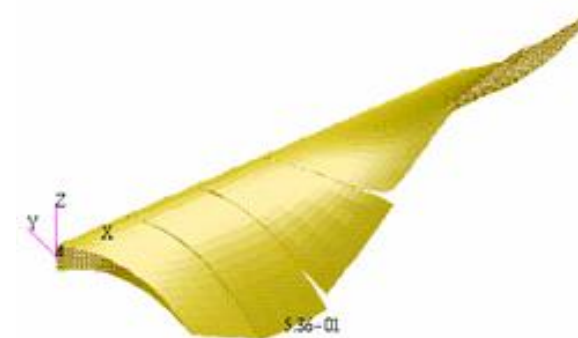




## II ECCOMAS Thematic Conference on Smart Structures and Materials

Lisbon, 18-21 July, 2005

Instituto Superior Técnico



<http://www.dem.ist.utl.pt/~smart05>



Institute of Mechanical Engineering (IDMEC)  
Instituto Superior Técnico (IST)  
Www.ist.utl.pt

Portuguese Association of Theoretical,  
Applied and Computational Mechanics  
[www-ext.lnec.pt/APMTAC/](http://www-ext.lnec.pt/APMTAC/)



### Location

The Congress will be held at IST Conference Center. IST is located near the city center, Lisbon Airport, metro station and several hotels.

### Accommodations

A wide range of hotels at a walking distance from Instituto Superior Técnico. Two metro stations are located in the vicinity (Saldanha and Alameda) and consequently other hotels in town also provide good alternatives.

### Registration

Early registration before April 30, 2005, is advised, late registrations will have a penalty. The following fees apply:

Fees(€)	Early Registration	Late Registration
IACM/ECCOMAS Members	350€	400€
Non IACM/ECCOMAS Members	400€	450€
Students	175€	200€

The fees cover: book of abstracts, proceedings on CD-ROM, participation in all the scientific sessions, lunches and coffee breaks, welcome reception and closing banquet. The lunches for participants will be organized at IST.

### Social Programme

A social programme for delegates and accompanying persons will be arranged, including a reception, a banquet and a trip.

Accompanying Persons	Feed:
Early Reg.	175€
Late Reg.	200€

### Congress Secretariat

Mrs. Andrea Marques  
IDMEC- Instituto Superior Técnico  
Av. Rovisco Pais  
1049-001 Lisboa, Portugal.  
Tel: +351 21 8417280 Fax: +351 21 8417915  
E-mail: [amarques@dem.ist.utl.pt](mailto:amarques@dem.ist.utl.pt)

More detailed information is available on the Conference Home Page:  
[www.dem.ist.utl.pt/~smart05](http://www.dem.ist.utl.pt/~smart05)

### Sponsors and Supporting Organizations

European Community on Computational Methods in Applied Science and Engineering  
International Association of Computational Mechanics  
Associação Portuguesa Mecânica Teórica, Aplicada e Computacional  
Instituto Superior Técnico  
Instituto de Engenharia Mecânica  
Technical University of Lisbon  
Fundação da Ciência e Tecnologia  
Fundação Luso-Americana  
Fundação Calouste Gulbenkian

Please Send To

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e-mail: [carlosmotasoes@dem.ist.utl.pt](mailto:carlosmotasoes@dem.ist.utl.pt)



The organizers would be grateful if intending participants would, without obligation, completed and return this form by fax or surface mail.

- I intend to present a paper with the tentative title:

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Authors: \_\_\_\_\_

The abstract must be sent by 31-Jan-2005

The registration must preferential be made at the web page:  
[www.dem.ist.utl.pt/~smat05](http://www.dem.ist.utl.pt/~smat05)

Title: \_\_\_\_\_ First Name: \_\_\_\_\_ Surname: \_\_\_\_\_

Organization: \_\_\_\_\_

Address: \_\_\_\_\_

Code/City: \_\_\_\_\_ Country: \_\_\_\_\_

Phone: \_\_\_\_\_ Fax: \_\_\_\_\_

E-Mail: \_\_\_\_\_

Obs: \_\_\_\_\_

Are you member of ECCOMAS or of an affiliated organization?

