

# Structural Membranes 2009

## Conference Secretariat

International Center for Numerical  
Methods in Engineering (CIMNE)  
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<http://congress.cimne.upc.es/membranes09>



Images of Stuttgart, Germany

## Location

The conference will take place at Institute for Statics and Dynamics of Aerospace Structures (ISD), University of Stuttgart, Keplerstrasse 7, Stuttgart, Germany.

## Registration Fees

The registration fees, including social events, with early registration applicable if received before **May 15, 2009**, are:

	Early	Late
Delegates	490 €	570 €
Students	280 €	300 €

The fees include:

- Conference Proceedings
- Attendance at all scientific sessions
- Coffee breaks, reception and banquet

ECCOMAS and IACM members will have a 5% reduction on the delegates fees.

## Social Programme

A social programme for delegates and accompanying persons will be arranged, including a reception and a banquet at a local place of interest.

## Accommodation

Block reservations at preference rates will be arranged by the organizers. Detailed information will be available on the Conference site, on the link "Accommodation".

## Supporting Organisations

- European Community on Computational Methods in Applied Sciences (ECCOMAS)
- International Association for Computational Mechanics (IACM)
- International Association for Shell and Spatial Structures (IASS)
- Universitat Politècnica de Catalunya (UPC)
- Build Air Ingeniería y Arquitectura S.A.
- Airship Technologies
- Quantech ATZ S.A.
- COMPASS Ingeniería y Sistemas S.A.



# Structural Membranes 2009

## III International Conference on Textile Composites and Inflatable Structures

5-7 October 2009, Stuttgart, Germany



<http://congress.cimne.upc.es/membrane2009>

## Objectives

Textile composites and inflatable structures are becoming increasingly popular for a variety of applications in - among many other fields - civil engineering, architecture and aerospace engineering. Typical examples include membrane roofs and covers, sails, inflatable buildings and pavilions, airships, inflatable furniture, airspace structures etc. The objectives of STRUCTURAL MEMBRANES 2009 are to collect and disseminate state-of-the-art research and technology for design, analysis, construction and maintenance of textile and inflatable structures. Previous editions of the conference were held in Barcelona (2003, 2007) and Stuttgart (2005).

The ability to provide numerical simulations for increasingly complex membrane and inflatable structures is advancing rapidly due to computer hardware development and the improved maturity of computational procedures for nonlinear structural systems. Significant progress has been made in the formulation of finite element methods for static and dynamic problems, complex constitutive material behaviour, coupled aero-elastic analysis etc. STRUCTURAL MEMBRANES 2009 will address both the theoretical bases for structural analysis and the numerical necessary for efficient and robust computer implementation.

A significant part of the conference will be devoted to discuss advances in new textile composites for applications in membrane and inflatable structures, as well as in innovative design, construction and maintenance procedures. Sessions related to specific topics of the conference will be introduced by a keynote lecture in the respective field. These keynote lectures will be complemented by invited sessions organised by recognised experts in targeted research and applied areas, as well as by contributed papers.

STRUCTURAL MEMBRANES 2009 aims to act as a forum for discussing recent progress and identifying future research directions in the field of textile composites and inflatable structures.

## Conference Topics

- Design Methods
- Numerical Methods for Structural Analysis
- New Membrane Materials
- Testing Procedures
- Manufacturing
- Construction Methods
- Maintenance Techniques
- Energetic Aspects
- Climate Impact
- Environmental Aspects
- Pressure Management
- Adaptivity
- Applications: membrane roofs and covers, sails, inflatable pavilions and buildings, geo-textiles, inflatable bridges and dams airships, airbags spill recovery bags, airspace structures, inflatable antennas, furniture, etc.

## Conference Chairmen

B. Kröplin, University of Stuttgart, Germany  
E. Oñate, Univ. Politecnica de Catalunya, Barcelona, Spain

## Technical Advisory Panel

J. Ayneto, Spain  
M.C. Bernasconi, Switzerland  
K-U. Bletzinger, Germany  
R. Blum, Germany  
A. Bown, UK  
D. Campbell, USA  
J.I. de Llorens, Spain  
B. Defoort, France  
F. Escrig, Spain  
F. Flores, Argentina  
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M. Kawaguchi, Japan  
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H. Ohmori, Japan  
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S. Pellegrino, UK  
J. Perez Valcárcel, Spain  
J. Pons, Spain  
A. Pronk, Netherlands  
E. Ramm, Germany  
R. Rossi, Italy  
M. Saitoh, Japan  
A. Samartín, Spain  
V. Sarrablo, Spain  
R. Sastre, Spain  
K. Schweizerhof, Germany  
E. Stach, USA  
E. Stein, Germany  
T. Stegmaier, Germany  
R. Tarczewski, Poland  
R. L. Taylor, USA  
R. Wagner, Germany  
D. Wakefield, UK  
P. Wriggers, Germany  
R. Wüchner, Germany

## An ECCOMAS Thematic Conference

Structural Membranes 2009 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 on ECCOMAS visit: [www.eccomas.org](http://www.eccomas.org)

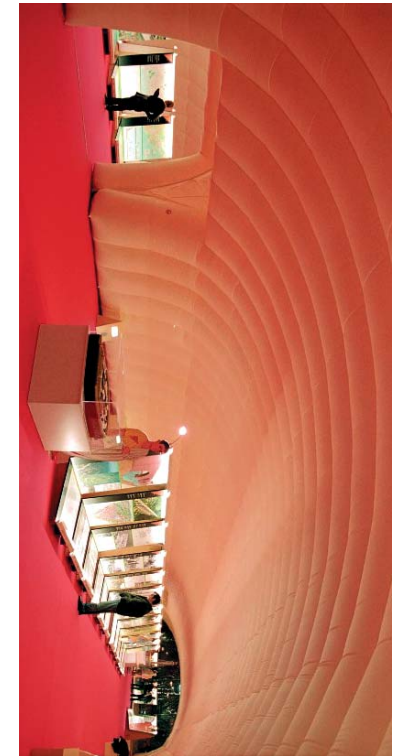
## Important Dates

Deadline for presenting one-page abstract	<b>16 January 2009</b>
Acceptance of the paper and instructions for written and extended abstract	<b>13 February 2009</b>
Deadline for submitting an extended abstract and early payment	<b>15 May 2009</b>
Booking of hotel accommodation	<b>ASAP</b>

## Exhibition

An exhibition on membrane and inflatable structures will be organized in connection with the Conference. Interested exhibitors can find the necessary information on the conference website.

<http://congress.cimne.upc.es/membranes09>



## Structural Membranes 2009

### How to register and submit contributions

Authors are invited to submit their contributions on any of the conference topics. Submission of abstracts and papers and conference registration must be performed electronically via the conference web site.