

OBITUARY: PROFESSOR IBRAHIM S SADEK (1949-2012)



Professor Ibrahim S Sadek died on 1st July 2012 in his residence on the campus of American University of Sharjah (AUS), United Arab Emirates. He was one of the most respected researchers and loved lecturers of his University. He graduated from the Middle East Technical University, Turkey in 1974 with BSc and MSc degrees and from the University of California at Santa Barbara (UCSB) in 1983 with PhD in mathematics. After spending a year as a post-doctoral student in UCSB, he moved to Queen's University in Canada in 1985 and to the University of North Carolina at Wilmington in 1986. He worked at the American University of Sharjah from 1997 onwards. From all these universities he received teaching excellence awards and he was well known for his clear presentations of complicated concepts and ideas in his lectures. Several generations of colleagues and students kept him in highest regard as a friend, as a human being and as a teacher whose impeccable integrity, good humour and genuine sincerity made him a person of distinction.

Professor Sadek's main research area was the optimal control of distributed parameter systems and he made extensive contributions to the field with several articles of archival value on the development and use of the maximum principle in the optimal control of hyperbolic partial differential equations. In his research work he extended the application of maximum principle to systems of hyperbolic equations with several variables and applied this theory to several problems of practical importance in the field of vibrating systems. He was part of the UCSB team in developing a method of solution for optimal piezoelectric control problems using the integral equations which provided a powerful tool for solving optimal control problems with discontinuities arising from finite size patch actuators as compared to approaches based on differential equations. The integral equation method was applied to several problems arising in the damping out of excessive vibrations using finite size piezoelectric actuators.

Another way Prof Sadek served the community of mathematicians working in the fields of modelling, control and optimization was by co-organizing well-attended conferences and networking with mathematicians all around the world. He and his colleagues started a series of conferences starting with the First International Conference on Modelling, Simulation and Applied Optimization in February 2005 at AUS which attracted delegates from around the world. Subsequently this conference was organized every two years.

Sadness and the sense of loss felt by everybody on the untimely passing away of Prof Sadek are indescribable. Only consolation that his colleagues and students have is being lucky to know such a human being. He will always live in the hearts and minds of people who knew him.