also had a high profile position in the Royal Statistical Society (RSS) in 2011.

We are very pleased to welcome Rachel Hilliam to the group, as Staff Tutor in the OU's East Midlands region, part-time at first, changing to full-time early in 2012. In the other direction, Karim Anaya has left us for a lecturing post at the London School of Hygiene and Tropical Medicine; we wish him well and are delighted that he still works with us in a visiting capacity.

The Statistical Advisory Service, which supports research in other departments across the Open University, continues to run successfully. It is led by Alvaro Faria, with assistance from Paul Garthwaite. A website explains the service: http://www.mathematics.open.ac.uk/advisory.

Further information on the Group is available through our web pages at http://statistics.open.ac.uk

3. Teaching

Presentation

The Group presented four modules of 30 CATS points each, namely, M248 *Analysing Data* (Chair: Alvaro Faria), M249 *Practical Modern Statistics* (Chair: Karen Vines), M343 *Applications of Probability* (Chair: Gillian Iossif), and M346 *Linear Statistical Modelling* (Chair: Paul Garthwaite).

Each of the first level mathematics modules, MU123 *Discovering Mathematics* and MST121 *Using Mathematics*, contains statistical material, MST121 substantially so (roughly one quarter of the module); Nickolay Trendafilov was involved with the latter. Kevin McConway contributed in a small way to the presentation of SDK125 *Introducing Health Science*.

Production

The Group continued production of M347 *Mathematical Statistics*. As well as enhancing our third level provision with a new module that gives "the theory behind the methods", this module is notable for leading the way within the Department of Mathematics and Statistics in terms of electronic presentation: it will be presented entirely on-line. Catriona Queen and Chris Jones were production team co-chairs and lead authors; Paddy Farrington made several considerable contributions; Heather Whitaker produced the screencasts; and Robert Hasson (Applied Mathematics Group) had a very important software development role, facilitating the interface between the authors' Latex drafting and the University's Virtual Learning Environment.

Gillian Iossif led, or perhaps more accurately did, the revision of M343 *Applications of Probability*. This very successful module needed a certain amount of improvement and updating. Gillian single-handedly authored the entire revision. In 2011, she had help on some aspects of production from Paddy Farrington.

Gillian also revised the M248 *Analysing Data* computer books for use with a newer version of Minitab.

The Group also made initial preparations for its next production, M140 *Introduction to Statistics*. This is a first-year statistics module which will have a leading role in the brave new world of revised qualifications.

All the modules mentioned in this subsection are 30 CATS points.

Qualifications

Our modules are compulsory components of degrees in Mathematics and Statistics, Computing & IT and Statistics, Mathematics and its Learning and Economics and Mathematical Sciences, as well being specified options in certain other qualifications. Fifty seven students were awarded the Mathematics and Statistics degree in 2011. The undergraduate Diploma in Statistics is awarded to students who successfully study M248, M249, M343 and M346 (or their predecessors). The Diploma was awarded to 69 students in 2011.

4. Ph.D.s awarded

Tom Collins for his thesis *Improved methods for pattern discovery in music, with applications in automated stylistic composition* (supervisors: R.Laney (Computing), A. Willis (Computing) and *P.H. Garthwaite*)

Doyo Gragn for his thesis *Interpretable and fast dimension reduction* (supervisors: *N.T. Trendafilov* and *F. Critchley*)

George Kafatos for his thesis *Statistical analysis of quantitative seroepidemiological data* (supervisors: *C.P. Farrington* and *K.J. McConway*)

Angela Noufaily for her thesis *Parametric quantile regression based on the generalised gamma distribution* (supervisors: **M.C. Jones** and **H.J. Whitaker**)

Alun Owen for his thesis *Development of Bayesian dynamic forecasting models of football match outcomes* (supervisors: **S.K. Vines** and **K.J. McConway**)

5. Research interests

The Department is home to three Research Groups:

Multivariate Statistics: Critchley (co-ordinator), Anaya, Faria, Garthwaite, Gower, Jones, Queen, Trendafilov, Unkel, Vines, Constantine (CSIRO, retired), Cook (University of Minnesota), Marriott (University of Waterloo), Taylor (University of Hertfordshire).

Bayesian Statistics: Queen (co-ordinator), Faria, Garthwaite, McConway, Vines, Whitaker.

