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Name Gareth Baxter

Born 1976

Nationality New Zealander

Current Employment Post Doctoral Fellow, School of Mathematics, Statistics and Computer Science, Victoria University.

Education

- PhD in Theoretical Physics, University of Manchester, 2002-05. "The Stochastic Dynamics of State Selection and Language Change".
- MSc in Physics, University of Auckland, 1997-8.
- BSc, University of Auckland, 1994-6

Work History

- Business Analyst, Transalta/NGC 1999-2002.
- Tutor in Physics and Mathematics, Auckland and Manchester, 97-8 and 2003-4.

Research I am interested in 'complex adaptive systems'—systems containing a lot of interacting elements which may themselves change in response to their environment. Complex and dynamic patterns emerge from the interactions between the elements, and can't be predicted just by studying isolated parts. An exciting feature of such research is that analogies and applications show up in a variety of subjects.

One of my current projects (carrying on from my PhD) is the development of a model of the way 'different ways of saying the same thing' compete in a language community. For example, how did the mixture of accents used by British and Irish immigrants to New Zealand lead to the fairly unified accent we use today?

I am also involved in an investigation the structures of large scale software. The networks of interactions between elements of a program have interesting statistical properties. By making measurements of a variety of programs, and developing models of the processes involved in their development, we hope to be able to draw a connection between software design methodologies and the 'shape' of the resulting programs.

Awards

- TEC Top Achiever Doctoral Scholarship 2002-05.
- UK Overseas Research Student scholarship 2002-05.

Hobbies Mountain biking, music, learning, appreciating NZ's scenery.

