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International Journal of Solids and Structures

journal homepage: www.elsevier.com/locate/ijsolstr

In memory of friend, colleague and hero

It is difficult to believe that on April 16th, 2009 we will mark the second anniversary of the tragic death of Liviu Librescu. Everybody who knew him will forever remember this brilliant scientist and true gentleman.



Liviu was a scientist of a truly immense talent who left an undeniable and deep impression in the lives of his colleagues and friends. His work in the theory of shells, aeroelasticity, composite, sandwich and smart structures, thin-walled beams, and other areas was always original and valuable. He never repeated old results and even at the age of 76 he was always looking for new ideas, new solutions, and new areas of research. Since Liviu was always involved in all aspects of life around him, his active interest was not limited to science. Probably this activity and involvement provided him with an amazing energy that we always observed when we met him at scientific meetings. He would be completely “immersed” in the papers, discussions and exchange of ideas from early morning to the last lecture of the day. Yet he was never tired (at least, he never showed that he was) since this was his true interest and he was totally dedicated to science.

Liviu was a humble and unassuming person. However, he knew a surprising number of colleagues because when it came to science he would overcome his shyness and talk to others asking questions, correcting, suggesting; always in the spirit of a friend and never in a confrontational manner. Everybody in our profession liked and respected him.

The biography of Liviu was repeated many times after his tragic and heroic death. Suffice it to say that he was born in Romania in 1930 and was deported with his family and interned in a labor camp in Transnistria by the Nazis during the Second World War. After the war, Liviu attended the Polytechnic Institute in Bucharest obtaining B.S. and later M.S. degrees. After his graduation, he worked at the Academy of Science of Romania simultaneously gaining a Ph.D. in Fluid Mechanics. In the 1970s, Liviu was prose-

cutured for refusing to swear allegiance to the Communist party. He was allowed to leave Romania and immigrate to Israel in 1978 as a result of a direct appeal of the Prime Minister of Israel Begin to President of Romania Ceausescu. Liviu worked in Israel at the Tel Aviv University from 1979 to 1986 and spent the last 22 years in the USA at Virginia Tech. His first and pioneering book on anisotropic shells was smuggled from Romania to Holland and published by Elsevier in 1976. The material considered in the book was completely new and Liviu was probably lucky that the communist government of Romania did not arrest him for such “transgression,” i.e. for making original scientific ideas and theories known in the West. Overall, Liviu published four books and close to 360 chapters in books and papers in archival journals.

On April 16, 2007, Liviu was teaching a class in Virginia Tech when a deranged gunman entered the building and attempted to enter the room. Liviu protected his students holding the door and commanding the students to jump from the windows. While saving numerous lives he died as a hero struck by several bullets.

The present special issue of the International Journal of Solids and Structures represents a collection of papers that we solicited from our colleagues who cooperated with Liviu or knew him. The contributions include tributes to Liviu from three of his peers (Professors Bert, Simitses and Vinson) and full papers. We would like to use this opportunity to express our appreciation to colleagues who contributed to this volume and to Professor Stelios Kyriakides, Editor-in-Chief of the journal, who gracefully presented us with the opportunity to publish this special issue.

Victor Birman
Missouri University of Science and Technology;
Formerly University of Missouri-Rolla

Michael W. Hyer
Virginia Polytechnic Institute and State University

George A. Kardomateas
Georgia Institute of Technology

Reminiscences in Memory of the Late Professor Liviu Librescu

Professor Librescu started his illustrious professional career in aerospace structures in Romania, continued in Israel (Tel Aviv University), and finally joining the faculty of the Department of Engineering Science and Mechanics at Virginia Tech. Although I knew of him through his research publications prior to 1983, I first met him in person at an Israel Mechanical Engineering Conference in Tel Aviv in 1983. He was the technical program chair of the conference and he worked very hard to bring in distinguished invited lecturers from other countries. This was despite the fact intensive fighting was taking place on the border between Israel and Leba-

non. As an example of his characteristic kindness, I would like to mention his arranging for all invited lecturers from overseas to have a guided touring-bus trip from Tel Aviv to Jerusalem and vicinity. The guide was a very entertaining recent college graduate.

In closing, I would like to point out the very broad scope of Liviu's research including aeroelasticity, mechanics of composite as well as homogeneous materials, thermoelasticity, shape control systems for flight surfaces of wings and helicopter rotors, advances in computational mechanics of solids and fluids, and sandwich structures.

With the cruel and premature passing of Liviu, the whole field of mechanics suffered a great loss. We miss him very much.

Charles W. Bert
*Perkinson Chair Emeritus
The University of Oklahoma*

A Tribute to Liviu Librescu

"Liviu, my friend, may your memory be eternal"

Liviu Librescu was born in 1930. During the Second World War, Liviu and his father were sent to concentration camps by the Germans because of his religion.

Later he graduated from the Polytechnic University of Bucharest and received his M.S. and Ph.D. degrees.

He was encouraged by his mentor, Professor E. Carafoli, to write his first book titled, "Elastostatics and Kinetics of Anisotropic and Heterogeneous Shell-Type Structures". The book was originally written in Romanian, and the English version was published by Noordhoff International Publishing Co., in 1975. According to Liviu, he smuggled the material, chapter by chapter, to Leyden, The Netherlands, since he was prohibited by the Romanian Government to publish outside Romania.

Because of his refusal to swear allegiance to the Communist Party, Liviu was forced out of his job and was, in effect, placed under house arrest. Thanks to the direct intervention of Prime Minister Menahem Begin, Liviu was allowed to immigrate to Israel with his wife, Marlena.

In 1985, he arrived at Virginia Tech as Visiting Professor in the Department of Engineering Science and Mechanics. The move became permanent and he stayed there until his cruel and undeserving death on April 16, 2007. On that day, he was in the classroom when he heard gunfire. He tried to block the door with his body and cried out to his students to leave the room by jump-

ing through the windows; 22 did but one student and Liviu were shot dead.

Professor Librescu was an excellent and tireless researcher and his papers were and are cited by many investigators of mechanics related issues. His research output is at the top of his profession and as a result he has received several honors and awards. His work in composite plates and shells and in aeroelasticity has become classical through his many publications that include books, chapters in books and journal papers.

Liviu served his profession well by organizing sessions and chairing some at national and international technical meetings. He was very gentle and polite and was liked by all that met him. He will always be remembered well by his students, colleagues and friends.

George J. Simitse
*Professor Emeritus
Georgia Institute of Technology*

In Memory of Professor Liviu Librescu

Dr. Liviu Librescu was unique, there was no one like him. He was the perfect example of a "gentleman and scholar". His gentleness and dedication to science were his most important qualities.

For decades one of the most pleasant impressions about attending any meeting that involved true scientific content was being able to see and spend time with Liviu Librescu. He was a most devoted fan of academic pursuits in many contexts. He loved learning. Whenever he asked questions of speakers at these conferences, his questions were always of significant substance.

As successful and accomplished as he was, he could have been even more recognized and honored, but his humility and gentleness precluded more fame in this world of robust aggressiveness. Truly he was a "great" among us and this is becoming clearer as time goes by.

He was ever kind, ever giving and he was a friend of tremendous compassion, great comfort and reassuring steadfastness.

Just in writing these words, my heart breaks that he is gone. Liviu was truly a unique person who is irreplaceable, and he died a most heroic death through literally saving the lives of his students.

Jack R. Vinson
H. Fletcher Brown
*Professor Emeritus
University of Delaware*