

ROBERT M KENEDI

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Robert Kenedi was born in Hungary on 19 March 1921 and went to Glasgow in 1938 to study civil engineering in classes conducted at the Royal Technical College leading to the degree of the University of Glasgow, from which he graduated with distinction in 1941. After spending two years as an Alien on Auxiliary War Service in Britain, he was appointed (in 1943) Lecturer in the Department of Civil and Mechanical Engineering of the Royal College of Science and Technology in Glasgow, which later became the University of Strathclyde. Robert Kenedi spent the first ten years of his professional career working primarily on strength of materials related research, developing new applied knowledge and strain gauge technology for stress analysis in thin-walled structures. He worked as a consultant to the Cold Rolled Sections Association and this resulted in the development of design codes for structures fabricated of such components. The thin structures work was applied to thin shells and related to the design of nuclear containment vessels. Concurrently, he obtained his PhD in structural engineering from Glasgow University in 1949. In the late 1950s he realised the potential application of his knowledge to the analysis of the mechanical behaviour of biological tissue. Together with the late Professor Tom Gibson FRSE, a prominent plastic surgeon from Glasgow, he developed an internationally renowned programme in biological tissue mechanics.

To allow the development of Robert Kenedi's bioengineering initiatives, the Medical Research Council in 1963 made a grant (unique for a non-medical department) for the institution of a Bioengineering Unit at Strathclyde. Robert Kenedi was appointed Professor and Head of the Unit. A subsequent grant from the Wolfson Foundation, together with University and Area Health Board monies, provided the funds for the construction of the Wolfson Centre which houses the Bioengineering Unit to the present day. Under Kenedi's direction, the Unit broadened its spectrum of activities in the area of biomechanics beyond tissue mechanics to cover human performance aspects, prosthetics and orthotics, artificial internal organs, and clinical measurement. Some of the pioneering research studies in musculoskeletal biomechanics and human locomotion were performed during the sixties. The establishment of the National Centre for Prosthetics and Orthotics in Strathclyde was also motivated by the success of the bioengineering studies in prosthetics which Kenedi and his associates undertook.

Professor Kenedi was an outstanding researcher in the field of mechanics of materials and in biomechanics. He published more than 110 papers in civil, structural engineering and bioengineering, and organised an International Meeting on nuclear containment vessels. Subsequently he edited the Strathclyde Seminar series: *Bedsore Biomechanics*; *Artificial Organs*; and *Disability*. Each volume contained the presentations and, most importantly, the discussions at the three-day meetings.

He received numerous recognitions throughout his career, notably his election to the Fellowship of the Royal Society of Edinburgh (1965); his election as Foreign Associate of the USA National Academy of Engineering (1976); and the receipt of the Lissner Biomedical Engineering Award (1982) from the American Society of Mechanical Engineers.

In 1980, Professor Kenedi took early retirement from the University of Strathclyde and went to Hong Kong, to assume the position of Associate Director (Engineering) of the Hong Kong Polytechnic. This was a four-year contractual appointment after which he returned to Glasgow and continued to contribute to Strathclyde University as a Professor Emeritus and consultant on various special assignments, including External Affairs, and the European Office and Learning in Later Life which became the Senior Studies Institute.

As an undergraduate student, I attended Professor Kenedi's lectures on the mechanics of materials in 1946. They were notable for their outstanding clarity and precision which seemed effortless but which, as I found out later, were the result of deep thought, extensive research and careful planning. In an address composed for his receipt of the Honorary Degree of Doctor of the University of Strathclyde in 1991 his major advice to the graduands was "take particular care with the detail of any task". He certainly achieved a great position in his discipline by attending to his own advice. He was always concerned about the success of students who need counselling especially those from overseas. Colonies of Strathclyde Bioengineering Graduates in every continent will testify to this.

Bobby Kenedi summarised his professional life in an article in SCOPE, the Journal of the Institute of Physics and Engineering in Medicine, in June 1998. Following his admission to hospital in February as he described he was treated and discharged. Subsequent investigation disclosed a lack of patency in one heart valve due to a previously unrecognised congenital anomaly. He again entered hospital in May and received a valve replacement. He made an excellent recovery, priding himself in being able to negotiate the 40 steps to his apartment without pause, driving his car and being very much his former self. He collapsed and died on September 7 1998 at home in Milngavie and is survived by his wife Jean, her son and daughter-in-law and their three teenage boys.

JOHN P PAUL