ECCOMAS

**European Community on
Computational Methods
in Applied Sciences**

ECCOMAS 2012

European Congress on Computational Methods in Applied Sciences and Engineering

September 10-14, 2012

Vienna, Austria

INVITATION TO THE EXHIBITION

Welcome to ECCOMAS 2012!

The European Community on Computational Methods in Applied Sciences (ECCOMAS) is pleased to anounce the organization of the

6th EUROPEAN CONGRESS ON COMPUTATIONAL METHODS IN APPLIED SCIENCES AND ENGINEE-RING (ECCOMAS 2012)

to be held in Vienna, Austria, September 10-14, 2012.

Previous ECCOMAS Congresses were held in Venice, Italy (2008), Jyväskylä, Finland (2004), Barcelona, Spain (2000), Paris, France (1996), and Brussels, Belgium (1992).

On behalf of the organisers we hope that you will attend ECCOMAS 2012 and we are looking forward to welcoming you in Vienna, in September 2012!

Organising Institutions

Local Organizer
Vienna University of Technology
Institute for Mechanics of Materials and Structures, Institute of Lightweight Design and Structural Biomechanics

Honorary Chairman
Herbert A. MANG

Congress Chairmen
Josef EBERHARDSTEINER
Helmut J. BÖHM
Franz G. RAMMERSTORFER

Secretary General
Martina PÖLL

Local Organising Committee

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Gernot BEER	Roman LACKNER
Peter BLAHA	Paul MAYRHOFER
Christian BUCHER	Dieter PAHR
Christoph DELLAGO	Heinz PETTERMANN
Christian DÜNSER	Bernhard PICHLER
Philipp GITTLER	Stefan PIRKER
Jürgen HAFNER	Martin SCHANZ
Christian HELLMICH	Otmar SCHERZER
Rudolf HEUER	Helfried STEINER
Günter HOFSTETTER	Herbert STEINRÜCK
Karin HOFSTETTER	Reinhard WILLINGER
Gerhard HOLZAPFEL	Philippe ZYSSET
Hans IRSCHIK	

Executive Committee

Ferdinando AURICCHIO	Alexander MASLOV
Michel BERCOVIER	Maria MORANDI CECCHI
Michel BERNARDOU	Carlos MOTA SOARES
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Tadeusz BURCZYNSKI	Manolis PAPADRAKAKIS
Pedro DÍEZ	Carlos PARÉS
Michael GILCHRIST	Ekkehard RAMM
Charles HIRSCH	Paul STEINMANN
Joze KORELC	Ismail TUNCER
Trond KVAMSDAL	Dick VAN CAMPEN
Pierre LADEVÈZE	Dirk VANDEPITTE

Scientific Committee / Industrial Committee

In addition, a Scientific Committee and an Industrial Committee were formed (please see at the congress webpage).
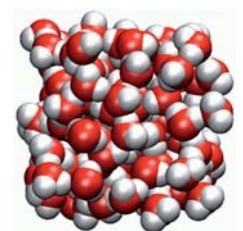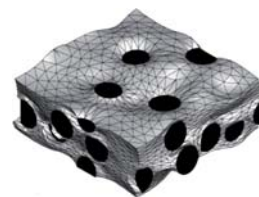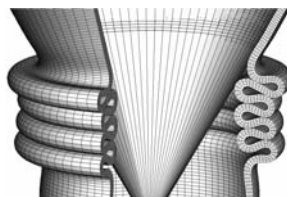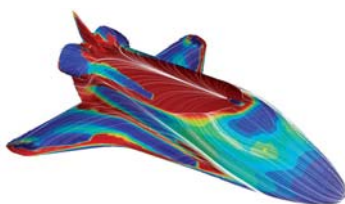
Scientific Outline

ECCOMAS 2012 aims at providing a forum for presentation of both the state-of-the-art and future research directions in all fields covered by ECCOMAS.

