

James Murphy

Cambridge, United Kingdom

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Date of Birth: 11-09-1981

Education

- 2009-current PhD student, Statistical Signal Processing, University of Cambridge
Current research is in application of Bayesian computational statistical methods (particle filtering, MCMC) to time series analysis and network inference
- 2003-2004 MSc, Mathematical Modelling and Scientific Computation, University of Oxford
Including courses on numerical analysis, mathematical methods and applications (CFD, finance, biology, environment); project on cluster analysis for genetic data
- 2000-2003 MA, Computer Science, University of Cambridge (1st Class, all years)
Including software engineering; won IEE Computer Science student of the Year award for dissertation project (visual simulation of smoke)
- 2000 A-levels, Maths (A), Further Maths (A), Physics (A), Chemistry (A)
- 1998 GCSEs, 9 A* including Maths and English

Employment

- 2007-2009 Senior Analyst, Cambridge Systems Associates
Financial consulting and software company; responsibilities included leading software development of trading support system for hedge fund client, client presentations, model development and testing
- 2006-2007 Analyst, Cambridge Systems Associates
Responsibilities included model development and testing, technical documentation and software development for individual asset liability management product
- 2005-2006 Analyst, Deloitte Consulting (Strategy and Operations)
Including modelling and analysis of patient choice for NHS client
- 2004-2005 Research Associate, Dept. of Applied Mathematics, Nottingham University
Implemented and developed multiscale models of tumour growth
- 2003 R&D Programmer (intern), Eurocom Entertainment Software
Summer internship developing physics engine for computer games

Publications

- *Forecasting high-frequency futures returns using online Langevin dynamics*, with H Christensen and S Godsill (2012), Journal of selected topics in signal processing (forthcoming)
- *Joint Bayesian removal of background and impulse noise*, with S Godsill (2011), ICASSP Conference 2011, Prague, Czech Republic
- *Risk profiling defined benefit pension schemes*, with MAH Dempster, M Germano, EA Medova, D Ryan and F Sandrini (2009), Journal of Portfolio Management **35**(4) 76-93
- *Individual Asset Liability Management*, with EA Medova, AP Owen and K Rehman (2008), Quantitative Finance **8**(6) 547-560
- *Modelling the response of vascular tumours to chemotherapy: A multiscale approach*, with HM Byrne, MR Owen, T Alarcon and PK Maini (2006), Mathematical Models and Methods in Applied Sciences, **16**(7S) 1219-1241

Additional Skills

- Programming Matlab, C#, F#, Java (including Android), C++, Python (and Django web framework)
- Teaching Supervising/demonstrating mathematics, Matlab, C++ and microprocessors

References *Academic and professional references available on request*