

David Firth



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NATIONALITY	British	
RESEARCH INTERESTS	Statistical theory and methods. Statistical modelling of data from many areas of life, including social research, animal behaviour, bibliometrics, sports. Statistical computation.	
EDUCATION	PhD in Statistics, University of London, UK 1987 ◦ Thesis title: <i>Quasi-likelihood Estimation: Efficiency and Other Aspects</i>	
	MSc and DIC in Statistics, University of London, UK 1982 ◦ Awarded with <i>Distinction</i>	
	BA in Mathematics, University of Cambridge, UK 1980	
ACADEMIC POSITIONS HELD	Professor of Statistics, University of Warwick, UK Aug 2003 – present ◦ <i>Department of Statistics</i> ◦ Turing Fellow in the <i>Alan Turing Institute</i> , 2016–present ◦ Director of the <i>Warwick Data Science Institute</i> , 2015–present ◦ Head of the Department of Statistics, 2011–2014 ◦ Director, EPSRC Academy for PhD Training in Statistics, 2006–2013 ◦ ESRC Professorial Fellow, 2003–2006 ◦ Permanent position	
	Professor of Social Statistics, University of Oxford, UK Aug 1993 – Jul 2003 ◦ Fellow of <i>Nuffield College</i> , 1993–2003 ◦ Departmental affiliations: <i>Politics and International Relations</i> , <i>Sociology and Statistics</i> ◦ Permanent position	
	Senior Lecturer in Statistics, University of Southampton, UK Aug 1989 – Jul 1993 ◦ <i>Department of Mathematics</i> ◦ Appointed as Lecturer; promoted to Senior Lecturer in 1992–1993 ◦ Permanent position	
	Assistant Professor in Statistics, University of Texas, USA Sep 1987 – Jul 1989 ◦ <i>Department of Mathematics</i> , University of Texas at Austin ◦ Tenure-track position	
	Lecturer in Statistics, Imperial College London, UK Sep 1986 – Aug 1987 ◦ <i>Department of Mathematics</i> ◦ One-year temporary position	
	PhD Student in Statistics, Imperial College London, UK Sep 1983 – Aug 1986 ◦ <i>Department of Mathematics</i> ◦ Supervisor: D R Cox ◦ Funded by UK Science and Engineering Research Council	
	Junior Consulting Fellow, Lancaster University, UK Sep 1982 – Aug 1983 ◦ <i>Centre for Applied Statistics</i>	
HONOURS AND AWARDS	Guy Medal in Silver , Royal Statistical Society 2012	
	Elected as a Fellow of the British Academy 2008	
	John M Chambers Statistical Software Award , American Statistical Association 2007 ◦ Awarded for the <i>gnm</i> package, jointly with Heather Turner	
	Guy Medal in Bronze , Royal Statistical Society 1998	
	Elected as a Member of the International Statistical Institute 1997	