Major fields of interest are the application of mathematical and computational methods and of modelling to areas such as fluid dynamics, structural mechanics, semi-conductor modelling, electro-magnetics, chemistry, acoustics, and multi-physics problems. Multidisciplinary applications of these fields to critical societal and technological problems encountered in sectors like aerospace, automotive and marine industry, electronics, energy, finance, chemistry, medicine, biosciences, and environmental sciences are of particular interest.

ECCOMAS 2012 aims at fostering interdisciplinary collaboration of and interaction between researchers within and beyond the major fields of interest of ECCOMAS.

http://eccomas2012.conf.tuwien.ac.at

MEDIA-PLAN

WELCOME TO THE EXHIBITION!

We cordially invite your company to join the exhibition to ECCOMAS 2012!

The exhibition is an integral part of the congress, providing attendees with the opportunity to update themselves on the latest technical developments. Furthermore it presents our industry partners with the chance to interact with a great number of key decision makers and potential new clients.

The exhibition will be located in close vicinity to the lecture rooms and will be combined with coffee break areas, thus ensuring maximum exposure and visibility for your company as well as a flow of visitors to the company booths throughout the entire congress.

Your support is essential for the success and attractiveness of the congress and will be highly appreciated by the organisers - we would be pleased to welcome you in Vienna!

Please submit the attached application form to secure your exhibitor space as soon as possible! Booth space allocation will consider the following factors: overall sponsorship, booth size, date of payment of first installment. The Exhibitiors' Manual with all technical details will be sent to confirmed exhibitors in due time.

For any further questions, please do not hesitate to contact our office, Veronica Näslund (ext. 72) or Kerstin Hamata (ext. 39) at any time.

Yours sincerely,

Media-Plan
International Exhibitions and Advertising
Exhibition management ECCOMAS 2012

Congress Topics

- Artificial Intelligence and Expert Systems
- CAD, CAM and CAE
- Computational Adaptive Materials Systems, Structures and Smart Materials
- Computational Advances in Composite Machining´
- Computational aero-acoustics
- Computational Atomistics Simulations´
- Computational Biomechanics
- Computational Damage Mechanics
- Computational Dynamic Failure and Fracture
- Computational Engineering Sciences and Physics
- Computational Environmental Science
- Computational Fluid Mechanics
- Computational Geomechanics
- Computational Ice Mechanics
- Computational Infrastructures and Aging Structures
- Computational Inverse Problems and Optimization
- Computational Materials Science
- Computational MEMS and Bio-MEMS
- Computational Methods in the Life Sciences
- Computational Microtribology and Micromechanics
- Computational Nanotechnology
- Computational NDE and Wave Propagation
- Computational Nonlinear Dynamics
- Computational Polymers and Polymer Composites
- Computational Solid and Structural Mechanics
- Computer Simulation of Processes and Manufacturing
- Data and Signal Processing
- Design optimization techniques that require extensive CFD and coupling/linkage methods
- Grid generation for CFD and geometry definition for complex configurations
- High-order methods
- High-speed and chemically reacting flows
- Interdisciplinary methods including CFD (flow control, fluid-structure interaction, fluid-thermal interaction, etc.)
- Lagrangian and vortex methods
- Large eddy simulation (LES), direct numerical simulation (DNS) and hybrid RANS/LES methods
- Meshless and Wavelet Methods
- Multi-phase flows
- Multiple-Scale Physics and Computation
- Numerical algorithms for Bio-fluid dynamics
- Numerical algorithms for inviscid and viscous flows
- Numerical algorithms for continuum approaches (finite-volume, finite differences, etc.)
- Numerical algorithms for particle methods (lattice- Boltzmann, direct simulation Monte Carlo, etc.)
- Numerical combustion
- Numerical methods and convergence acceleration in CFD
- Numerical treatment of boundary conditions
- Parallel Computing
- Particle Finite Element Method
- Reynolds Averaged Navier-Stokes (RANS) models of turbulence
- Scientific Visualization, data mining and simulation data analysis techniques
- Solution adaptive grid techniques
- Uncertainty and Stochastic Analysis
- Uncertainty propagation methods for CFD
- Unsteady flow computation

