Citation for Honorary Doctor of Engineering (*honoris causa*)

DR PETER MISHA SELIGMAN BEng *Monash* PhD *Monash*

Dr Peter Seligman was born in the United Kingdom, of Czech parents, in 1944. He emigrated to Australia in 1948 and studied electrical engineering at Monash University, graduating with a Bachelor of Engineering in 1968. This was followed by a PhD on 'Auditory Pattern Transmission', which was completed in 1973. He subsequently worked at Westinghouse Brake and Signal Company on fail safe electronics and the computer control of railway systems. Since 1979, Dr Seligman has dedicated his research on the Cochlear Implant (Bionic Ear) project, first with the Department of Otolaryngology at the University of Melbourne and then with Cochlear Limited (formerly known as Nucleus).

His contribution to engineering in the field of signal processing has been outstanding and critical to the success of the bionic ear project, pioneered by Professor Graeme Clark. Dr Seligman is the designer behind seven generations of speech processors that were developed in service of the bionic ear. His insight on how to transform sound into electrical pulses that could be interpreted by the brain as 'sound' was critical to the success of the bionic ear.

After joining Cochlear Limited (or Nucleus as it was then known) in 1983, Dr Seligman continued developing and improving the design of the Speech Processor. By the early 1990s, it was reduced to Behind the Ear size and built on a single chip, boasting the lowest power consumption and smallest size of any multichannel cochlear implant speech processor ever created. Dr Seligman was the architect behind this record-breaking achievement.

He overcame many challenges in his research, one of which was designing a speech processor that would cater to previous implant recipients. At the time, it was assumed that the Behind the Ear speech processor would not be possible for previous implant recipients. Dr Seligman was able to design an innovative processor that could fit 95% of previous implant recipients.

He is a holder of over 20 patents and has authored over 30 journal and conference publications relating to the engineering of cochlear implants. His passion and dedication to the Cochlear Implant project is to be admired and demonstrates creativity, vision and drive. He is one of the great signal-processing engineers of our time and his achievements in the design and development of the Speech Processor are fundamental to the bionic ear's success.