

Obituary for Professor Nigel Priestley

Prof. Nigel Priestley passed away on Tuesday 23 December 2014, in Christchurch at the age of 71.

Nigel completed his PhD at the University of Canterbury (UC) at age 23 in 1967. Until 1976 he was head of the Structures Laboratory of the Ministry of Works Central Laboratories working on bridges and buildings. From 1976-1986, at UC, he conducted extensive research on the seismic behaviour of water tanks, masonry structures (in collaboration with Prof. Tom Paulay), and reinforced concrete columns (in collaboration with Prof. Bob Park). During 1985 and 1986, Nigel was president of the New Zealand Society for Earthquake Engineering (NZSEE). He joined the faculty at the University of California, San Diego, in 1986 where he conducted extensive research into the seismic design, assessment and retrofit of bridges. From 1991-1999 he was also US coordinator of the joint US/Japan research program on seismic design of precast structures (the PRESSS program). From 2002-2008 Nigel was co-director of the ROSE school in Pavia, Italy, establishing the curriculum, teaching and advising students.



**Prof.
Priestley**

In addition to his research, Nigel was active with consulting on projects in NZ, USA, Guam, Turkey, and Greece. A number of the design projects with which he was involved received awards for excellence. These included the 1978 Air New Zealand hangar in Christchurch with a 124.5m segmental pre-stressed concrete span, and the 78 metre high South Rangitikei rail viaduct with rocking piers constructed in 1981. Nigel was chairman or member of Caltrans committees regarding the assessment/retrofit/design and research on bridges from 1989-1999. He also acted as an expert witness on high profile collapses. Following the 2010-2011 Canterbury earthquakes, Nigel chaired a panel for the Royal Commission investigating the collapse of the Canterbury Television (CTV) building, as well as three other notable structures.

Nigel had a profound impact on educational institutions in three continents; University of Canterbury, University of California San Diego, and the ROSE School. He was primary advisor for more than 25 PhD students and many masters students. His research resulted in more than 450 papers, 250 research reports, and he wrote three books “Seismic Design of Concrete and Masonry Buildings” with T. Paulay (1992), “Seismic Design and Retrofit of Bridges” (1996) with F. Seible and M. Calvi, and “Displacement-Based Seismic Design of Structures” with M. Calvi and M. Kowalsky (2007). All of these are regarded as definitive texts in their areas.

Nigel received more than 30 awards for research publications. He was made a fellow of the Royal Society of NZ, the Institute of Professional Engineers of NZ, NZSEE, and the American Concrete Institute. He held honorary doctorates from ETH, Zurich, and Cujo, Argentina.

Nigel passionately believed in the need for engineers to understand structural behaviour. He advocated capacity design principles and the importance of careful detailing. He abhorred the indiscriminate use of elastic analysis, and had an innate distrust of computer output. His work was conducted for engineers and recommendations were expressed clearly to allow easy implementation. As a result, recommendations based on his research are included in standards around the world where earthquakes are a threat to structural safety. In 2014, in recognition of his contributions, Nigel was made an officer of the New Zealand Order of Merit. At that time, he said that his biggest contribution was in determining the best way to design structures for earthquake response.

Nigel will be remembered for his passion, his clarity of thought, his perceptive and pointed questions, his ability to communicate complex concepts simply, his ability to inspire others, and his kindness to his students and many others who knew him. Nigel is survived by his wife Jan, four children, four step children, and nine grandchildren who recall his marmalade jam and his enjoyment in chasing butterflies. We express our grief and condolences to family and to all who knew him.

This obituary was prepared by Gregory MacRae, with much help from friends and colleagues in New Zealand and elsewhere.