

## Curriculum Vitae

Personal Details	Contact Details
Dr Richard Sandes <b>Forsyth</b>	[Please request postal address by email.]
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### ► Personal Profile

I am a reasonably reliable and conscientious person, who's more than averagely knowledgeable in a variety of fields, ranging from evolutionary computing to linguistic statistics. I'd like to use the skills I still have to some research, in the sense of actually trying to find things out. To be paid for doing so would make it even more satisfying. Although much of what persuades research-funding agencies these days to cough up money isn't research as I understand it, there are still some projects aimed at reducing humanity's areas of ignorance, which I would be happy to join.

### ► Personal Website

[www.richardsandesforsyth.net](http://www.richardsandesforsyth.net)

### ► Some Possibly Relevant Skills

- good at writing & editing articles, books, papers, reports and reviews;
- proficient with Windows applications, including MS Excel, Powerpoint & Word;
- fluent at computer programming in several languages, e.g. C, Pascal and especially Python;
- skilled at both univariate & multivariate statistical analysis, preferably using R;
- experienced both in devising and applying machine-learning techniques.

### ► Qualifications

Date	Qualification
2003	Certificate in TEFL, University of Luton/Bedfordshire.
1996	Ph.D. in computational text analysis, University of Nottingham.
1980	M.Sc. in Computer Science, City University, London.
1970	B.A. honours, 1 <sup>st</sup> class, in Psychology, University of Sheffield.
1966	A-levels in English Literature, History, Geography & General Paper.
1964	7 O-levels, including English & Mathematics.

### ► Employment History

Dates	Post
2010-2012	Senior Research Fellow, Centre for Translation Studies, University of Leeds.
2009-2010	Research Fellow, School of Medicine, University of Southampton.
2008-2009	Research Associate, Research School of Informatics, Loughborough University.
2006-2007	Postdoctoral Research Fellow, School of Psychology, University of Nottingham.

2004-2005	Senior Research Fellow, Centre for Applied Linguistics, University of Warwick.
1999-2004	Senior Lecturer, Department of Computing & Information Systems, University of Luton / Bedfordshire.
1991-1999	Senior Lecturer, Faculty of Computing, Statistics & Mathematics, University of the West of England, Bristol.
1989-1991	Research Associate, School of Psychology, University of Nottingham.
1984-1989	Freelance author, software developer and computer consultant.
1979-1984	Lecturer / Senior Lecturer, Department of Mathematics, Statistics & Computing, Polytechnic of North London.
1977-1979	Software Manager, RAIR Timesharing Ltd., London.
1975-1977	Academic Programmer, City of London Polytechnic Computer Service.
1974	Lecturer in Social Psychology, University of Canterbury, Christchurch, New Zealand.
1973-1974	Computer Operator/Advisor, Open University Computing Service, Alexandra Palace, London.

### ► Teaching Experience

A selection of modules & courses for which I have been responsible as module leader during the past two decades follows.

Years	Title + Information
1991-1995	Introduction to Statistical Methods, Level 1 (UWE, Bristol)
1992-1997	Business Decision Analysis, Postgraduate Diploma & MBA (UWE, Bristol)
1995-1996	Multivariate Statistical Methods, Postgraduate Diploma (UWE, Bristol)
1995-1999	Artificial Intelligence, Masters level (UWE, Bristol)
1996-1999	Expert & Knowledge-based Systems, Level 3 (UWE, Bristol)
1996-1999	Machine Learning, Level 3 (UWE, Bristol)
1999-2000	Introduction to Logic, Level 1, evening (Univ. Bedfordshire)
1999-2002	Practical Program Production, Masters level (Univ. Bedfordshire)
2000-2003	Representation Techniques in Artificial Intelligence, Level 2 (Univ. Bedfordshire)
2000-2002	Introduction to Artificial Intelligence, Level 1 (Univ. Bedfordshire)
2000-2003	Knowledge-based Systems, Level 3 (Univ. Bedfordshire)
2000-2002	Research & Professional Practice, Masters level (Univ. Bedfordshire)
2002-2003	Intelligent Systems, Masters level (Univ. Bedfordshire)
2003-2004	Concepts of Artificial Intelligence, Level 2 (Univ. Bedfordshire)

### ► Books

Forsyth, R.S. (1978). *The BASIC Idea: an introduction to computer programming*. London: Chapman & Hall.