- PROFESSIONAL SERVICE: MAJOR
- Several **Royal Statistical Society** roles, including:
- Chair, *RSS Research Section*, 2001–2003, and 2009
 - Editor, *Journal of the Royal Statistical Society Series B*, 1998–2001
 - Hon Secretary, *RSS Research Section*, 1994–1996
 - Member of the *Research Section Committee* (1990–1993), *Programme Committee* (1994–1996, 1998–2002), *Conference Committee* (1991–1992), *Editorial Policy Board* (1998–2002), *President Nominating Committee* (2000), *Honours Committee* (2013–2015)
 - Associate Editor, *Journal of the Royal Statistical Society Series B*, 1993–1997
- HEFCE national (UK) Research Assessment Exercise, ‘RAE 2008’:**
- Member of *Sub-panel 22, Statistics and Operational Research*
 - Selected as that panel’s representative to the 2009 HEFCE *REF Expert Advisory Group*
- ESRC Research Grants Board** member, 2003–2005
- National Statistics Methodology Advisory Committee**, inaugural member, 2001–2005; RSS-nominated member, 2015–present
- BBC News and Current Affairs**, election and referendum consultant, 1997–2005
- PROFESSIONAL SERVICE: OTHER
- Editorial.** In addition to the RSS editorial roles already mentioned above:
- Frequent referee for many journals, in Statistics and other fields
 - Associate Editor of *Brazilian Journal of Probability and Statistics*, 2010–2013
 - Associate Editor of *Sociological Methodology*, 2005–2009
 - Associate Editor of *Political Analysis*, 2004–2009
 - Associate Editor of *Biostatistics*, 2004–2008
 - Associate Editor of *Biometrika*, 1989–1993
- Conferences/workshops, organiser or co-organiser:**
- Alan Turing Institute scoping workshop, ‘Intractable Likelihoods and Data Science’ (Warwick, November 2015; with G O Roberts and others)
 - Alan Turing Institute scoping workshop, ‘Data Science for Data-Rich Sports’ (London, November 2015; with I Kosmidis and others)
 - ‘Composite Likelihood Methods’ (Banff, Canada, April 2012; with H Joe and others)
 - ‘useR! 2011’ (Warwick, August 2011; with H L Turner, T E Nichols and others)
 - CRiSM workshop ‘Composite Likelihood Methods’ (Warwick, April 2008)
 - ‘Measurement in Social Science’ (Nuffield College, June 1997)
 - ‘Statistical Issues in Sociology’ (Nuffield College, November 1996)
 - ‘Non-ignorable non-response’ (Nuffield College, June 1996)
 - ‘Contingency table analysis and model selection’ (Nuffield College, June 1995)
 - ‘Analysis of Categorical Data’ (Nuffield College, May 1994)
 - ‘Quasi-likelihood and Related Methods’ (Imperial College, May 1987)
- Economic and Social Research Council** roles in addition to the Research Grants board already mentioned above:
- Deputy Director, Lancaster-Warwick Node of the ESRC National Centre for Research methods, 2005–2008.
 - ESRC Oxford Spring School in Quantitative Methods of Social Research (Chair of Steering Committee, 2002–2003; Executive Committee member, 2003–2009)
 - ESRC Theme Overview Consultant, 2002
 - ESRC Studentships Examiner, 2001–2002
 - ESRC Validation Panel for the new National Statistics Social Classification, 1997
 - Coordinator of the *Statistics, Methods and Computing Pathway* in the Warwick ESRC Doctoral Training Centre in Social Science, 2010–2014
- External Examining:**
- Various PhDs including at University of London, University of Liverpool, EPFL, UCL, University of Kent, etc.
 - University of Cambridge, Part III of the Cambridge Mathematical Tripos and the MPhil in Statistical Science, 2006–2007
 - Open University, undergraduate courses in Statistics, 2010–2013.
- Other advisory roles** include:
- Advisor on several Chair appointments at UCL, LSE, Lancaster, Southampton and others
 - Contributor to the Bean Review of UK Economic Statistics (2015)
 - London School of Economics and Political Science, UK External Advisor, international review of the LSE Department of Statistics (2015)

- At LSE, appointed as the *External Assessor* for all academic promotion cases in Statistics (2011–present)
- Newton International Fellowships panel (British Academy and Royal Society), 2008–2012
- University of Auckland, International Review of the Department of Statistics, 2007
- EPSRC London Taught Course Centre for Statistics PhD Students, Advisory Board, 2007–2008
- University of Oxford, statistical advisor to the North Commission, 1995–1996.

