

TRIBUTE TO PAULINE COOLEN-SCHRIJNER

Pauline Coolen-Schrijner, who served as an Editorial Board member of the *Journal of Risk and Reliability* from its inauguration in 2006, died on 23 April 2008, aged 40.

Pauline was born in Arnhem, The Netherlands. She received an MSc degree in Econometrics (main subjects: stochastic processes, operations research and statistics) from the Catholic University of Brabant in Tilburg, and then joined the University of Twente in Enschede as a PhD student. Working on her thesis entitled 'Quasi-stationarity of discrete-time Markov chains' was the start of an intensive and enduring cooperation with her supervisor, and good friend, Erik van Doorn.

In 1995 she continued her career in England, where she worked briefly as Lecturer at Newcastle University, and then as Senior Research Associate, Lecturer and Reader in the Department of Mathematical Sciences at Durham University. Her well-recognized research includes contributions to the theory and application of Markov chains, in particular on quasi-stationary and limiting conditional distributions. In addition, in recent years she was also intensively engaged, together with her husband and colleague Frank Coolen, in the development of nonparametric predictive inference (NPI) – a new exciting methodology for predictive inference under low structure assumptions leading to interval-valued probabilities.



Pauline published over 40 papers in a wide range of journals, including *Journal of Applied Probability*, *Stochastic Models*, *Journal of Statistical Planning and Inference*, *Journal of the Operational Research Society*, *European Journal of Operational Research*, *Reliability Engineering and System Safety*, and of course *Journal of Risk and Reliability*.

Pauline's favourite areas of application were operations research and reliability. She particularly developed NPI for replacement problems, which offers great adaptivity to process data, and she wrote an invited contribution to the recently published Wiley *Encyclopedia of Quantitative Risk Analysis and Assessment* on 'Repair, inspection, and replacement models'. She greatly enjoyed working with post-graduate students, and supervised four PhD students: Maha Rahrouh completed in 2005 with a thesis entitled 'Bayesian reliability demonstration', a topic on which Pauline and Frank Coolen also contributed an invited article to the Wiley *Encyclopedia of Statistics in Quality and Reliability*; Richard Crossman and Tahani Maturi are due to complete in 2009, working on 'Quasi-stationarity in birth-death processes with interval probability' and 'NPI for precedence testing', respectively; and Rebecca Baker was supervised by Pauline for just over one year, working on

'NPI for multinomial data with sub-categories'. Research results which Pauline achieved with her PhD students, as well as further results with Frank Coolen, will lead to a substantial number of further papers to be published in the near future.

Far beyond her scientific achievements, we will keep Pauline in our minds, and our hearts, as a wonderful, simply loveable person, with a bright and open mind, and a heart of gold. Although in the last two decades her devastating diseases had forced Pauline to give up gradually many of the things most precious to her, she was always full of optimism, mental strength and energy, with a special sense for the 'small things in life', being well aware that – quoting the last line of her web page – 'breathing is not something we can take for granted'.

Thomas Augustin, Munich

Pauline died on 23rd April 2008 while the paper which follows this tribute was under review for the *Journal of Risk and Reliability*. The paper was subsequently accepted for publication and is dedicated to her memory.

John Andrews
Editor