Forsyth, R.S. (1982). *Pascal at work and play*. London: Chapman & Hall.

Forsyth, R.S. (1984) ed. *Expert systems: principles and case studies*. London: Chapman & Hall. [2nd revised edition 1989.]

Forsyth, R.S. & Naylor, C. (1985). *The hitch-hiker's guide to artificial intelligence*. London: Chapman & Hall.

Forsyth, R.S. & Rada, R. (1986). *Machine learning: applications in expert systems and information retrieval*. Chichester: Ellis Horwood.

Drapkin, A.T. & Forsyth, R.S. (1987). *The punter's revenge: computers in the world of gambling*. London: Chapman & Hall.

Forsyth, R.S. (1988) *From here to humanity*. Pathway Publications, Nottingham.

Forsyth, R.S. (1989) ed. *Machine learning: principles and techniques*. London: Chapman & Hall.

### ► Chapters

- Forsyth, R.S. (1984). The Anatomy of Expert Systems. In: Yazdani, M. & Narayanan, N. (eds.) *Artificial Intelligence: Human Effects*. Chichester, UK: Ellis Horwood.
- Forsyth, R.S. (1990). Developments in artificial intelligence. In: Mirzai, A. (ed.) *Artificial Intelligence: Concepts and Applications*. London: Chapman & Hall Ltd.
- Forsyth, R.S. (1992). In search of knowledge. In: Arciszewski, T. (ed.) *Knowledge Acquisition in Civil Engineering*. American Society of Civil Engineers.
- Forsyth, R.S. (1992). Ockham's razor as a gardening tool. In: Bramer, M.A. & Milne, R.A. (eds.) *Research and Development in Expert Systems IX*. Cambridge: Cambridge University Press.
- Forsyth, R.S. (1997). Deriving document descriptors from data. In: Dorfman, L., Martindale, C., Leontiev, D., Cupchik, G., Petrov, V. & Machotka, P. (eds.). *Emotion, Creativity, and Art*, Vol. 2. Perm: Perm State Institute of Arts and Culture.
- Forsyth, R.S. (1999). New directions in text categorization. In: Gammerman, A. (ed.) *Causal Models and Intelligent Data Management*. Heidelberg: Springer Verlag.

### ► Refereed Journal Papers

- Forsyth, R.S. (1981). BEAGLE: a Darwinian approach to pattern recognition. *Kybernetes*, 10, 159-166.
- Forsyth, R.S. (1984). Machine learning systems. *Aslib Proceedings*, 36(5), 219-227.
- Forsyth, R.S. (1990). The strange story of the Perceptron. *AI Review*, 4, 147-155.
- Forsyth, R.S. (1991). Towards a grounded morality. *Changes*, 9(4), 264-278.
- Forsyth, R.S., Clarke, D.D. & Wright, R.L. (1994). Overfitting revisited: an information-theoretic approach to simplifying discrimination trees. *J. of Experimental & Theoretical Artificial Intelligence* 6(3), 289-302.
- McKenzie, D. & Forsyth, R.S. (1995). Classification by similarity. *Computers in Human Behavior*, 11(2), 273-288.
- Holmes, D.I. & Forsyth, R.S. (1995). The "Federalist" revisited: new directions in authorship attribution. *Literary & Linguistic Computing*, 10(2), 111-127.
- Forsyth, R.S. & Holmes, D.I. (1996). Feature-finding for text classification. *Literary & Linguistic Computing*, 11(4), 163-174.
- Clarke, D.D., Forsyth, R.S. & Wright, R.L. (1998). Behavioural factors in accidents at road junctions: The use of a genetic algorithm to extract descriptive rules from police case files. *Accident Analysis & Prevention*, 30(2), 223-234.
- Clarke, D.D., Forsyth, R.S. & Wright, R.L. (1998). Machine Learning in road accident research: Decision trees describing road-accidents during cross-flow turns. *Ergonomics*, 41(7), 1060-1079.
- Forsyth, R.S., Holmes, D.I. & Tse, E.K. (1999). Cicero, Sigonio, and Burrows: investigating the authenticity of the "Consolatio". *Literary & Linguistic Computing*, 14(3), 1-26.
- Forsyth, R.S. (1999). Stylochronometry with substrings, or: a poet young and old. *Literary & Linguistic Computing*, 14(4), 1-11.
- Forsyth, R.S. (2000). Pops & Flops: some properties of famous English poems. *Empirical Studies of the Arts*, 18(1), 49-67.
- Clarke, D.D., Forsyth, R.S. & Wright, R.L. (2005). A statistical analysis of road accidents during cross-flow turns. *Accident Analysis and Prevention*, 37(4), 721-730.
- Forsyth, R.S., Clarke, D.D. & Lam, P. (2008). Timelines, talk and transcription: a chronometric approach to simultaneous speech. *International Journal of Corpus Linguistics*, 13(2), 225-250.

