



# Damon Jude Wischik

## Personal details

Born 5 August 1974

British, French & Australian nationalities

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<http://www.wischik.com/damon>

## Work

**Electrical Engineering, Stanford, 2001-2002: Postdoc**, continuing my research with Balaji Prabhakar. Also, a teaching assistant for the Autumn 2001 class on Stochastic Networks given by Frank Kelly.

**Trinity College, Cambridge, 1999-2004: Junior Research Fellow**, an independent research position. I am based in the Statistical Laboratory in the University of Cambridge. My work is on the mathematical modelling of communications networks, including optical networks and switches. I have devised and taught a 16-lecture Part III (Masters-equivalent) course on *Large Deviations and Queues*. I supervise second and final year undergraduates in information theory, Markov chains, optimization and control, and statistics.

### Short-term positions and work-experience

*Summer 1999: Electrical Engineering, Stanford, USA.* I worked with Balaji Prabhakar on various problems to do with Internet congestion control. I spoke in the Operations, Information and Technology seminar series in the Business School, and in the Probability and Stochastic Processes seminar series in the Statistics department.

*Summer 1998: AT&T Labs-Research, NJ, USA.* I worked with Nick Duffield on the large deviations analysis of traffic in data networks.

*Summer 1996: AT&T Labs-Research, NJ, USA.* With Albert Greenberg I investigated the problem of booking network resources in advance, such as for video conferencing.

*Summer 1995: Statistical Laboratory, Cambridge.* With Polina Bayvel, University College London, I worked on the problem of designing topologies for optical networks which use wavelength-division multiplexing.

## Education

**Trinity College, Cambridge, 1996-1999: PhD** in the Statistical Laboratory, supervised by Prof. Frank Kelly. My thesis was titled *Large Deviations and Internet Congestion*. *Awards*— Research Scholarship. *Copy of Certificate. Academical record.*

**Trinity College, Cambridge, 1992-1996: MA in Mathematics.** Three years of undergraduate study leading to BA (Hons), and one year of postgraduate study leading to a Certificate of Advanced Studies in Mathematics and MA. Courses include stochastic networks, advanced probability, applied probability, advanced financial models, optimization and control, and statistical inference. *Exams*— Part IA (1st class), Part IB (1st class), Part IIB (1st class), Part III (1st class). *Awards*— Junior and Senior Scholarships; Mayhew Prize for top final-year result in Applied Mathematics. *Academical record. List of courses.*

**The Leys School, Cambridge, 1987-1992.** *STEP*— Further Mathematics A (S), Further Mathematics B (2). *A-level*— Mathematics (A), Further Mathematics (A), Physics (A), Chemistry (A). *A/O level*— French (A), Mathematics (A). *GCSE*— A's in all 10 subjects, including English, French, German, History.

## Selected publications and talks

- A.Ganesh, N.O'Connell, D.J.Wischik (2004). *Big Queues*, a book.
- D.J.Wischik (2004). Moderate deviations in queueing theory, submitted.
- D.J.Wischik (2001). Sample path large deviations for queues with many inputs. *Annals of Applied Probability* 11, 379-404.
- D.J.Wischik (1999). The output of a switch, or, effective bandwidths for networks. *Queueing Systems* 32, 383-396.

## Skills and interests

*Web design*— HTML, CSS, Javascript

*Computer programming*— Statistics in R and S-Plus; Object-oriented simulation in C++ and Java; substantial use of Mathematica as a research tool

*Language skills*— Conversational French, learning Italian

*Hobbies*— Cooking for festive occasions; Jungian psychoanalysis

## Reference

Prof. F.P. Kelly, Statistical Laboratory, Cambridge.