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# Introduction to the Special Section

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This special section contains some of the papers presented at a Symposium held in September 2015 at Imperial College London, UK, to honour Erol Gelenbe, whose work on probability models started in his Thesis[1,2] and in early work on virtual memory.[3,4] His recent work covers search,[5–9] security in networks,[10–12] neural computation,[13] network routing,[14] and the 'hot topic' of energy consumption by information technology.[15–21]

In this special section of *European Review* M. Pavella recalls Erol's links to the University of Liege. P. Castillon's paper presents the National Academy of Technologies of France where Erol is an active member. Alain Bravo discusses Erol's question regarding the re-development of a viable European telecommunications industry. A. Hatchuel and M. Chen view the role of constraints to enhance creativity in Engineering Design, while Y. Rezaeitabar and U. Halici review brain computer interfaces. N. Szostak, S. Wasik and J. Blazewicz discuss the possible artificial emergence of life, and M. Civelek and A. Yazici discuss the role of object recognition in video surveillance systems. Finally, the paper by W. Serrano discusses the design of a recommender system for web search engines



**Figure 1.** Erol Gelenbe signing the Book of Fellows of the Royal Academy of Sciences, Arts and Letters of Belgium in Brussels on 30 May, 2015.

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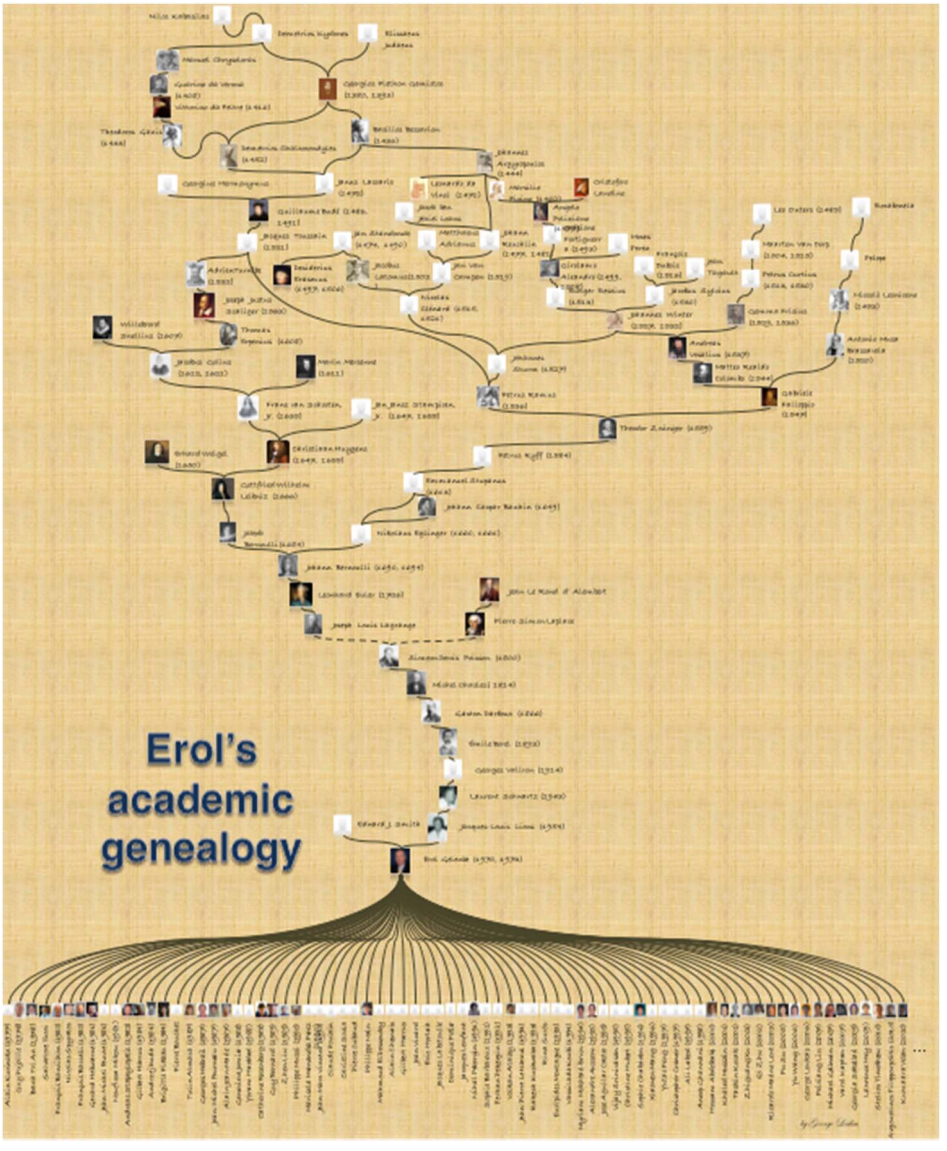



**Figure 2.** The mathematical genealogy tree of Erol Gelenbe, showing his academic ancestry and some of his 72 graduated PhD students. This chart was prepared by Dr Georgios Loukas, Reader in Computer Science at the University of Greenwich. London.

that uses the Random Neural Network and machine learning algorithms developed by Erol. Other papers on computer systems appear elsewhere.

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