Gavin Whitaker Curriculum Vitae

Contact Information

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Educational Background

Newcastle University September 2011 – July 2016

Qualification	PhD in Statistics
Thesis Title	Bayesian Inference for Stochastic Differential Mixed-effects Models
Supervisors	Dr Andrew Golightly and Prof Richard Boys

Newcastle University September 2007 – June 2011

Qualification	Master of Mathematics and Statistics (MMathStat)
Grade	First Class Honours
Masters Title	The Bivariate Poisson Distribution and its Applications to Football
Supervisor	Dr Philip Ansell

Scarborough Sixth Form College September 2005 – June 2007

4 A Levels: Mathematics (A), Further Mathematics (B), History (B), Drama and Theatre Studies (B).

George Pindar Community Sports College September 2000 – June 2005

10 GCSE's at A*-C including A's in Mathematics, Science and English. Full list available on request.

Technical Skills

Statistical Skills

I am interested in, and have experience working with: Stochastic differential equations, Markov chain Monte Carlo methods, Bayesian statistics, mixed/random effects modelling, time series analysis and sports modelling.

Computer Packages

`R` - I am an experienced user of the Statistical package `R` and write my own functions; these are mainly built around Markov Chain Monte Carlo schemes.

C - I have experience with the C programming environment, gained from requiring greater efficiency in the codes I am currently using for my PhD. This includes parallelisation through the use of `openmp`.

I am very experienced with Microsoft Office and proficient with all its elements, word processing, spreadsheets, presentations etc.

I also have experience with numerous other computer packages such as LaTeX (Typesetting program for preparing documents and presentations), Minitab (Statistical software) and HTML (HyperText Markup Language).

Operating Systems

I am very familiar with Microsoft Windows and Ubuntu Linux operating systems. I have experience in programming from the command line in Ubuntu.

Roles and Responsibilities

Problems class leader for undergraduate studies at Newcastle University. I have presented the full set of problems classes (33 hours) for a first year course on "Quantitative Methods for Business Management", consisting of an 11 hour course repeated 3 times for approximately 100 undergraduate students (2013).

Practical demonstrator for undergraduate studies at Newcastle University. I have demonstrated for several courses using statistical packages `R` and Minitab.

Assignment marker for undergraduate studies at Newcastle University (2011-Present).

I helped to organise the Royal Statistical Society Graduate Training Programme, an annual course for 2nd and 3rd year PhD students in Statistics, held at Newcastle University and funded by the EPSRC. My role included advertising the course, designing and maintaining its website, overseeing the registration process for attendees, liaising with speakers and the general organisation of the course (2012-2015).

Publications

Whitaker GA, Golightly A, Boys RJ, Sherlock C."Bayesian inference for diffusion-driven mixed-effects models." Bayesian Analysis, 2016. In press.

Whitaker GA, Golightly A, Boys RJ, Sherlock C. "Improved bridge constructs for stochastic differential equations." Statistics and Computing, 2016. In press.

Presentations

June 2016, ISBA 2016, Sardinia (poster presentation):
Bayesian inference for diffusion driven mixed-effects models

April 2014, Research Students Conference, Nottingham University:
Bayesian inference for stochastic differential random effects models (winning a prize for best talk)

March 2013, Research Students Conference, Lancaster University:
MCMC schemes for partially observed diffusions

Recent Employment

Research Associate: Customer Led Network Revolution July 2014 – May 2015
School of Mathematics & Statistics
Newcastle University
Newcastle Upon Tyne
Tyne and Wear
NE1 7RU
United Kingdom

I worked as a statistician on the Customer Led Network Revolution, a project which examined the effect of new technologies on the electricity usage of different levels of consumer. The project was a collaboration between Newcastle University, Durham University, Northern Powergrid and British Gas. Tasks included the analysis of a "large" dataset using methods such as ANOVA, helping to explain technical details so that they could be presented in non-technical reports, and conveying subtle intricacies of statistics to non-statisticians, such as the correct interpretation of hypothesis tests.

Research Associate: PragmatIC April 2016 – July 2016
School of Mathematics & Statistics
Newcastle University
Newcastle Upon Tyne
Tyne and Wear
NE1 7RU
United Kingdom

I worked as a statistician on a project between Newcastle University and PragmatIC, which looked to model electrical current through a new type of electronic chip under various treatment regimes. We looked to detect any changes in the current accounting for large week-to-week variation as well as replicate variation. Techniques to handle large data were needed as any approach used was required to be handled online in under a minute, along with visualisation techniques to convey these results to those in the industry in a non-technical manner.

References

Available on request.