In addition to the regular sessions **mini-symposia** on particular subjects of interest will be organised.

http://eccomas2012.conf.tuwien.ac.at

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Congress Management

Organizations and institutions interested in an exhibition at ECCOMAS 2012 are asked to contact the

Exhibition Management
Media-Plan
Int. Exhibitions & Advertising
P.O. Box 155
A-1014 Vienna, Austria
Phone: (+43/1) 536 63-72
Fax: (+43/1) 535 60 16
Email: mp@media.co.at

Correspondence related to registration, abstract and paper submission, hotel accommodation, social programme, sightseeing tours, and post-congress tours should be sent to the

Congress Secretariat
Mondial Congress & Events
Operngasse 20b
A-1040 Vienna, Austria
Email: eccomas2012@mondial-congress.com
Phone: (+43/1) 588 04-0
Fax: (+43/1) 588 04-185

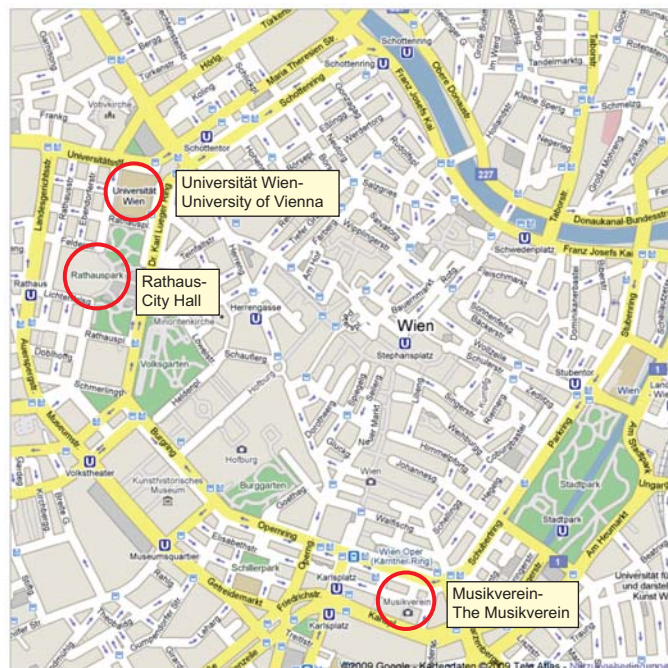Correspondence related to all other matters should be sent to the

Scientific Secretariat
Vienna University of Technology
Institute for Mechanics of Materials and Structures
Karlsplatz 13/202
A-1040 Vienna, Austria
Email: office@eccomas2012.conf.tuwien.ac.at
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Fax: (+43/1) 588 01-920211

Congress Website
http://eccomas2012.conf.tuwien.ac.at

Social Programme

Welcome Cocktail
It will be offered on Sunday, September 9, in the Arcade Court of the University of Vienna.

Opening Ceremony
The opening ceremony on Monday, September 10, will take place in the Main Concert Hall of the Musikverein.

Banquet
The banquet, given by the Mayor of the City of Vienna, will take place in the picturesque City Hall on Wednesday, September 12.

Accompanying Persons Programme
From Monday, September 10, to Friday, September 14, full and half-day guided tours for accompanying persons will be offered.

Location

The congress will take place at the University of Vienna, Austria, which is located in the center of the city. It can be easily reached by public transport from Vienna International Airport, which provides direct flights to 170 destinations worldwide. Vienna´s most impressive sights are within walking distance of the University of Vienna.

The Opening Ceremony and the Plenary Lectures will take place in the Main Concert Hall of the Musikverein, where the famous New Year's Concert by the Vienna Philharmonic Orchestra is broadcast worldwide every year.

Map of City Center

http://eccomas2012.conf.tuwien.ac.at

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