Medical Statistics: Whitaker (co-ordinator), Farrington, Garthwaite, Gragn, Noufaily, Unkel, Vines, Weldeselassie.

Clearly, these three general groupings cover a huge variety of research projects in Statistics. Research also continues, of course, on topics not directly covered by these Research Groups, of which single case studies, distribution theory, kernel smoothing, robust statistics, time series forecasting and influence analysis are but a small selection. Strong ongoing collaborations continue in areas such as medicine, psychology, traffic modelling and ecology.

For details, see the publications, talks and other items to follow.

6. Publications

6.1 Book

Gower, J.C., Lubbe, S. & LeRoux, N.J. (2011) *Understanding Biplots*. Wiley.

6.2 Publications in refereed academic journals

Albers, C.J., **Critchley, F.** & **Gower, J.C.** (2011) Quadratic minimisation problems in statistics. *Journal of Multivariate Analysis*, **102,** 698-713.

Albers, C.J., **Critchley, F.** & **Gower, J.C.** (2011) Applications of quadratic minimisation problems in statistics. *Journal of Multivariate Analysis*, **102,** 714-722.

Albers, C. J. & **Gower, J.C.** (2011) A general approach to handling missing values in Procrustes analysis. *Advances in Data Analysis and Computing.* **4,** 223-237.

Anaya-Izquierdo, K.A., Critchley, F. & **Vines, S.K.** (2011) Orthogonal simple component analysis: a new, exploratory approach, with biological and other applications. *Annals of Applied Statistics*, **5,** 486-522.

Araya, Y.N., Silvertown, J., Gowing, D.J., **McConway, K.J.,** Linder, H.P. & Midgley, G. (2011) A fundamental, eco-hydrological basis for niche segregation in plant communities. *New Phytologist,* **189,** 253-258.

Collins, T., Laney, R., Willis, A. & **Garthwaite, P.H.** (2011) Modelling pattern importance in Chopin's mazurkas. *Music Perception*, **28**, 387-413.

Crawford, J.R., **Garthwaite, P.H.** & Ryan, K. (2011) Comparing a single case to a control sample: Testing for neuropsychological deficits and dissociations in the presence of covariates. *Cortex*, **47**, 1166-1178.

Crawford, J.R., **Garthwaite, P.H.,** Sutherland, D. & Borland, N. (2011) Some supplementary methods for the analysis of the Delis-Kaplan executive function system. *Psychological Assessment*, **23**, 888-898.

Crawford, J.R., **Garthwaite, P.H.** & Wood, L.T. (2010). Inferential methods for comparing two single cases. *Cognitive Neuropsychology*, **27**, 377-400.

De, S. & **Faria, A.E.** (2011) Dynamic spatial Bayesian models for radioactivity deposition. *Journal of Time Series Analysis*, **32,** 607-617.

Farrington C.P., Anaya-Izquierdo K., Whitaker H.J., Hocine M.N., Douglas I. and Smeeth L. (2011) Self-controlled case series analysis with event-dependent observation periods. *Journal of the American Statistical Association,* **106,** 417–426.

Garthwaite, P.H. & Crawford, J.R. (2011) Inferences for a binomial proportion in the presence of ties. *Journal of Applied Statistics*, **38**, 1915-1934.

Gower, J.C. & Albers, C.J. (2011) Between group metrics. *Journal of Classification*. **28**, 315-326.

Jones, M.C. & **Anaya-Izquierdo, K.** (2011) On parameter orthogonality in symmetric and skew models. *Journal of Statistical Planning and Inference,* **141,** 758-770.

Jones, M.C., Rosco, J.F. & Pewsey, A. (2011) Skewness-invariant measures of kurtosis. *The American Statistician,* **65,** 89-95*.*

Kuhnert R., Hecker H., Poethko-Mueller C., Schlaud M., Venneman M., **Whitaker H.J.** & **Farrington C.P.** (2011) A modified self-controlled case series method to examine association between multi-dose vaccinations and death. *Statistics in Medicine,* **30,** 666–677.

Louzada F., **Anacleto, O.,** Candolo C. & Mazucheli, J. (2011). Poly-bagging predictors for classification modelling for credit scoring. *Expert Systems with Applications,* **38**, 12717-12720.

