

President's Research Award 2011/2012

Dr. John Appleby
School of Mathematical Sciences

John Appleby is currently a senior lecturer in the School of Mathematical Sciences. He was awarded his doctorate in Mathematical Finance from DCU in March 1999.

Over the past ten years, his research has principally been concerned with understanding the qualitative behaviour of stochastic functional differential equations. Such equations are dynamical systems which evolve in a random environment, which are subject to time delays, or in which the system has a memory of its past behaviour. These properties are useful for modeling the evolution of systems in many branches of science - control engineering, continuum physics, mathematical biology and finance.

Since 1999, John has published over 80 peer reviewed journal papers and refereed conference papers which have attracted in excess of 185 citations. He has also presented at least 40 papers at international conferences and has been an invited speaker on over 20 occasions in Ireland, France, Hungary, Turkey, Canada, Russia, China and the USA. John has successfully supervised 6 Ph.D. students to completion, and has 2 further Ph.D. students currently under his supervision. He has been funded by SFI and IRCSET through a number of grants and was the lead Principal Investigator in the €1m Edgeworth Centre for Financial Mathematics here at DCU.

Within mathematics, John's publication record is impressive. His enthusiasm for research has inspired several international collaborations with established experts in differential equations.

To quote Prof Christopher Baker from the University of Manchester: "*in the preceding decade John has published approx. 75 papers that have been*

reviewed in 'MathSciNet'. The bare statistics thus gleaned fail, however, to convey fully the impact and quality of his contribution. Firstly, in mathematics this is an exceptionally high publication rate; secondly, the citation rate is an indication of the quality and impact of the work; thirdly, the theoretical works exhibits a high degree of novelty and depth that will be appreciated fully by a fellow mathematician. Having served on all of the UK Research Assessment Panels.....I can attest to the exceptional nature of his contributions'.

John's broad understanding and passion for mathematics continues to attract excellent students to work with him as postgraduate researchers.

The area of stochastic functional differential equations is a relatively new branch of mathematics. The core body of John's publications has made a significant impact on this emerging area of applied mathematics.

It is my great pleasure to award John the **2011/2012 President's Research Award for Science and Engineering.**