Other international recognition, committees, etc.:

- Harvard University: *Distinguished Visiting Fellow*, Institute for Quantitative Social Science, 2009
- Reviewer for several NSF proposals (in addition to the many that I see for ESRC and EPSRC)
- Bernoulli Society, European Regional Committee member, 1998–2002
- Institute of Mathematical Statistics, President Nominating Committee member, 1997

TEACHING

[U – undergraduate; G – graduate]

At the **user!** annual international conference (G):

- *Generalized Nonlinear Models in R* (with H Turner; Rennes, July 2009)

At the **ESRC Oxford Spring School** (all G):

- *Crash Course in R* (with R Andersen, H Turner)
- *Categorical Data Analysis*
- *Introduction to Generalized Nonlinear Models in Social Research* (with H Turner)
- *Overview of Statistical Models and Statistical Thinking in Social Research*

At the **EPSRC Academy for PhD Training in Statistics** (G):

- *Statistical Inference* (2007–2012)

At **Warwick**:

- *Mathematical Statistics* (U2)
- *Linear Statistical Models* (U2)
- Supervision of *Masters theses* (G)

At **Oxford** (all G):

- *Statistical methods for the Social Sciences*
- *Advanced Social Statistics*
- *MSc supervision/projects*
- Home Office Research Unit course, *Analysis of Categorical Data*

At **Southampton**:

- *Introduction to Probability and Statistics* (U1)
- *Computing for Mathematicians* (U1)
- *Stochastic Processes* (U2)
- *Statistical Methods II* (U3)
- *Design and Analysis of Experiments* (U3)
- *Univariate Statistical Theory and Inference* (G)
- Supervision of *3rd-yr and MSc projects* (U & G)
- *Actuarial training*, Bacon & Woodrow (departmental contract) (G)

At the **University of Texas**:

- *Introduction to Probability* (U3)
- *Introduction to Mathematical Statistics* (U4)
- *Statistics for Pharmacy Majors* (U2)
- *Analysis of Frequency Data* (G)
- *Stochastic Processes and their Statistical Analysis* (G)
- *Multivariate Statistical Analysis* (G)
- Supervision of *Masters theses* (G)

At **Imperial College London** (all G):

- *Analysis of Discrete Data*
- *Variance Component Models*
- *Generalized Linear Models*

ACADEMIC

At **Warwick**:

ADMINISTRATION

- Alan Turing Institute, Science Committee (2015–16)
- Alan Turing Institute, Interim Programme Committee (2015)

- Director, Warwick Data Science Institute (2015–present)
- Management Team of the Leverhulme ‘Bridges’ Doctoral Training Centre (2014–present)
- BSc Data Science development group (2013–present)
- Head of Department of Statistics (2011–2014)
- Deputy Head of Statistics (2010–2011)
- Management team of the Centre for Research in Statistical Methodology (2006–present)
- Pathway Coordinator for Statistics, Warwick ESRC Doctoral Training Centre (2010–2014)
- Co-Director of the Academy for PhD Training in Statistics (APTS) (2006–2013)
- Development of new web-based maintenance and presentation of undergraduate handbooks (2011)
- Web Editor, Dept of Statistics (2008–2010)
- RAE 2008 co-ordinator, Dept of Statistics
- University-wide RAE 2008 Steering Group
- Re-design (with B Finkenstädt) of the MSc in Statistics course (2006)
- Many departmental and University appointing committees

At Oxford:

- Division of Social Sciences, Research Support Unit, Acting Director
- Division of Social Sciences, Committee on Computing
- Dept of Sociology, Graduate Studies Committee
- Dept of Politics and International Relations, Graduate Studies Committee
- Dept of Politics and International Relations, General Purposes Committee
- Nuffield College, Information Services Fellow
- Nuffield College, Investment Committee
- Co-ordinator of University-wide statistics training of graduate students in social-science disciplines (Sociology, Social Policy, Politics, Psychology, Education, Geography, etc.)
- Many appointing committees

At Southampton:

- University Computing Services Committee (Faculty representative)
- Board of the Faculty of Engineering (Faculty representative)
- Mathematics Faculty Standing Committee
- Mathematics Faculty Computing Committee
- Organiser, Inter-Faculty Statistics Seminars

At the University of Texas:

- Chair, Board of Graduate Studies in Statistics
- Seminar organiser, Center for Statistical Sciences

GRANTS
AND
CONTRACTS
AWARDED

(PI – Principal Investigator; CI – Co-Investigator)