- Garrard, P. & Forsyth, R.S. (2010). Abnormal discourse in semantic dementia: a data-driven approach. *Neurocase*, 16, 520-528.
- Nerlich, B., Forsyth, R.S. & Clarke, D.D. (2012). Climate in the news: How differences in media discourse between the US and UK reflect national priorities. *Environmental Communication*, 6(1), 44-63.
- Forsyth, R.S. & Sharoff, S.A. (2014). Document dissimilarity within and across languages: a benchmarking study. *Literary & Linguistic Computing*, 29(1), 6-22. doi: 10.1093/lc/fqt002.
- Forsyth, R.S. & Lam, P.W.Y. (2014). Found in Translation: to what extent is authorial discriminability preserved by translators? *Literary & Linguistic Computing*, 29(2), 199-217. doi: 10.1093/lc/fqt018.
- Forsyth, R.S. & Grabowski, Ł. (2015). Is there a formula for formulaic language? *Poznan Studies in Contemporary Linguistics*, 51(4), 511-549, ISSN (Online) 1897-7499, ISSN (Print) 0137-2459, DOI: [10.1515/psicl-2015-0019](https://doi.org/10.1515/psicl-2015-0019).
- McDermott, J.M. & Forsyth, R.S. (2016). Diagnosing a disorder in a classification benchmark. *Pattern Recognition Letters*, in press. <http://dx.doi.org/10.1016/j.patrec.2016.01.004>

### ► Conference Presentations

- Forsyth, R.S. (1990). Neural learning algorithms: some empirical trials. Neuro-Nimes-90, Nimes, November 1990. 301-317.
- Forsyth, R.S. (1996). A robust Bayesian text classifier. *Language Engineering for Document Analysis and Recognition: AISB Workshop*, Sussex University, 2nd April 1996.
- Forsyth, R.S. (1996). Deriving document descriptors from data. *XIVth Congress of the International Association of Empirical Aesthetics*, Prague, July 1996. <http://www.science-of-aesthetics.org/proceedings/congress.htm>
- Forsyth, R.S. (1996). IOGA: an instance-oriented genetic algorithm. *Fourth International Conference on Parallel Processing from Nature*, Berlin, September 1996. <http://www.psychology.nottingham.ac.uk/staff/rsf/docs/ppsn1996.pdf>
- Forsyth, R.S. (1997). Short substrings as document discriminators. *ACH-ALLC/1997 Joint International Conference of the Association for Computers and the Humanities and the Association for Literary & Linguistic Computing*, Queen's University, Kingston, Ontario, June 1997. <http://www.cs.queensu.ca/achallc97/papers/p025.html>
- Forsyth, R.S. (1998). Yeats over the years. *ALLC-ACH 1998 Joint International Conference of the Association for Literary & Linguistic Computing and the Association for Computers and the Humanities*, Debrecen, July 1998. <http://www.arts.klte.hu/allcach98/abst/>
- Forsyth, R.S. (1998). Pops and flops: some properties of famous English poems. *XVth Congress of the International Association of Empirical Aesthetics*, Rome, September 1998. <http://www.science-of-aesthetics.org/proceedings/abmon.html>
- Stamou, C. & Forsyth, R.S. (2000). Dating Dickinson: an experimental approach to stylochroometry. *ALLC/ACH 2000 Joint International Conference of the Association for Literary & Linguistic Computing and the Association for Computers and the Humanities*, Glasgow, July 2000. <http://www2.arts.gla.ac.uk/allcach2k/Programme/session5.html#541>
- Forsyth, R.S. (2002). It ain't my Style: a study in authorship exclusion. *The 2002 Annual Meeting of the Classification Society of North America*, Madison, Wisconsin, June 2002. <http://www.psychology.nottingham.ac.uk/staff/rsf/docs/wisc2002.pdf>
- Nesi, H., Gardner, S., Forsyth, R.S., Hindle, D., Wickens, P., Ebeling, S., Leedham, M., Thompson, P. and Heuboeck, A. (2005). Towards the compilation of a corpus of