Rosco, J.F., **Jones, M.C.** & A. Pewsey (2011) Skew *t* distributions via the sinh-arcsinh transformation. *Test,* **20,** 630-652.

Silvertown, J., Cook, L., Cameron, R., Dodd, M., **McConway, K.,** Worthington, J., Skelton, P., Anton, C., Bossdorf, O., Baur, B., Schilthuizen, M., Fontaine, B., Sattman, H., Bertorelle, G., Correia, M., Oliveira, C., Pokrysko, B., Ożgo, M., Stalažs, A., Gill, E., Rammul, Ü., Sólymos, P., Féher, Z. and Juan, X. (2011) Citizen science reveals unexpected continental-scale evolutionary change in a model organism. *PLoS ONE,* **6**(4), e18927.

Trendafilov, N.T. & **Unkel, S.** (2011) Exploratory factor analysis of data matrices with more variables than observations. *Journal of Computational and Graphical Statistics,* **20,** 874-891.

Unkel, S., Hannachi, A., **Trendafilov, N.T.** & Jolliffe, I.T. (2011) Independent component analysis of three-way data with an application to atmospheric science. *Journal of Agricultural, Biological, and Environmental Statistics,* **16,** 319-338.

Weldeselassie Y.G., Whitaker H.J. & **Farrington C.P.** (2011) Use of the self-controlled case series method in vaccine safety studies: review and recommendations for best practice. *Epidemiology & Infection,* **139,** 1805–1817.

6.3 Refereed conference proceedings and letter to the editor

Adachi, K. & **Trendafilov, N.T.** (2011) Sparsimax: A sparse component analysis procedure. In *The 39th Annual Meeting of the Behaviormetric Society of Japan*, pp. 213-216.

Adachi, K. & **Trendafilov, N.T.** (2011) Sparse component and factor analysis procedures via directly constraining the sparseness of loadings. In *Symposium on "Life Sciences and Statistics"*, Osaka, Japan, pp. 5-12.

Escolano, S., **Farrington C.P.,** Hill C. and Tubert-Bitter P. (2011) Intussusception after rotavirus vaccination – spontaneous reports. Letter to the Editor. *New England Journal of Medicine,* **365,** p. 2139.

Trendafilov, N.T. (2011) Exploratory factor analysis: modern aspects. In *Symposium on "Life Sciences and Statistics"*, Osaka, Japan, pp. 32-45.

6.4 Outreach and other publications

Collins, T., Laney, R., Willis, A. & **Garthwaite, P.H.** (2011) Chopin, mazurkas and Markov: Making music in style with statistics. *Significance*, **8,** 154-159.

Louzada-Neto, F., Diniz, C.A.R., Rocha, R.F. & **Anacleto, O.** (2011). Reject inference: using combined models to boost predictive power. *Credit Technology.* **77,** 7-17.

McConway, K. (2011) ESP and the significance of significance. http://understandinguncertainty.org/node/1286

Spiegelhalter, D. & **McConway, K.** (2011) 10 questions to ask about a health care story. *BBC Focus,* September 2011.

7. Seminars and conferences at The Open University

In May, the Statistics group organized its 24th approximately annual one-day conference, this one being on **Visualisation and Presentation in Statistics**. The organising committee comprised Sarah Frain, Sara Griffin (secretary in Mathematics & Statistics Department), John Gower and Steffen Unkel. Along with an introduction by John Gower, speakers at the conference were:

John Aldrich (University of Southampton) *Graphs before graphics – some history*

Rosemary Bailey (Queen Mary University of London) *Bad statistics*

Martin Bland (University of York) *Reporting clinical trials with confidence*

Michael Blastland (freelance journalist) *Statistics: a game for two players*

Tony Hirst (Communication and Systems Department, The Open University) *Visualisations for the rest of us - How to create rich interactive visualisations without any of the pain*

Jill Leyland (Royal Statistical Society) *The lack of confidence in UK official statistics - are communication problems responsible? - And what can be done?*

Kevin McConway (The Open University) *Statistics in the media: publicity, entertainment and wallpaper*

David Spiegelhalter (University of Cambridge and MRC Biostatistics Unit, Cambridge) *Visualising risk and uncertainty: the power of movement*

