Preface

We are extremely happy to bring out this Special Issue of *KEM* commemorating the 90th birthday of Professor Ján Sobota.

Professor Sobota was an outstanding academic teacher, in both didactic and pedagogical fields, a highly talented research worker, incorporating both theory and engineering practice. His attitude, industriousness and cordiality brought him a great esteem among his co-workers and a students' community.

With the help of this volume, we attempt to provide a flavor of the wide range of his interest in and contributions to structural mechanics and the Finite Element Method. The issue contains contributions from experts ranging across former Czechoslovakia (now Slovak Republic and Czech Republic), where Professor Sobota had been immensely active over several decades. We received massive response to our requests soliciting articles for this Special Issue, reflecting the deep respect and affection of the broad scientific community that Professor Sobota enjoyed. We believe that this issue would be of great value to the specialists as well as to those aspiring to become practitioners of structural mechanics, and static calculations using the FEM.

Editors

Professor Ján Sobota

Professor Ján Sobota was born on August 28, 1926 in Trnava, Slovakia. During his University studies, he was among the group of outstanding students of the Faculty of Civil Engineering SVST, who had worked as assistant teachers during their fourth and fifth grade of study. It was a logical continuation that after graduation in 1950 he started his academic life in the Department of Structural Mechanics. There he stayed until 1991 when he retired.

Above all, professor Sobota was an excellent teacher. He was able to explain to students the most demanding parts of the theory of structures so that even average students had a nice feeling of understanding the problem. His teaching activities were perfectly complemented by scientific and research activities. Thanks professor Sobota, today we can be proud that we were among the first institutes in former Czechoslovakia and Central Europe, where the Finite Element Method was implemented and used. Similarly he was a pioneer in using the Transfer Matrix Method and the Boundary Integrals Method and its numerical modification Boundary Element Method.

He is the author or co-author of eight books aimed at problems of structural mechanics, many of which were officially recommended and also used as university textbooks nationwide. His ability to link scientific research activities with educational process as well as with the implementation of results of scientific and research processes in practice was extraordinary. It can be said that by means of introducing matrix calculus and the Finite Element Method the teaching of Structural Mechanics moved to higher level in former Czechoslovakia. He had been frequently invited to be the keynote speaker at various meetings and conferences for top experts, but provided some lectures also for projection institutions which were appreciated by common engineers.

His activity in making expertise analyses included wide range of problems: Let us mention some of his most important works: assessment of the core of the building of the Czechoslovak Television in Mlynská Dolina Bratislava - Slovakia, assessment of the pipeline bridge for Vojany Power Plant, calculation of the 100 m high tower for Oil Refinery Slovnaft, structural analysis of

the steel construction at football stadium AC Nitra, assessment of the highway and rail bridge over the Danube River, assessment of foundation structure of a high-rise telecommunication building in Bratislava, and many others.

To underline working achievements and personal success of Prof. Sobota it is important to mention that at the age of 29 years he became an associated professor and being 39 year old he became a special professor. In 1980 he defended his doctoral dissertation on the subject of the matrix analysis of beam, plane and shell structures.

In 1990-1991 he held the position of Head of the Department of Structural Mechanics, Faculty of Civil Engineering. He also served as Vice-Dean of FCE for education and for part-time studies.

Professor Sobota was a founding member of the Slovak Society for Mechanics – Slovak Academy of Sciences where he served as vice-chairman for many years. He was also an honorary member of the Slovak Association of Civil Engineers.

As a humble scientist he never tried to draw attention to himself making showy presentations, but he was always ready to assist and cooperate with anyone at the Department and Faculty with his typical modesty and willingness. For many years, he had been a role model and mentor to numerous generations of researchers in the field of Structural Mechanics, Statics of Structures, and the Finite Element Method in civil engineering. He was certainly one of the most admired and ingenious teachers and researchers in this field. Experts from Slovak Academy of Sciences and many other research institutes, as well as his former students who became top experts in their fields, used to contact him asking for advices on specific problems occurring in the engineering practice. For his outstanding results and achievements, he had been awarded the Gold Medal of the Slovak University of Technology in Bratislava, Slovakia.

Editors