- assessed student writing. *Third Corpus Linguistics Conference 2005*, Birmingham, July 2005.  
<http://www.corpus.bham.ac.uk/PCLC/NesiStudentWriting.doc>
- Forsyth, R.S., Ainsworth, S.E., Clarke, D.D., Brundell, P.R. and O'Malley, C.E. (2006). Linguistic computing methods for analyzing digital records of learning. *Second International Conference on e-Social Science, Manchester*, June 2006.  
<http://www.ncess.ac.uk/events/conference/2006/papers/papers/ForsythAnalysingDigitalRecordsOfLearning.pdf>
- Forsyth, R.S., Clarke, D.D., & Ainsworth, S.E. (2007). Automated Categorical Coding of Transcribed Talk: a system that forecasts its own future performance. *CAQDAS 07 Conference, Advances in Qualitative Computing*, Royal Holloway, Egham, April 2007.  
<http://caqdas.soc.surrey.ac.uk/conference/abstracts.htm#forsyth>
- Forsyth, R.S., Clarke, D.D. and Lam, P. (2007). Timelines, Transcription and Turn-taking: a corpus-driven approach to simultaneous speech. *CL-2007, Fourth Corpus Linguistics Conference*. Birmingham, July 2007.  
[http://corpus.bham.ac.uk/corplingproceedings07/paper/185\\_Paper.pdf](http://corpus.bham.ac.uk/corplingproceedings07/paper/185_Paper.pdf)
- Forsyth, R.S. & Lam, P. (2009). Keyness as Correlation: Notes on Extending the Notion of Keyness from Categorical to Ordinal Association. *CL-2009, Fifth Corpus Linguistics Conference*. Liverpool, July 2009.
- Forsyth, R.S. & Sharoff, S. (2011). From Crawled Collections to Comparable Corpora. *CL-2011, Sixth Corpus Linguistics Conference*. Birmingham, 22 July 2011.
- Lam, P. & Forsyth, R. (2012). Found in Translation: to what extent is authorial discriminability preserved by translators? *6th Inter-varietal Applied Corpus Studies Conference (IVACS 2012)*, Leeds Metropolitan University, 21 June 2012.
- Forsyth, R. & Grabowski, L. (2014). Is there a Formula for Formulaic Language? *Formulaic Language Research Network 6th International Conference (FLaRN 2014)*, Swansea University, 15 July 2015.

### ► Fiction

- 1978 The Hexadecimal Kid, *Computer Weekly*.  
 1979 Ascii through the Logic Gate, *Computer Weekly*.  
 1980-1981 Son of Hexadecimal Kid, *Practical Computing*.  
<http://vintagecomputers.site90.net/mags/praccomp/stories/index.htm>

Forsyth, R.S. (1984). Silicon valley of the dolls. In: Masoud Yazdani, M. & Narayanan, N. (eds.) *Artificial Intelligence: Human Effects*. Chichester, UK: Ellis Horwood.

### ► Invited Lectures & Talks

In the 1980s and 1990s it was quite commonplace for me to give invited talks, usually on subjects related to Artificial Intelligence and Expert Systems; for instance, at the first three International Symposia in AI and Expert Systems in Berlin 1987-1989, but I have not kept a record of them. The following list gives a selection of my invited talks of the last 12 years.