- **Alan Turing Institute** Faculty Fellowship (PI, c.£60K), 2016–2018, to work on various projects including scalable statistical modelling and principled ranking methods.
- **Alan Turing Institute** Research Scoping Workshop (CI, £14K), 2015, ‘Data Science in Data-Rich Sports’ (with I Kosmidis and others).
- **Alan Turing Institute** Research Scoping Workshop (CI, £14K), 2015, ‘Intractable Likelihoods and Data Science’ (with G O Roberts and others).
- **Leverhulme Trust** Doctoral Scholarships scheme (CI, £1.05M), 2015–2020, ‘Bridges: Bringing Together the Social and Mathematical Sciences to Understand Social Information’ (with T Hills and S O Becker).
- **EPSRC Programme Grant** (CI, £2.5M), 2013–2018, ‘Intractable Likelihood’ (with G Roberts and others).
- **EPSRC** (CI, £600K), 2012–2016, ‘Centre for Research in Statistical Methodology, Phase 2’ (with G Roberts and M Steel)
- **EPSRC** (CI and Co-Director, £140K), 2011–2016, ‘Academy for PhD Training in Statistics (APTS) — Follow on Funding’ (with W S Kendall and others from 9 universities)
- **Banff International Research Station** (CI, c.40k Canadian), 2012, ‘Workshop on Composite Likelihood Methods’ (with H Joe, N Reid, P Song, C Varin).
- **EPSRC** (PI, £314K), 2009–2012, ‘Generalized Nonlinear Models: Theory, Computation and Extensions’ (with H L Turner).
- **EPSRC** (CI and Co-Director, £362K), 2006–2011, ‘APTS: Academy for PhD Training in Statistics’ (with W. S. Kendall and others from 9 universities)
- **ESRC** National Centre for Research Methods, Lancaster-Warwick Node (CI, with colleagues at Lancaster, £900K), 2005–2008, 2008–2010, ‘Developing Statistical Modelling in the Social Sciences’.

- **ESRC Professorial Fellowship** (PI, £350K), 2003–2006, ‘Models, Measurement and Inference in Social Research’.
- **ESRC Research Methods programme** (PI, £130K), 2002–2007, ‘ESRC Oxford Spring School in Quantitative Methods of Social Research’ (joint with S D Fisher, A F Heath and C Wlezien)
- **ESRC Analysis of Large and Complex Datasets programme** (PI, £61K), 1998–1999, ‘Model selection for very large datasets’ (jointly with D R Cox and J H Goldthorpe)
- **ESRC Health Variations programme** (CI, £95K), 1997–1999, ‘Inequalities in women’s health: work or way of life?’ (jointly with M Bartley and R M Fitzpatrick)
- **ESRC Analysis of Large and Complex Datasets programme** (PI, £150K), 1994–1997, ‘Two major themes in large-scale data analysis’ (jointly with D R Cox, A F Heath and N G Shephard; graded ‘Outstanding’ by ESRC, July 1998).
- **British Telecom plc** (CI, £80K), ‘Carry-over effects in speech transmission experiments’ (jointly with S M Lewis), 1992–1995.
- **EPSRC Complex Stochastic Systems Initiative** (PI, £67K), 1993–1995, ‘Joint modelling of mean and dispersion in experimental and observational data’ (graded Alpha 4, ‘very significant contribution to the field’ by EPSRC, 1995).

RESEARCH
DEGREES
SUPERVISED

Current PhD students: Anyi Zou, David Selby.

Awarded:

