

## Professor Ioannis G. Vardoulakis, 1949-2009

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### **Sent to the USUCGER mailing list by Professor Joe Labuz, University of Minnesota, 09/22/09:**

It is with great sadness that I report the death of Ioannis G. Vardoulakis on Saturday, September 19, 2009. Ioannis was severely injured in a fall approximately two weeks ago.

Ioannis was an international leader in geomechanics, pioneering the application of bifurcation theory to geomaterials, with this work culminating in the writing of the book, co-authored with Jean Sulem, titled "Bifurcation Analysis in Geomechanics" (Blackie Academic, 1995). His over 90 refereed papers have generated over 1,700 citations in SCOPUS. His 1987 paper titled "The thickness of shear bands in granular materials," co-authored with Hans Mühlhaus, is the second most cited paper since 1965 (as listed by the ISI Web of Knowledge) in Geotechnique. He was awarded the Bishop Medal by the U.K. Institution of Civil Engineers in 1996, and the Research Medal by the Japanese Geotechnical Society in 2002.

His many contributions can be found in the principal fields of (i) mechanics of geomaterials, including plasticity theories for porous-frictional solids with microstructure; (ii) experimental mechanics, including four U.S. patents, one of which is the plane-strain apparatus for soil, and one French patent; and (iii) numerical modeling, including borehole stability, consolidation of layered media, and soil-structure interaction.

Ioannis received a Diploma of Civil Engineering in structures from the National Technical University of Athens, Greece in 1972, and a Doctor of Engineering (with highest honors) in soil mechanics from the University of Karlsruhe, Germany in 1977. He joined the Department of Civil Engineering at the University of Minnesota as an Assistant Professor in 1980, where he earned the rank of Professor in seven years. In 1990, he returned to Greece and was a Professor of Applied Mathematics and Physics at the National Technical University of Athens.

Ioannis was born on February 28, 1949, and he is survived by his wife and two children. A fund for students has been established in memory of Ioannis:

"Foititiki Merimna"

National Bank of Greece

IBAN account number: GR67 0110 0800 0000 0805 4510 196

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