Michel van de Velden (Erasmus University Rotterdam, Netherlands) *Perceptual maps: the good, the bad and the ugly*

The group also ran its usual **seminar programme** with invited speakers. Over the year we heard:

Oliver Johnson (University of Bristol) *Efficient entropy-based detection of change-points in streaming data*

Tony Lawrance (University of Warwick) *Three topics in non-linear time series analysis and modelling*

Jian Qing Shi (University of Newcastle) *Penalized Gaussian process regression and classification for high-dimensional data*

Jane Hutton (University of Warwick) *Modelling longitudinal data with bounded responses, with missing data*

Sujit Sahu (University of Southampton) *High resolution Bayesian space-time modelling for ozone concentration levels*

Irini Moustaki (London School of Economics and Political Science) *Full and limited information estimation methods for latent variable models with longitudinal categorical data*

Philip Scarf (University of Salford) *A statistical excursion in the isochronic hills*

Jim Smith (University of Warwick) *Chain event graphs: a new graphical representation of a discrete model*

Andrew B. Lawson & Ana Corberán-Vallet (Medical University of South Carolina, Charleston, USA) *A multivariate Bayesian model-based approach for on-line spatio-temporal disease surveillance*

We also ran our eighth ***Annual Research Students' Research Day***, where speakers were Osvaldo Anacleto, Fadlalla Elfadaly, Alexandre Santos and Yonas Weldeselassie.

8. Conference & workshop papers and posters given

O. Anacleto

34th Research Students' Conference in Probability and Statistics, Cambridge *Graphical dynamic models for road traffic networks*

34th Research Students' Conference in Probability and Statistics, Cambridge *Modelling the variability of road traffic flows* [Poster]

ERCIM'11, 4th International Conference of the ERCIM Working Group on Computing & Statistics, London *Graphical model representations of multivariate time series for road traffic flow forecasting*

UseR! 2011, Coventry *Forecasting multivariate time series using the DLM package: An application to road traffic networks* [Poster; awarded best application poster prize]

K. Anaya

All Models are Wrong …, Groningen, Netherlands *Computational information geometry: geometry of model choice* [Poster]

F. Critchley

Fifth Scientific Conference on Modelling and Forecasting of Socio-Economic Phenomena, Zakopane, Poland *Invariant coordinate selection: an overview and some recent developments* [Plenary talk]

WOGAS3, Third Workshop on Geometric and Algebraic Statistics, Coventry *Computational information geometry for statistical science: theory and practice*

ICORS 2011, International Conference on Robust Statistics, Valladolid, Spain *Invariant coordinate selection revisited: Fisher symmetry and symmetric component analysis*

ERCIM'11, 4th International Conference of the ERCIM Working Group on Computing & Statistics, London *Invariant coordinate selection revisited: a symmetry group perspective*

F. Elfadaly

34th Research Students' Conference in Probability and Statistics, Cambridge *On eliciting some prior distributions for the probabilities of multinomial models*

Hierarchical Models and Markov Chain Monte Carlo, Conference in Honour of Professor Adrian F.M. Smith, Crete, Greece *On Eliciting Logistic Normal Priors for Multinomial Models*

C.P. Farrington

NIHR Workshop, Manchester *Methodologic development of syndromic and laboratory statistical surveillance systems in England*

University of Bremen Institute for Prevention Research and Social Medicine workshop on pharmacoepidemiology, Bremen, Germany *The self-controlled case series method. I: Principles and methodology; II: Variations, applications, design*

RIVM Workshop on Human Papillomavirus, Bilthoven, Netherlands *Correlated infections: quantifying heterogeneity in transmission and identifying transmission routes from multivariate serological survey data*

P.H. Garthwaite

47th Annual Statistics Conference at Gregynog, Newtown The analysis of single case studies

J.C. Gower

CARME 2011, Correspondence Analysis and Related Methods, Rennes, France *Biplots: taking stock*

58th World Statistics Congress of the International Statistical Institute, Dublin, Ireland *New generalizations and algorithms of principal components analysis: some remarks*

International Classification Conference, St Andrews *The canonical analysis of distance*

D. Gragn

ISCB 2011, 32nd Annual Conference of the International Society for Clinical Biostatistics, Ottawa, Canada *Evaluation of statistical algorithms for the detection of infectious disease outbreaks*