- Fiona Sammut (PhD Warwick, 2017) ‘Using Generalized Linear Models to Model Compositional Response Data’
- Apostolis Gkatzionis (PhD Warwick, 2015) ‘Using Quasi-densities to Summarize and Present the Posterior Distribution of Parameter Contrasts in Statistical Models’
- Helen Ogden (PhD Warwick, 2013) ‘Inference for generalised linear mixed models with sparse structure’
- Thomas Wolfgarten (MPhil Warwick, 2012), ‘Model Based Community Detection with Application to Citation Analysis’
- Miland Joshi (PhD Warwick, 2011) ‘Applications of Generalized Additive Models’ (jointly supervised with J E H Shaw)
- Ioannis Kosmidis (PhD Warwick, 2007) ‘Bias Reduction in Exponential Family Non-Linear Models’
- Jamie Sergeant (DPhil Oxford, 2007) ‘Some Model-Based Approaches to Measurement in Social Science’
- Renée de Menezes (DPhil Oxford, 1999) ‘More useful standard errors for group and factor effects in generalized linear models’
- Nicholas Banks (DPhil Oxford, 1999) ‘Cultural values and the adoption of efficient technologies’ (jointly supervised with B Boardman)
- Rory Wolfe (PhD Southampton, 1996), ‘Models and estimation for repeated ordinal responses, with applications in telecommunications experiments’
- Sheila Jacobs (DPhil Oxford, 1995), ‘Routes from origins to destinations: a longitudinal study of women’s social mobility, occupational and marital, using retrospective data’ (jointly supervised with J Gershuny)
- Kathleen Bennett (PhD Southampton, 1994), ‘A nonparametric regression approach to prediction in finite populations’

Also substantial, *informal involvement with many other Oxford DPhil theses* between 1993 and 2003, especially in Sociology, Politics and Psychology.

CONFERENCE
TALKS:
INVITED

Note: The large number of *invited research seminars* given at UK and international universities have been omitted — they are by now too numerous to list. Listed here are only the *conferences and workshops* at which a talk was invited.

- ‘Ranking from dyadic encounters: Bradley-Terry model, extensions and application’. *ISI World Congress*, Rio de Janeiro, July 2015.
- ‘Bias reduction in the estimation of Rasch models’ (with I. Kosmidis and H. Turner). *PsychoCo 2012*, Innsbruck, Austria, February 2012. **Plenary**
- ‘Quasi-variances and extensions’. *26th International Workshop on Statistical Modelling*, València, Spain, July 2011. **Plenary**
- ‘Pseudo-likelihoods and representation invariance’. *23rd Nordic Conference on Mathematical Statistics*, Voss, Norway, June 2010. **Plenary**
- ‘Extended Bradley-Terry models’ (with H Turner). *2nd Workshop on Psychometric Computing*, Munich, February 2010. **Plenary**

- ‘Getting it right on election night’. *ISA Conference on Applied Statistics*, Dublin, May 2009. **Plenary**
- ‘Multiplicative interaction models in R’ (with H Turner), *3rd IASC World Conference on Computational Statistics and Data Analysis*, Limassol, October 2005.
- ‘The BBC/ITN Exit Poll’ (with J. Curtice), *EPOP Conference*, University of Essex, September 2005. **Plenary**
- ‘Some topics in social statistics’, international conference *Celebrating Statistics*, Neuchâtel, July 2004. **Plenary**
- ‘Comparing measures of social position as predictors’, *ISA International Conference on Social Science Methodology*, Cologne, October 2000.
- ‘Assessing lack of fit with the index of dissimilarity’, *ISA International Conference on Social Science Methodology*, Cologne, October 2000.
- ‘Model assessment using the index of dissimilarity’ (with J Kuha). *ESRC ALCD Conference*, London, April 1999. **Plenary**
- ‘Ridge logistic regression and referendum prediction’. *Midland and Northern Universities Statistics Conference*, April 1999. **Plenary**
- ‘Relative importance of explanatory variables’. *Statistical Issues in Social Science*, Royal Swedish Academy of Sciences, Stockholm, October 1998. **Plenary**
- ‘Bias in phylogeny reconstruction and what to do about it’ (with W Bruno, A Halpern, N Succi and P Lewis). *Evolution of HIV*, Santa Fe, April 1998.
- ‘Class, religion and vote in France and Britain’ (with B Cautrès and A F Heath). *Anglo-French Conference on Elections*, Maison Française, Oxford, June 1997. **Plenary**
- ‘Quasi-likelihood and pseudo-likelihood for estimation of variance functions’. *IMS Special Topics meeting on Estimating Functions*, Athens, Georgia, March 1996. **Plenary**
- ‘Generalized linear models and smoothing in finite-population problems’. *IMS Special Topics Meeting on Generalized Linear Models*, Gainesville, Florida, Sept 1995. **Plenary**
- ‘Recent developments in quasi-likelihood methods’, *49th Biennial Session of the International Statistical Institute*, Florence, August 1993.
- ‘Bias reduction, the Jeffreys prior and GLIM’, *7th International Workshop on Statistical Modelling*, Munich, July 1992. **Plenary**
- ‘Quasi-likelihood and pseudo-likelihood for inference about a variance function’, *European Meeting of Statisticians*, Bath, September 1992.
- ‘Maximum likelihood and bias’, *Gregynog Conference in Statistics*, April 1992. **Plenary**
- ‘Quasi-likelihood and multiplicative random effects’, *Brazilian National Symposium on Probability and Statistics*, São Paulo, July 1990.
- ‘Quasi-likelihood and nested errors’, *208th Meeting of the Institute of Mathematical Statistics*, Lexington Kentucky, March 1989.
- ‘The efficiency of quasi-likelihood estimation’, *NATO/SERC International Workshop on Asymptotic Theory*, Edinburgh, 1986. **Plenary**
- ‘Quasi-likelihood estimation in models with constant coefficient of variation’, *4th European Young Statisticians’ Meeting*, Varna, Bulgaria, 1985. **Plenary**

