



## **Professor Emeritus Sol. R. Bodner**

See:

[http://meeng.technion.ac.il/Sol R. Bodner.htm](http://meeng.technion.ac.il/Sol_R_Bodner.htm)

<http://www.barnesandnoble.com/c/sol-r-bodner>

<http://www.worldcat.org/identities/lccn-no2001-72075>

### **Education**

1950 - B.C.E., Civil Engineering, Polytechnic Institute of Brooklyn.

1953 - M.S., Mathematics, New York University, Courant Institute of Mathematics.

1955 - Ph.D., Applied Mechanics, Polytechnic Institute of Brooklyn

### **Research Interests**

Constitutive modelling of elastic-viscoplastic behavior of materials;

Material behavior at high strain rates;

Analysis of ballistic penetration and perforation;

Representation of creep and damage development in rock salt;

Viscoelasticity.

## **Academic Appointments**

On professorial staff of Brown University, Providence, RI, USA (1956-1964)

## **Guest Appointments**

Visiting Professor, U. California, Berkeley (1970)

Visiting Professor, U. Illinois, Urbana (1975, 1979)

Visiting Professor, ETH-Zurich, Switzerland (1983, 1990, 1994)

Visiting Professor, Kyoto U., Japan (1988)

## **Public Professional Activities**

Head, Material Mechanics Laboratory

## **Honors and Awards**

Rothschild Prize for Engineering (1982)

Markus Reiner Chair in Mechanics and Rheology

## **Selected Publications**

S.R. Bodner, "A lower bound on bifurcation buckling of viscoplastic structures", *Acta Mechanica* [Suppl] 3, Springer-Verlag, Pub. 1992, pp 181-190, (1992).

K.S. Chan, S.R. Bodner, A.F. Fossum and D.E. Munson, "A constitutive model for inelastic flow and damage evolution in solids under triaxial compression", *Mechanics of Materials*, Vol. 14, pp 1-14, (1992).

M. Ravid, S.R. Bodner and I. Holcman, "Penetration into thick targets - refinement of a 2D dynamic plasticity approach", *International Journal of Impact Engineering*, Vol. 15, pp 491-499, (1994).

S.R. Bodner and M.B. Rubin, "Modeling of hardening at very high strain rates", *Journal of Applied Physics*, Vol. 76, pp 2742-2747, (1994).

M. Ravid, S.R. Bodner, and I. Holcman, "A two-dimensional analysis of penetration by an eroding projectile", *International Journal of Impact Engineering*, Vol. 15, pp 587-603, (1994).

K.S. Chan, N.S. Brodsky, A.F. Fossum S.R. Bodner and D.E. Munson, "Damage induced nonassociated inelastic flow in rock salt", *International Journal of Plasticity*, Vol. 10, pp 623-642, (1994).

S.R. Bodner and A. Lindenfeld, "Constitutive modelling of the stored energy of cold work under cyclic loading", *European Journal of Mechanics/A Solids* (in press).