ANNOUNCEMENT AND CALL FOR ABSTRACTS

MiniSymposium in Computational Biomechanics

To be held at the Fifth U.S. National Congress on Computational Mechanics
Wednesday-Friday, August 4-6, 1999, University of Colorado at Boulder, CO, USA

Symposium Organizer: G.A. HOLZAPFEL

Due to rapid advances in constitutive modeling and computer technology the multidisciplinary growing field of computational biomechanics has the potential to be a driving basis for the improvement of clinical medicine. Computational biomechanics may increase success rates of clinical interventions and therapeutic effectivness which is not only of medical but also of great socioeconomical interest. A very few of the complex mechanical based interactions that govern the human body in health and disease have been identified, efficient numerical characterizations of human 'material' are a challenging helpful task to understand them. This MiniSymposium will bring together scientists and bioengineers working in the area of computational mechanics. Application areas include solid and fluid biomechanics and fluid-structure interaction of physiological flows, separated into *constitutive modeling, numerical methods, applications*.

Contributions are solicited in the following areas:

- Novel constitutive modeling of bio-tissue structures and bio-fluids: (Anisotropic) damage and fracture, large strain (visco)elasticity and (visco)plasticity.
- Biological mass transport: Poroelasticity, multiphase flow, diffusive and convective transport through multiphasic structures.
- Remodelling, regeneration.
- Material parameter identification.
- Finite Element Methods and algorithmic issues for biomechanical simulations.
- Numerical treatment of internal constraints in solid and fluid mechanics.
- Coupling of FEM, BEM, FVM, FDM.
- Large scale computation in biomechanics.
- Applications in physiology and clinical medicine: Cardiovascular mechanics (e.g. artherosclerotic plaques, balloon angioplasty). Muscle-skeletal biomechanics. Artificial organs, bio-materials. Histomechanics, cellular biomechanics.

Submission Instructions:

If you are interested in contributing to this MiniSymposium, please submit a one-page abstract of up to 400 words using the *e-mail* alias **gh@biomech.tu-graz.ac.at** *on or before December 15, 1998*. Abstracts sent by Fax or regular mail will not be considered.

Abstracts may be submitted in one of four forms: (1) plain text, (2) TEX source compatible with the Plain TEX format, (3) Word 6 or 7 document in Rich Text Format (RTF), or (4) plain ASCII text format. Please *do not* include figures or graphics. Avoid equations in title or text. Greek letters are acceptable if the abstract is submitted in TEX or Word. For samples of forms (1) and (2) click links in

`http://civil.colorado.edu/usnccm99/Abstracts.d/Instructions.html`

If the abstract is co-authored it must identify the e-mail of the corresponding author. All subsequent correspondence will take place by e-mail.

Abstracts deemed to fit the scope and objectives of the Symposium will be communicated to the Congress organizers by *January 15, 1999*, and notification of acceptance will be given by e-mail to the corresponding author.

A final version for inclusion in the printed book of Abstracts may be submitted before *May 15, 1999*. This final form is to be sent directly to the Congress e-mail address following the instructions posted on the Web site.

Please go to next page for Organizer Address

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Congress Program and Registration Information

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