CONFERENCE
TALKS:
CONTRIBUTED

- ‘How to get along with sum 1: Generalized linear models for compositional data’ (with F Sammut). *Royal Statistical Society International Conference*, Manchester, September 2016.
- ‘PageRank and the Bradley-Terry model’ (with D Selby). *Royal Statistical Society International Conference*, Manchester, September 2016.
- ‘Consistent Bradley-Terry model for fair standings in football leagues and other round-robin tournaments’ (with H Turner). *Royal Statistical Society International Conference*, Manchester, September 2016.
- ‘Generalized Bradley-Terry Modelling of Football Results’ (with H Turner). *useR! 2013*, Albacete, Spain, July 2013.
- ‘Modelling the diluting effect of social mobility on health inequality’ (with H Turner). *Royal Statistical Society International Conference*, Telford, September 2012.
- ‘Modelling the effect of social mobility on limiting long-term illness’ (with H Turner). *useR! 2012*, Nashville TN, USA, June 2012.
- ‘Extended quasi-variances’. *2nd International Workshop of the ERCIM Working Group on Computing and Statistics*, Limassol, Cyprus, October 2009.
- ‘Do journal rankings reflect research quality?’ (with M Cattelan and C Varin). *RSS International Conference*, Edinburgh, September 2009.
- ‘Nonlinear Discrete-time Hazard Models for the Rate of First Marriage’ (with A Batchelor and H Turner). *22nd International Workshop on Statistical Modelling*, Barcelona, July 2007.
- ‘GNM: A package for generalized nonlinear models’ (with H. L. Turner). *UseR! 2006 Conference*, Vienna, July 2006

