

Professor George Stephen Springer



The degree of Doctor of Engineering (honoris causa) was conferred upon Professor George S Springer at the Faculty of Engineering and Information Technologies graduation ceremony held at 11.30am on 25 May 2007.



The Chancellor the Hon Justice Kim Santow conferring the Honorary Doctorate upon Professor Springer, *photo, copyright Memento Photography.*



Professor Mai, Professor Springer, Mrs Springer, Professor Greg Hancock and Professor Ye at the graduation, *photo, Engineering Sydney Newsletter, Issue 8, September 2007.*

Citation

Chancellor, I have the honour to present Professor George S Springer, for admission to the degree of Doctor of Engineering, *honoris causa.*

Having fled from the 1956 Hungarian Revolution and having not quite finished a degree from the Technical University of Budapest, the young George Springer arrived in Sydney in February 1957 with no money,

nothing except the clothes he was wearing and with very little English. Looking through the newspaper's 'help-wanted' column with a view to finding highly paid work, his first job was breaking up aeroplanes, Spitfires, in fact, with a sledgehammer that he could barely lift! Naturally, he was very soon fired! Whereupon, George decided to continue his studies at this University and saw the Dean with an interpreter in March 1957. He passed an English language test (he thought the bar was set extremely low) and was admitted to the third year of the Mechanical Engineering course. As a 'new Australian' with limited command of English, he had to learn things the hard way at the University - by copying lecture notes word for word from another student and understanding the material with English to Hungarian translation. Slowly, he overcame all these problems. He was impressed by and even enjoyed the 'colourful' language of the Australian workers when he did six months technical training with Carrier Air Conditioning - language he did not learn from his University studies! George finally graduated in Mechanical Engineering in the spring of 1959 having collected a string of scholarships and prizes along the way.

With a scholarship from CSR, George Springer went to Yale University for further studies and graduated PhD in 1962 for research on solidification and melting processes. By coincidence, Professor Gordon Brown, a Sydney graduate who taught George in 1958, had become Dean of Engineering at MIT. Dr Springer was offered an Assistant Professorship and worked on molecular gas dynamics which was a hot topic at that time. He was subsequently recruited by the University of Michigan with a substantial salary rise, promotion and ultimately tenure in 1966. He even spent six months sabbatical leave with Emeritus Professor Graeme Bird, possibly the world's best molecular gas dynamics researcher, in Aeronautical Engineering at the University of Sydney in 1973. However, 'space' research was no longer stylish. The automotive industry in Detroit was also not interested in funding his emission studies. It was at this crossroad that his friend and fellow student at Yale, Dr Steve Tsai, then Chief Scientist of the US Air Force Materials Laboratory, suggested that he work in the new field of composite materials. This was to change Dr Springer's research completely for the next 30 years and enabled him to build up an impeccable international reputation! Then in 1983, he moved from Michigan to Stanford where he further expanded his composites activities making Stanford one of most outstanding centres of composite materials research in the world.

Professor Springer has made significant and lasting contributions to the science and engineering of fibre composites. These include theoretical models, experiments and computer simulations of manufactured parts and components which require a thorough understanding of process modelling, durability, environmental effects and mechanical properties evaluation; as well as smart health monitoring, composite repair and retrofitting. The results and outcomes of his research have enabled the aerospace, automobile and civil infrastructure industries to fabricate and design more reliable, safer and cost-effective structures. Through his various archival journal publications and technical expositions, and more importantly his former research fellows and graduate students who now occupy significant positions in academia and industry, Professor Springer has influenced and will continue to influence the research and development activity of many countries.

Professor Springer is Paul Pigott Professor of Engineering, Professor of Aeronautics and Astronautics, Professor of Mechanical Engineering and Professor of Civil Engineering at Stanford University. Recognitions of his achievements in the field of composites have been numerous. These include: elections to the US National Academy of Engineering in 1994 and to the Hungarian Academy of Science (foreign member) in 1995, and the award of the honorary degree of Doctor of Engineering from the Technical University of Budapest in 2000. Other awards and medals are the Ralph Teetor Award of the Society of Automobile Engineers in 1978, the Delmonte Award of the Society for the Advancement of Material and Process Engineering in 1988, the Worcester Reed Warner Medal of the American Society of Mechanical Engineers in 1994, and, among others, the American Institute of Aeronautics and Astronautics; Structures, Structural Dynamics and Materials Award in 2000. He is a highly cited researcher in Materials Science. He is also Editor of the Journal of Reinforced Plastics and Composites, an important archival journal in composites.

Chancellor, I have great pleasure in presenting, for admission to the degree of Doctor of Engineering, honoris causa, educator, engineer and researcher, George Stephen Springer, and I invite you to confer the degree upon him.