M.C. Jones

Statistics 2011 Canada/IMST 2011-FIM XX, Montreal, Canada *Some parametric families of distributions, and their interconnections* [Plenary talk]

International Conference on Advances in Probability and Statistics – Theory and Applications: a Celebration of N. Balakrishnan's 30 Years of Contributions to Statistics, Sha Tin, Hong Kong *Some parametric families of distributions and their interconnections* [Plenary talk]

K.J. McConway

Visualisation and Presentation in Statistics, The Open University *Statistics in the media: publicity, entertainment and wallpaper*

A. Noufaily

ISCB 2011, 32nd Annual Conference of the International Society for Clinical Biostatistics, Ottawa, Canada *Robust threshold estimation in regression-based statistical surveillance systems*

A.J. Santos

34th Research Students' Conference in Probability and Statistics, Cambridge *Dynamic Bayesian smooth transition autoregressive (DBSTAR) models*

31st Annual International Symposium on Forecasting (ISF), Prague, Czech Republic *Dynamic Bayesian smooth transition autoregressive (DBSTAR) models*

7th Workshop on Bayesian Inference in Stochastic Process (BISP), Madrid, Spain *Dynamic Bayesian smooth transition autoregressive (DBSTAR) models*

N.T. Trendafilov

Symposium on Life Sciences and Statistics, Osaka, Japan *Exploratory factor analysis: modern aspects* [Plenary talk]

ASMDA'11, Applied Stochastic Models and Data Analysis, Rome, Italy *sBarse: sparse biplots component analysis*

S. Unkel

ISCB 2011, 32nd Annual Conference of the International Society for Clinical Biostatistics, Ottawa, Canada *The relative frailty variance and shared frailty models*

57th Biometric Colloquium of the International Biometric Society, German Region, Zurich, Switzerland *The relative frailty variance and shared frailty models*

Y.G. Weldeselassie

34th Research Students' Conference in Probability and Statistics, Cambridge *Smooth risk functions for self-controlled case series models*

9. Other seminars and talks given

O. Anacleto

University of Leeds *Graphical dynamic models for road traffic networks*

F. Critchley

University College London *Computational information geometry for statistical science: Theory and practice*

University of Bristol *Computational information geometry for statistical science*

A.E. Faria

University of Southampton *Dynamic spatial Bayesian models for the interface between computer codes*

C.P. Farrington

International Society for Pharmacoepidemiology webinar *The self-controlled case series method in pharmacoepidemiology*

Université de Pau et des Pays de l'Adour, Pau, France *Modèles de fragilité et données de survie à statut actuel*

Biostatistics Network, University College London *The self-controlled case series method: recent developments*

P.H. Garthwaite

University of New South Wales, Sydney, Australia *The analysis of single case studies*

J.C. Gower

Polytechnic University of Barcelona, Spain *Applications of quadratic minimisation problems in statistics*

Polytechnic University of Barcelona, Spain *Fisher, Rothamsted 1919 – 1932*

K.J. McConway

Royal Statistical Society, Sheffield Local Group *Statistics in the media: the good, the bad and the ugly*

Max Planck Institute for Human Development, Berlin *Statistics as reported in the British mass media: publicity, entertainment and wallpaper*

A. Noufaily

Royal Statistical Society, South West Local Group, Plymouth *Parametric quantile regression based on the generalized gamma distribution*

N.T. Trendafilov

University of Bologna, Italy *Exploratory factor analysis of data matrices with more variables than observations*

S. Unkel

University of Durham *On assessing time dependence of association in bivariate current status data*

University of Essex *On assessing time dependence of association in bivariate current status data*

University of Zurich, Switzerland *On assessing time dependence of association in bivariate current status data*

H.J. Whitaker

London School of Hygiene and Tropical Medicine *The self-controlled case series method: general overview and what next?*

10. Editorial roles

F. Critchley

- Associate Editor: *Journal de la Société Francaise de Statistique*
- Editorial Board Member: *Studies in Classification, Data Analysis, and Knowledge Organisation* (book series, Springer)

C.P. Farrington

- Associate Editor: *Biostatistics*
- Editorial Board Member: *Epidemiology and Infection*

