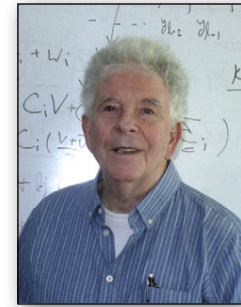


## Professor Raphael Sivan 1935–2011

Raphael Sivan (Rafi to his friends) was born in November 1935 in Essen, Germany. In the wake of the second world war, his family found refuge in Switzerland after wandering through the Netherlands, Belgium and France. In 1945 the family immigrated to Israel.



Rafi received the B.Sc. degree in Electrical Engineering from the Technion in 1957, and subsequently served in the IDF as a communications engineer. From 1960 he studied at the University of California at Berkeley, where he obtained his Ph.D. degree in 1963. He was an Assistant Professor at the California Institute of Technology, Pasadena, CA, during 1963–1964.

In 1964 Prof. Sivan joined the Department of Electrical Engineering at the Technion. He became an essential part of a small group of outstanding systems, control and communications researchers, who led the department forward towards the modern age of system science, and shaped its form for years to come under the highest standards of academic excellence. Since 1974 he has been a full Professor, holding the Shirley and Burt Harris Chair, and a Professor Emeritus since 2004. Prof. Sivan served twice as Dean of the department, in 1976–1978 and 1983–1985. He further served as the Technion Dean of Students in 1979–1980, and as Dean of Undergraduate Studies at the Technion in 1992–1999. During his sabbatical years Prof. Sivan held numerous visiting appointments in leading universities and industry, including the Langley Research Center (1970–71), MIT (1978–9), the University of Massachusetts (1986–7), and Imperial College, London (1990–91).

Prof. Sivan made important contributions to the theory of automatic control, in particular optimal control of linear systems. He authored two highly regarded textbooks, both together with Prof. Huibert Kwakernaak, a friend and colleague. His first book, *Linear Optimal Control Systems* (Wiley, 1972), became one of the key texts in this area, and is still well known and appreciated by any graduate-level control specialist. His second book, *Modern Signals and Systems* (Prentice-Hall, 1991), offered a disciplined and innovative mathematical approach to the teaching of this important topic in the undergraduate engineering curriculum. He also held various editorial positions, and most recently served as the Editor for Book Reviews in *Automatica*.

Rafi was a remarkable teacher, blessed with a unique talent to spark interest and add intuition into technical topics, and he continued teaching up to the previous year. His lectures will be long remembered by the numerous students who attended his courses on systems and control. Among his other interests, Rafi held an academic degree in psychology, and was an avid musician and flute player.

Prof. Sivan was one of the first Chairs of the Israel Association of Automatic Control. He was truly a key figure in shaping the landscape of Israeli science in systems and control, as well as that of the Technion's Department of Electrical Engineering. He passed away in November 2011, a few days after his 76<sup>th</sup> birthday, leaving a wife, four children, and eleven grandchildren. May his memory be blessed.