

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	<p>PhD in Statistics, University of London, UK 1987 ◦ Thesis title: <i>Quasi-likelihood Estimation: Efficiency and Other Aspects</i></p> <p>MSc and DIC in Statistics, University of London, UK 1982 ◦ Awarded with <i>Distinction</i></p> <p>BA in Mathematics, University of Cambridge, UK 1980</p>
ACADEMIC POSITIONS HELD	<p>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</p> <p>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</p> <p>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</p> <p>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</p> <p>Lecturer in Statistics, Imperial College London, UK Sep 1986 – Aug 1987 ◦ <i>Department of Mathematics</i> ◦ One-year temporary position</p> <p>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</p> <p>Junior Consulting Fellow, Lancaster University, UK Sep 1982 – Aug 1983 ◦ <i>Centre for Applied Statistics</i></p>
HONOURS AND AWARDS	<p>Guy Medal in Silver, Royal Statistical Society 2012</p> <p>Elected as a Fellow of the British Academy 2008</p> <p>John M Chambers Statistical Software Award, American Statistical Association 2007 ◦ Awarded for the <i>gnm</i> package, jointly with Heather Turner</p> <p>Guy Medal in Bronze, Royal Statistical Society 1998</p> <p>Elected as a Member of the International Statistical Institute 1997</p>

- 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)
- *Professional Practice of Data Analysis* (U3)
- *Statistical Analysis of Networks* (G – OxWaSP)
- *IAS/WDSI inter-disciplinary Vacation Schools* (G)
- Supervision of *Masters theses* (U4, 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

ADMINISTRATION

At **Warwick**:

- 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 student: David Selby.

Awarded:

- Anyi Zou (MPhil Warwick, 2018) ‘An Extended Bradley-Terry Model: Opponent Reference Model’
- 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.

- ‘Fair Standings in Soccer and Other Round-Robin Leagues’. *New England Symposium on Statistics in Sport*, Harvard University, September 2018. **Plenary** (opening talk of conference)
- ‘Bradley-Terry models for pair-comparison networks: Structure and scalability’. *Isaac Newton Institute workshop*, Cambridge, July 2018. **Plenary**

- ‘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 Socci 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

- ‘Modelling item worth based on rankings’ (with H Turner and others). *European R Users Meeting*, Budapest, May 2018.
- ‘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
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