- November 1998, Centre for Computing in the Humanities, King's College London: *Cicero or Ciceronian? Unmasking a Four-Hundred-Year-Old Forgery*.  
 October 2006, Corpus Research Group Seminar, University of Lancaster: *A Naive Markov Classifier for Short Text Sequences*.  
 December 2007, London Forum for Authorship Studies, Institute of English Studies, University of London: *On Authorship Attribution and Text Classification, Part 1*.  
 March 2008, London Forum for Authorship Studies, Institute of English Studies, University of London: *On Authorship Attribution and Text Classification, Part 2*.

July 2009, Academic Meeting, Division of Clinical Neurosciences, University of Southampton: *Time's Pencil: some signs of ageing in the writings of eminent authors.*  
March 2011, Natural Language Processing Seminar Series, University of Leeds: *Back in the 2SSR: Using bilingual similarity space remapping to quantify corpus comparability.*  
March 2016, EuroGP 2016, Porto, plenary talk: *Confessions of a Mongrel Rule-Breeder.*

► **Languages**

Beginner's Hungarian; "schoolboy" French; intermediate Italian.

► **Interests**

Art, poetry, reading, running, talk, travel.

► **Non-Academic Qualifications**

Clean driver's licence, mainly because I never drive. (-;-)

► **Additional Information**

I developed the PC/BEAGLE package in 1985-1986 which was a data mining tool using an early form of what would now be called Genetic Programming. Indeed it is arguable that I discovered Genetic Programming (Forsyth, 1981) before the scientist normally credited with its invention, John Koza. In any case, I am unusually well informed about evolutionary computing -- one of the most robust and versatile methods of automated model-development.

Between 1984 and 1989 I was self-employed and carried out consultancy projects for a Norwegian Oil Exploration Company, BUPA Medical Research, a Swiss Bank and a UK Bank. These involved knowledge discovery in databases.

In 1991 I co-founded the Bristol Philosophy Circle, and was an active member from 1991 to 1995. This entailed organizing, and often taking part in, a series of discussions on a wide range of issues, from quantum theory to gender politics, with a group of people from all walks of life united only by a shared enthusiasm for debating ideas.

From 1992 to 1994 I was editor of the Newsletter of the British Computer Society's Specialist Group on Expert Systems.

I have been an external PhD examiner five times, at the universities of Liverpool, Nottingham, Belfast (Queen's U.), Edinburgh and Bristol. I also served as an external moderator at Middlesex University (1993-1996) for their degree and masters programmes in Artificial Intelligence. I have supervised 2 PhD students to completion as first supervisor (director of studies) and one MPhil student, who didn't intend to progress to a doctorate. All 3 passed on first submission; and all 3 were Greek, as it happens.

In 2004 I completed 2 evaluation reports on a pair of training programmes funded by the European Social Fund. These involved analyzing data collected by the project teams as well as deciding what other data to collect and how to analyze it. This involved face-to-face and telephone interviewing. In addition to conventional statistical analyses, with SPSS, I developed my own coding scheme, motivated by my earlier text-analysis work, for analyzing free-form responses. The request to do the second of these reports came from the manager of a training project who had read my earlier report and described it as "excellent".

In June 2005, I took part in the Warwick Shoot-out competition in which teams had to make a short film in 24 hours. As well as general work for our team, I acted the part of Professor Mort, a deranged scientist, so I can now claim that for 7 minutes I was a Professor at Warwick University -- 14 minutes, arguably, since our entry, *The Hole*, won the "best film" award and was re-shown along with the other prize-winners.

► **Referees**

Former Colleague	Former Supervisor	Former Student
Dr David Holmes, Professor of Statistics College of New Jersey Ewing NJ 08628-0718 USA. (+1)609-771 2164 <a href="mailto:dholmes@tcnj.edu">dholmes@tcnj.edu</a>	Dr David Clarke, Professor of Psychology University of Nottingham Nottingham NG7 2RD UK. (+44)115 846 6966 (+44)115 951 5284 <a href="mailto:David.Clarke@nottingham.ac.uk">David.Clarke@nottingham.ac.uk</a>	Robert Clayton, IT Director FG Energy 133 Aldersgate London EC1A 4JA UK. (+44)20 7726 9570 <a href="mailto:RClayton@fgenergy.com">RClayton@fgenergy.com</a>

Thank you for your interest.