

KEN BEEN (1953–2017)

By Dennis Becker, Jack Crooks and Sheri Burton



The name Ken Been is synonymous with excellence and innovation in geotechnical engineering, and with being a wonderful, sincere and gentle person. His colleagues regarded him as a true friend - gifted, humble, wise and a great mentor. Diagnosed with cancer in 2002 and given a bleak prognosis, Ken remained cheerful, optimistic, and determined to keep working and living.

Ken was born on October 7, 1953 in Cape Town, South Africa. After graduating from the University of Cape Town with a B.Sc. in Civil Engineering, Ken won a Rhodes Scholarship in 1980 to study for a DPhil. at the University of Oxford. Through his vision, leadership and high capacity for work, Ken contributed substantially in advancing the forefront of technology and in transferring technology throughout the world. The impacts of his work are highly significant, timely and relevant to academia, the state-of-practice and state-of-the-art. The significant contributions began with his seminal doctorate research work on sedimentation and consolidation while at Oxford University, followed by a very distinguished 35-year consulting career with Golder Associates – initially working in Calgary (Alberta) before moving to Celle (Germany), Nottingham (England), Houston (Texas), and then Halifax (Nova Scotia). “Retiring” in 2015, Ken moved to Vancouver Island and, despite poor health, continued as a Senior Consultant until his death.

Ken’s career achievements included the development of state parameter, advanced CPT interpretation and innovative liquefaction assessment technologies, pipeline soil-structure interaction, and offshore island construction in the Beaufort Sea using hydraulically placed sand and spray ice as construction materials. Of particular note, Ken significantly advanced the understanding of fundamental soil behaviour through the application of critical state soil mechanics and development of state parameter as key in characterizing sand behaviour. State parameter was developed in the early to mid-1980s through Ken’s leadership and collaborative efforts of his colleagues in the Golder Calgary office. State parameter is now commonly used in research and industry throughout the world; it is recognized as a “game changer” in geotechnical engineering. The findings and applications of the project and applied research work were presented in a series of very highly cited journal papers in *Géotechnique*

and the *Canadian Geotechnical Journal*, and culminated in 2006 with the publishing of the book *Soil Liquefaction – A Critical State Approach* by Mike Jefferies and Ken Been. The book is a very well received, definitive authoritative reference. The seminal paper “A state parameter for sands” (Been and Jefferies, 1985) is one of *Géotechnique*’s most cited papers.

Ken had the innate ability to quickly identify the key aspects lying at the kernel of the problem, and to formulate a practical approach towards effective solutions based on fundamental theoretical considerations and scientific principles. One of Ken’s many talents and attributes was his ability to articulate complex issues in a simple manner that captured well the essence of the issue. He also had the capability of effectively communicating with professional colleagues and laypersons in his presentations of practical and effective engineering solutions. Ken’s ability to work with others to integrate fundamental research and practical engineering made significant inroads into engineering “difficult ground” around the world, with Ken becoming a globally recognized expert in geotechnical engineering involving reclaimed land and soft soils, in particular, for LNG and other onshore facilities for the oil and gas industry in North America, Africa and South America.

Ken had an exemplary track record in disseminating geotechnical engineering knowledge through a variety of means, including peer-reviewed journals, books, lectures, conferences, workshops, seminars and the like. The quality of Ken’s contributions was always at the highest level. In addition to the abovementioned book, Ken was lead author and co-author of 75 technical papers on topics and issues that are timely and highly relevant to the Canadian and international geotechnical communities. This publication track record is truly impressive given the high demands of being a highly sought consulting practitioner. He was a Chair of Technical Committee TC206 – Interactive Geotechnical Design of the International Society for Soil Mechanics and Geotechnical Engineering (ISSMGE). Additionally, he was the Committee Chair for many years of the Canadian Standards Association (CSA) Offshore Code Foundations Working Group that contributed to *Part 4: Geotechnical and foundation design considerations* of the ISO (International Organization for Standardization).

Ken gave freely and unselfishly of his personal time to the best interests and benefits of the geotechnical community, professional agencies and to his colleagues and friends. Ken was an excellent mentor and, despite his very busy schedule and time demands, he always found time to discuss issues, answer questions or direct colleagues to sources that would provide the information and guidance required. He was a leader in how to apply basic honesty in one’s life – he said what he believed in and lived by it but he didn’t preach – he knew what was right and wrong. He practiced his values to the fullest extent every day of his personal and professional life. He was a gentle force on our lives.

Ken was always enthusiastic about life and enjoyed golf, bird photography and sailing (including a trans-Atlantic trip with three Golder colleagues for “team building”), but his passion for engineering shone through. Despite his internationally recognized stature, world-class reputation and accomplishments, Ken Been was a humble man – indeed a gentleman and a scholar.

Ken is survived by his wife, Fiona, and sons Daniel and Steven.