

ANNOUNCEMENT AND CALL FOR PAPERS

THIRD INTERNATIONAL CONFERENCE ON CONSTITUTIVE LAWS FOR ENGINEERING MATERIALS: THEORY AND APPLICATIONS

AND

WORKSHOP ON INNOVATIVE USE OF MATERIALS IN INDUSTRIAL AND INFRASTRUCTURE DESIGN AND MANUFACTURING

University of Arizona, Tucson, AZ 85721, U.S.A.

7-12 January 1991

Following the overwhelming reception and success of the two previous conferences, the Third International Conference on Constitutive Laws for Engineering Materials: Theory and Applications will be held again at the University of Arizona, Tucson, Arizona; the tentative dates are 7-12 January 1991. It is also planned to organize during the conference a workshop on Innovative Use of Materials in Industrial and Infrastructure Design and Manufacturing, which is expected to be of interest to industries and academics alike.

The major topics proposed to be covered at the conference and workshop are:

- Basic theory and unified concepts for various models for mechanical, thermal, fluid, and other environmental loadings and effects.
- Laboratory and field destructive and nondestructive tests for parameter identification, validation and calibration.
- Implementation in computational procedures; consistency, stability and robustness of algorithms, parallel processing, optimization and stochastic methods, and identification techniques through expert systems.
- Material systems:
 - Composites: metals, alloys, ceramics, and polymers, intermetallic compounds, high performance plastics, directionally solidified alloys.
 - Geomaterials, concrete and other porous saturated and unsaturated materials, extraterrestrial (lunar) materials, reinforced earth.
 - Biomaterials.
 - Electronic and optical devices: silicon wafers, LSI chips, thin-layered and packaging materials, single crystals, foam composites.
 - Discontinuities and tribological contacts, interfaces and joints.
 - Tailored, smart and intelligent materials.
- Special topics:
 - Damage, fracture, softening, non-continuum models.
 - Localization, shear bands, stability and bifurcation.
 - Micro-macro correlation.
 - Mesomechanics.
 - Initial and induced anisotropy.
 - Creep and high temperature effects.
 - High rate of loading.
 - Solidification processes.
- Innovative use of available and new materials in industrial and public works (infrastructure) applications.

The workshop is planned to run concurrently with the conference. Tentatively, one session each day will be devoted to the workshop. A number of persons from industries from various countries are expected to participate in the workshop and discuss the innovative uses of available and new materials, and future trends and needs for optimal industrial and infrastructure design and manufacturing.

The conference and workshop are expected to be co-sponsored by a number of government and private organizations and professional societies.

Abstracts of about 500 words are due by 28 February 1990, and completed papers by about 30 June 1990. The conference proceedings are planned to be published before the conference.

Send abstracts to and for further information regarding the technical content of the conference and workshop contact :

Professor Chandra S. Desai,
Department of Civil Engineering and Engineering Mechanics,
University of Arizona,
Tucson,
AZ 85721,
U.S.A.
Tel. (602) 621-2266 or FAX (602) 621-2550.

Inquiries regarding registration should be directed to :

The Office of Engineering Professional Development,
University of Arizona,
Box 9 Harvill Building,
Tucson,
AZ 85721,
U.S.A.
Tel. (602) 621-3054 or FAX (602) 621-1443.