Yes  No

## Call for Papers and Deadlines

Authors wishing to contribute to the conference are invited to submit a one-page abstract to the conference chairperson. Authors will receive notification of acceptance of their proposed contribution. A full length manuscript, limited to 20 pages, is expected to be received from the authors of accepted abstracts to be published in the conference proceedings. The full manuscripts will be peer reviewed and, if accepted and selected, will be published in an International Journal. Applicants that intend to submit papers must meet the following deadlines:

Abstract submission:	31-Jan-2005
Notification of acceptance:	28-Feb-2005
Paper manuscripts:	16-May-2005

Confirmation of participants in the conference by the authors will be required when papers are accepted. Only confirmed presentations will be included in the proceedings and final programme.

## An ECCOMAS Thematic Conference

Smart Structures and Materials 2005 is one of the Thematic Conferences of the European Community in Computational Methods in Applied Sciences (ECCOMAS) and it has been promoted by the European Committee in Solids and Structural Mechanics (ECSSM) of ECCOMAS. For further information about ECCOMAS Thematic Conference: <http://www.cimne.upc.es/eccomas/html/link3.htm>

## Organizing Committee

Prof. Carlos A. Mota Soares (Co-Chairperson), Technical University of Lisbon, Portugal.

Prof. Jan Holnicki-Szulc (Co-Chairperson), Polish Academy of Science, Poland

Prof. Afzal Suleman, Technical University of Lisbon, Portugal.

Prof. Cristóvão M. Mota Soares, Technical University of Lisbon, Portugal.

## Invited Lecturers

Benjeddou, Ayeche, ISMCM-CESTI, France.

Boller, Christian, University of Sheffield, U.K \*

Bullough, W.A., University of Sheffield, U.K.

Culshaw, B., University of Strathclyde, U.K.

Elwenspoek, M., University of Twente, Netherland.

Gabbert, Ulrich, Otto-von-Guericke-Universitaet, Magdeburg, Germany

Gaul, Lothar, University of Stuttgart, Germany.

Guemes, J.A., Univ. Polytecnic Madrid, Spain.

Inman, Daniel, Virginia Polytechnic Institute and State University, USA

Kikuchi, Noboru, University of Michigan, USA.

Prasad, E., Sensor Technology Ltd, Canada.

Preumont, Andre, University of Brussels, Belgium.

Reddy, J.N., University of Texas, A & M, USA.

Takeda, Nobuo, University of Tokyo, Japan \*

\*Not yet confirmed

## Objective

In the past decade, technological developments in material and computer sciences have evolved to the point where their synergistic combination have culminated in a new field of multidisciplinary research in smart materials and structures, systems and related technologies. The advances in material sciences have provided a comprehensive and theoretical framework for implementing multifunctionality into materials, and the development of high speed digital computers has permitted the transformation of that framework into methodologies for practical design and production. The goals of the ECCOMAS Conference on Smart Structures and Materials consist in the provision of a comprehensive forum for discussion on the current state-of-the-art in the field. The Conference will enable:

- Understanding of basic fundamentals of smart structures
- Modelling and characterization of smart actuators and sensors
- Comparatively evaluation of different smart actuators and sensors
- Formulation and analysis of systems integrated with smart actuators
- Analysis of smart structures
- Design and development of smart structures and systems
- Fabrication and testing of smart structures and systems
- Application of smart materials, structures and related technology

## Conference Format

The conference will last four full days. Invited international experts will organize sessions, on several topics and application areas of smart structures and materials.

- 15 Keynote Lectures of 30 minutes
- 30 Invited Papers of 20 minutes
- 60 Contributed Papers of 20 minutes
- Poster Session for Ph.D. Students

## Topics

The proposed topics are the following:

- Sensors and Structural Identification
- Active Materials and Actuators
- Structural Health Monitoring and Signal Processing
- MEMS and Structural Control
- Vibration and Shape Control
- Adaptive Crashworthiness
- Composite Modelling
- Software Tools and Optimal Design
- Identification of Materials Properties
- Nanotechnology
- Industrial Applications
- Demonstrators.