



## Complas 2003

VII International Conference  
on Computational Plasticity  
Fundamentals and Applications

Barcelona, 7-10 April 2003

An IACM Special Conference



### Objectives

Previous meetings in the COMPLAS series were held in Barcelona in 1987, 1989, 1992, 1995, 1997 and 2000. COMPLAS 2000 attracted some 400 participants.

COMPLAS 2003 will address both the theoretical bases for the solution of plasticity problems and the numerical algorithms necessary for efficient and robust computer implementation. The ability to provide numerical simulations for increasingly complex problems is advancing rapidly due to both remarkable strides in computer hardware development and the improved maturity of computational procedures for non-linear systems. Significant advances have been made in the formulation and implementation of algorithms for static and dynamic problems involving finite strains, complex contact interaction laws, constitutive material behaviours including multi-physics or multi-scale effects, progressive large scale fracturing, etc.. Such advances, however, demand a closer interaction between numerical analysts and material scientists in order to produce theoretical models which provide a response in keeping with fundamental material principles and experimental observations. Numerical techniques, and in particular finite element and discrete element methods, are now extensively employed in non-linear deformation predictions and very often offer the only means of solution for practical engineering problems. It is therefore essential to ascertain that such techniques can be reliably employed in industrial and R&D applications.

COMPLAS 2003 aims to act as a forum for practitioners in the field to discuss recent advances and identify future research directions.

Sessions related to specific topics of the conference will be introduced by a Keynote Lecture in the field. These Keynote Lectures will be complemented by Invited Sessions organised by recognised experts in targeted research areas, as well as by contributed papers received from the general Call for Papers.

### Conference Topics

- Multi-fracturing solids
- Forming process simulations
- High velocity impact
- Contact problems
- Composites
- Biomechanics
- Damage, fracture & fatigue
- Granulation processes
- Multi-physics problems
- Advanced material models
- Multi-scale material models
- Innovative computational models
- Parallel processing computations
- Multi-body and non-linear dynamic
- Industrial applications

### Conference Chairmen

**D. R. J. Owen**

University of Wales Swansea, UK

**E. Oñate**

Universitat Politècnica de Catalunya, Spain

### Important Dates

Deadline for presenting a one page abstract:

*15th September 2002*

Acceptance of the paper and instructions for writing a full paper: *15th October 2002*

Deadline for submitting the full paper

*15th January 2003*

Deadline for early payment

*30th January 2003*

### Conference Secretariat

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