- ‘Generalized non-linear models and over-parameterized representation’ (with H Turner). *21st International Workshop on Statistical Modelling*, Galway, Ireland, July 2006.
- ‘Multiplicative interaction models in R’ (with H Turner), *ASA/IMS Joint Statistical Meetings*, Minnesota, August 2005. (**Winner of the ASA award for best contributed paper at that year’s meeting.**)
- ‘Working With over-parameterized models’, *European Meeting of Statisticians*, Oslo, July 2005.
- ‘Structured Bradley-Terry models, and flat lizards fighting’, *‘UseR!’ conference*, Vienna, June 2004.
- ‘LLAMA: an object-oriented system for log multiplicative modelling’. *COMPSTAT 98*, Bristol, August 1998.
- ‘Unification and bias reduction of some commonly-used estimators of evolutionary distance’. *European Meeting of Statisticians*, Vilnius, Aug 1998.
- ‘Shrinkage in logistic regression’, *Social Science and Statistics, in memory of Clifford C Clogg*. Penn State University, October 1996.
- ‘On the Role of Generalized Linear Models in Survey Sampling’, *11th International Workshop on Statistical Modelling*, Orvieto, July 1996.
- ‘Efficacy of Schemes for the Unemployed: Discrete-time Survival Analysis’ (with C Payne), *11th International Workshop on Statistical Modelling*, Orvieto, July 1996.
- ‘On D-Optimum Design for Generalized-Linear and Other Nonlinear Models’ (with J Hinde). *9th International Workshop on Statistical Modelling*, Exeter, July 1994.
- ‘Generalized linear models and Jeffreys priors: an iterative weighted least-squares approach’, *COMPSTAT 92*, Neuchâtel, Switzerland, August 1992.
- ‘Bias reduction of maximum likelihood estimates’, *223rd meeting of the Institute of Mathematical Statistics*, Corvallis Oregon, USA, June 1992.
- ‘Marginal homogeneity and the superposition of Latin squares’, *207th Meeting of the Institute of Mathematical Statistics*, Fort Collins Colorado, 1988.
- ‘Multiplicative error: lognormal or gamma?’, *Third International Workshop on Statistical Modelling*, Perugia, Italy, July 1987.

David Firth: Publications

ONLINE
BIBLIOGRAPHY

Google Scholar:
<https://scholar.google.co.uk/citations?user=rtOYz5YAAAAAJ&hl=en&oi=ao>
ResearcherID:
<http://www.researcherid.com/rid/A-8207-2011>

PAPERS
IN
PEER-REVIEWED
JOURNALS

The three papers highlighted in the list below as **RSS Read Paper** underwent more extensive peer-review than normal, and each of those papers was selected for open, published discussion at an *Ordinary Meeting* of the Royal Statistical Society.

- **RSS Read Paper** (3rd of 3)
Varin C, Cattelan M and Firth D (2016). Statistical modelling of citation exchange between statistics journals (with Discussion). *Journal of the Royal Statistical Society A* **179**, 1–63. <http://dx.doi.org/10.1111/rssa.12124>
- Cattelan M, Varin C and Firth D (2013). Dynamic Bradley-Terry models for sports tournaments. *Journal of the Royal Statistical Society C* **62**, 135–150. DOI: 10.1111/j.1467-9876.2012.01046.x
- Turner H and Firth D (2012). Bradley-Terry models in R: The BradleyTerry2 package. *Journal of Statistical Software* **48**(9), 1–21. <http://www.jstatsoft.org/v48/i09>
- Firth D (2011). On improved estimation for importance sampling. *Brazilian Journal of Probability and Statistics* **25**, 437–443. DOI: 10.1214/11-BJPS155
- Kosmidis I and Firth D (2011). Multinomial logit bias reduction via the Poisson log-linear model. *Biometrika* **98**, 755–759. DOI: 10.1093/biomet/asr026
- Varin C, Reid N and Firth D (2011). An overview of composite likelihood methods. *Statistica Sinica* **21**, 5–42. <http://www3.stat.sinica.edu.tw/statistica/j21n1/21-1.html>
- Kuha J and Firth D (2011). On the index of dissimilarity for lack of fit in log-linear and log-multiplicative models. *Computational Statistics and Data Analysis* **55**, 375–388. DOI: 10.1016/j.csda.2010.05.005
- Kosmidis I and Firth D (2010). A generic algorithm for reducing bias in parametric estimation. *Electronic Journal of Statistics* **4**, 1097–1112. DOI: 10.1214/10-EJS579
- Kosmidis I and Firth D (2009). Bias reduction in exponential-family nonlinear models. *Biometrika* **96**, 793–804. DOI: 10.1093/biomet/asp055
- **RSS Read Paper** (2nd of 3)
Curtice J and Firth D (2008). Exit polling in a cold climate: The BBC/ITV experience in Britain in 2005 (with disussion). *Journal of the Royal Statistical Society A* **171**, 509–539. DOI: 10.1111/j.1467-985X.2007.00536.x
- Sergeant J C and Firth D (2006). Relative index of inequality: Definition, estimation and inference. *Biostatistics* **7**, 213–224. DOI: 10.1093/biostatistics/kxj002
- Whiting M J, Stuart-Fox D M, O'Connor D, Firth, D Bennett N C and Blomberg S P (2006). Ultraviolet signals ultra-aggression in a lizard. *Animal Behaviour* **72**, 353–363. DOI: 10.1016/j.anbehav.2005.10.018
- Stuart-Fox D M, Firth D, Moussalli A and Whiting M J (2006). Multiple signals in chameleon contests: designing and analysing animal contests as a tournament. *Animal Behaviour* **71**, 1263–1271. DOI: 10.1016/j.anbehav.2005.07.028
- Firth D (2005). Bradley-Terry models in R. *Journal of Statistical Software* **12**, 1–12. <http://www.jstatsoft.org/v12/i01>
- Firth D and de Menezes R X (2004). Quasi variances. *Biometrika* **91**, 65–80. DOI: 10.1093/biomet/91.1.65
- Firth D (2003). CGIwithR: Facilities for processing web forms using R. *Journal of Statistical Software* **8**(10), 1–8. <http://www.jstatsoft.org/v08/i10>

