



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

European Community on Computational Methods in  
Applied Sciences (ECCOMAS)

### Venue

Vienna University of Technology

### Conference Local Organizers

Vienna University of Technology  
Institute for Mechanics of Material and Structures  
Institute of Lightweight Design and Structural  
Biomechanics

### Conference Chairmen

Herbert A. Mang (*Honorary Chairman*)  
Josef Eberhardsteiner  
Helmut J. Böhm  
Franz G. Rammerstorfer

## MMCM4

### Contact Information

Enquiry about the abstract and manuscript  
submission for the MCM4 Symposium,

Please contact:  
Prof. Tomasz Sadowski

Faculty of Civil Engineering and Architecture  
Lublin University of Technology  
20-618 Lublin, Poland  
Nadbystrzycka 40 str

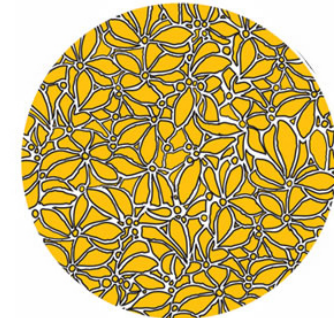
Fax: [\(+48 81\) 538 41 73](tel:+48815384173)  
Tel: [\(+48 81\) 538 43 86](tel:+48815384386)  
[\(+48\) 600 460 227](tel:+48600460227)

E-mail: [t.sadowski@pollub.pl](mailto:t.sadowski@pollub.pl)  
[sadowski.t@gmail.com](mailto:sadowski.t@gmail.com)

6th European Congress on  
Computational Methods in Applied  
Sciences and Engineering

September 10-14, 2012

Wien – Austria



International Symposium on  
**Multiscale and  
Multiphysics Modelling  
for Complex Materials**

**MMCM4**

**deadline for abstracts:**

**DECEMBER 15, 2011**

**deadline for papers:**

**MAY 30, 2012**

## MMCM4 Description

This symposium will provide a forum to present and debate multiscale and multiphysics methodologies for studying the behaviour of complex materials.

The goal is to bring together researchers (engineers, physicists, mathematicians) specializing in multiscale and multiphysics modelling and simulation of complex materials. Mechanics will play a central role, but the focus will be set on those problems where mechanics is highly coupled with other concurrent physical phenomena. In this framework, the interest and suitability of multiscale strategies will be highlighted. This symposium is intended to be a computational-oriented follow-up of the successful MMCM symposia previously held in Vancouver (2006), Berlin (2009) and Paris (2010). The focus will be set on computational issues, while still highlighting the underlying conceptual and theoretical basis.

## Coordinators

Tomasz Sadowski

*Lublin University of Technology, Poland*

Patrizia Trovalusci

*Sapienza – University of Rome, Italy*

Rene de Borst

*Eindhoven University of Technology, The Netherlands*

Bernhard A. Schrefler

*University of Padova, Italy*

## MMCM4 Topics

With these aims in mind, contributions from all aspects of engineering applications, with particular attention to structural engineering applications, will be considered. Topics of applications will include (but not be limited to):

### Materials with micro(/nano)-structure

- Composites, Fibre-Reinforced, Laminated
- Granular, Masonry-Like, Cementitious
- Biomaterials
- Random Materials
- Shape-Memory Alloys

### Complex material behaviour

- Damage, Fracture, Defects, Cracks
- Non-Classical Continua, Multiphysics
- Poromechanics, Fluid Flow
- Randomness and Fractals
- Wave Propagation

### Computational Methods

- Coupled Discrete-Continuum Methods
- Homogenization Methods
- Computational Multiscale Methods
- Non-standard Methods for Generalized Continua
- Molecular, Dislocation Dynamics
- Object-oriented, Adaptive Homogenization

## Keynote Lecturers

Rene de Borst, *TU Eindhoven*, the Netherlands

Martin Ostoja-Starzewski, *University of Illinois*, USA

George Papanicolaou, *University of Patras*, Greece

Ramesh Talreja, *Texas A&M University*, USA

## ECCOMASS 2012 Call for Papers

Prospective authors are kindly invited to submit an abstract related to a [mini-symposium](#) or to a [congress topic](#) online by December 15, 2011.

Online submission of abstracts:

In the submission process you are asked to submit both

- a short abstract of up to 1,200 characters (plain text, no graphs or formulas) this abstract will be printed in the Book of Abstract
- a 2-page abstract (upload of a pdf file which has to comply with the template this abstract will be sent out for review and will be made available in the proceedings)

Please make sure that special characters and symbols are inserted correctly through the toolbar provided. Authors will be able to draft the abstracts online and may return to edit the texts of the abstracts, if necessary, before submitting. After the submission no changes can be made.

All abstracts have to be written in English. Submission of an abstract constitutes a commitment by the author to present it at the congress, if accepted.

Notification of acceptance and information regarding full paper submission will be sent by March 15, 2012. For inclusion of the abstract in the final scientific programme, it is mandatory to register for the congress and to settle payment.