J.C. Gower

- Associate Editor: *The Mathematical Scientist*

M.C. Jones

- Associate Editor: *Annals of the Institute of Statistical Mathematics*
- Associate Editor: *Communications in Statistics*
- Associate Editor: *Journal of Statistical Planning and Inference*
- Associate Editor: *Journal of the Korean Statistical Society*
- Associate Editor: *Statistica Sinica* (to August)
- Associate Editor: *Statistical Methodology*

N.T. Trendafilov

- Associate Editor: *Computational Statistics*
- Guest Editor: Special Issue on Sparse Methods in Multivariate Analysis, *Computational Statistics*

11. Grants awarded

F. Critchley

A grant of £4,000 from *Centre for Research in Statistical Methodology (CRiSM), University of Warwick* to put on WOGAS3, Third Workshop on Geometric and Algebraic Statistics

A grant of US$500 from *The Minerva Foundation* to participate in ICORS2011, International Conference on Robust Statistics, Valladolid, Spain

(with H. Massam (York University, Canada), F. Matús (Academy of Sciences, Czech Republic) and J. Smith (University of Warwick)) A grant of CAN$9,900 from *The Fields Institute, Toronto* to organise the Workshop on Graphical Models: Mathematics, Statistics and Computer Science

C.P. Farrington

Received a *Royal Society Wolfson Merit Award*, grant of £56,000 over five years

A.J. Santos

A grant of US$660 from the *International Institute of Forecasters* to participate in the 31st Annual International Symposium on Forecasting (ISF), Prague, Czech Republic

12. Other activities

F. Critchley

- co-organised WOGAS3, Third Workshop on Geometric and Algebraic Statistics, University of Warwick, and a session therein

- international rapporteur for PhD at École Polytechnique Fédérale de Lausanne, Switzerland

- visited Instituto Superior Técnico, Lisbon, Portugal

C.P. Farrington

- RSS Vice-President for Academic Affairs

- member of the RSS Council and Council representative on RSS Research Section committee. Elected from Council to serve on the Executive Committee

- external examiner for the MSc in Statistical Science at the University of Lancaster

- external assessor for the Periodic Quality Review of the University of Lancaster's Department of Mathematics and Statistics

- examined two PhDs, one at Hasselt University, Belgium, the other for the Science Faculty of the Open University

- is a co-investigator on a French grant approved in 2010, from the Agence Nationale pour la Recherche

- is a co-investigator (as is Heather Whitaker) on two Canadian research grants approved in 2010, from the Ministry of Health and Long-Term Care, and from the Canadian Institutes of Health Research

P.H. Garthwaite

- external examiner for undergraduate statistics courses at the University of Aberystwyth

- examined a PhD for the University of Durham

- member of the College of Experts for the NIHR Evaluation, Trials and Studies Coordinating Centre

J.C. Gower

- member of the Sir Ronald Aylmer Fisher Memorial Committee of Great Britain

- foreign member of the Advisory Board of IOPS (Interuniversitaire Onderzoekschool voor Psychometrie en Sociometrie)

M.C. Jones

- member and vice-chair of the RSS Research Section committee

K.J. McConway

- wrote a major report for the RSS Council on the state of academic statistics in the UK

- spent long visits at the Statistical Laboratory, University of Cambridge (including contributing to the website at understandinguncertainty.org) and the Centre for Adaptive Behaviour and Cognition at the Max Planck Institute for Human Development, Berlin, Germany

- examined a PhD for the Exconomics Department of the Open University

- member of the South Central Regional Funding Committee for the Research for Patient Benefit Programme of the NHS National Institute of Health Research

- academic consultant on three more series of the BBC Radio4/OU series 'More or Less' (including contributions on air)

C.M. Queen

- examined a PhD for the University of Warwick

N.T. Trendafilov

- organised session at ASMDA'11, Applied Stochastic Models and Data Analysis, Rome, Italy

- visited University of Osaka, Japan

H.J. Whitaker

- examined a PhD at the London School of Hygiene and Tropical Medicine

- gave lecture on course 'Practical Pharmacoepidemiology' at the London School of Hygiene and Tropical Medicine

- is a co-investigator (as is Paddy Farrington) on two Canadian research grants approved in 2010, from the Ministry of Health and Long-Term Care, and from the Canadian Institutes of Health Research