- Firth D (2003). Overcoming the ‘reference category’ problem in the presentation of statistical models. *Sociological Methodology* **33**, 1–18. DOI: 10.1111/j.0081-1750.2003.t01-1-00125.x
- Wolfe R and Firth D (2002). Modelling subjective use of an ordinal response scale in a many period crossover experiment. *Journal of the Royal Statistical Society C* **51**, 245–55. DOI: 10.1111/1467-9876.00267
- Sacker A, Bartley M, Firth D Fitzpatrick R and Marmot M (2001). The relationship between job strain and coronary heart disease: Evidence from an English sample of the working male population. *Psychological Medicine* **31**, 279–290. DOI: 10.1017/s0033291701003270
- Sacker A, Bartley M, Firth D and Fitzpatrick R (2001). Dimensions of social inequality in the health of women in England: occupational, material and behavioural pathways. *Social Science and Medicine* **52**, 763–781. DOI: 10.1016/s0277-9536(00)00176-3
- Firth D (2000). Quasi-variances in Xlisp-Stat and on the Web. *Journal of Statistical Software* **5.4**, 1–13. <http://www.jstatsoft.org/v05/i04>
- Bartley M, Fitzpatrick R, Firth D and Marmot M (2000). Social distribution of cardiovascular disease risk factors: change among men in England 1984–1993. *Journal of Epidemiology and Community Health* **54**, 806–814. DOI: 10.1136/jech.54.11.806
- Sacker A, Firth D, Fitzpatrick R, Lynch K and Bartley M (2000). Comparing health inequality in men and women: prospective study of mortality, 1986–1996. *British Medical Journal* **320**, 1303–1307. DOI: 10.1136/bmj.320.7245.1303
- Bartley M, Sacker A, Firth D and Fitzpatrick R (1999). Understanding social variation in cardiovascular risk factors in men and women: the advantage of theoretically based measures. *Social Science and Medicine* **49**, 831–845. DOI: 10.1016/s0277-9536(99)00192-6
- Iturria S J, Carroll R J and Firth D (1999). Polynomial regression and estimating functions in the presence of multiplicative measurement error. *Journal of the Royal Statistical Society B* **61**, 547–561. DOI: 10.1111/1467-9868.00192
- Marshall G and Firth D (1999). Social mobility and personal satisfaction: Evidence from ten countries. *British Journal of Sociology* **50**, 28–48. DOI: 10.1080/000713199358806
- Bartley M, Sacker A, Firth D and Fitzpatrick R (1999). Social position, social roles and women’s health: Changing relationships 1984–1993. *Social Science and Medicine* **48**, 99–115. DOI: 10.1016/s0277-9536(98)00293-7
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