

Venue

The conference will take place at Vienna University of Technology (TU Wien), which is located right in the center of the city. Many of Vienna's most popular tourist attractions are within walking distance from the conference venue.

TU Wien can be easily reached by public transport from the Vienna International Airport, which provides direct flights to 170 destinations worldwide.



TU Wien, main building (left) and Karlskirche (right) © TU Wien



Stephansdom (left) and Belvedere (right) © WienTourismus

Accommodation

Block reservations at preference rates are arranged by the organizers. Detailed information is available on the conference webpage.

Social Programme

A banquet, given by the Mayor of the City of Vienna, will take place on Tuesday, September 12.

Registration Fees

Early registration fees are applicable if payment is received not later than July 15, 2017.

	Early	Late
ECCOMAS and ESB Members	€ 370	€ 390
Delegates	€ 470	€ 490
Students	€ 190	€ 210

The fees include the Book of Abstracts, coffee breaks, lunches, and the banquet.

Important Dates

Abstract submission, deadline	June 15, 2017
Notification of acceptance	June 30, 2017
Early registration, deadline	July 15, 2017
Presenter registration, deadline	July 30, 2017

Conference Secretariat

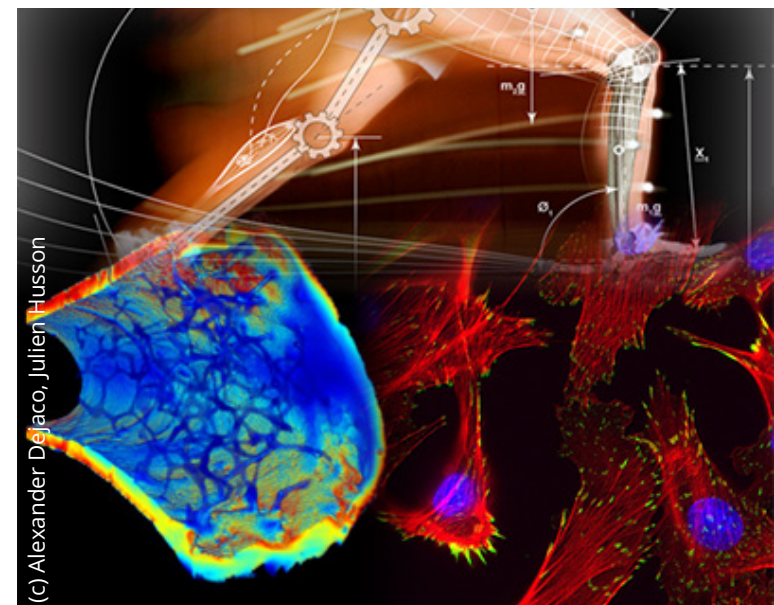
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MultiBioMe 2017

ECCOMAS Thematic Conference on Multiscale Problems in Biomechanics and Mechanobiology

September 11-13, 2017
Vienna, Austria



(c) Alexander Delajo, Julien Husson

Scope and Invitation

Investigating the behavior of hierarchically composed systems is a challenging task, owing to a cascade of various, interrelated intricacies across several orders of magnitude, including physical properties, morphological configurations, as well as the development of the material over time. This is true for a broad range of biological systems, and particularly relevant for the fields of biomechanics and mechanobiology. Biomechanics deals with quantifying the effects of mechanical forces on biological systems (such as the musculoskeletal system, or specific parts thereof, or the fluids contained in pore spaces), hence providing insights as to the correspondingly arising mechanical stresses and strains. In hierarchically organized biological systems, stresses and strains vary, potentially to a significant extent, between the different observation scales involved. The latter range from the scales of whole organs down to the scale of single molecules. The emerging field of mechanobiology, in turn, attempts to understand how cells or other biological factors (such as proteins, hormones, or growth factors) respond to their mechanical environments, and how these responses affect the overall biological system; thereby bridging the fundamentally different, but yet complementary fields of engineering mechanics, on the one hand, and genetics and molecular biology, on the other hand.

The MultiBioMe 2017 is the inaugural edition of a new, biennial series of scientific gatherings, offering a platform for presenting and discussing the latest advances and developments in the thriving fields of biomechanics and mechanobiology. In particular, the focus of this conference lies on reconciliation of the distinct spatial and time scales at which related processes and mechanisms occur, considering for that purpose the whole range of available techniques, including experimentation, imaging and visualization, mathematical modelling, as well as numerical simulation. Emphasis will be on multidisciplinary scientific approaches genuinely taking into account the inherent multiscale nature of the studied biomechanical and mechanobiological phenomena, and demonstrating successful synergies between the involved disciplines. Studies relating to all kinds of biological systems are welcome, including hard tissues, soft tissues, and tissue engineering applications, ranging from the molecular to the structural level.

Conference Topics

The topics covered by the MultiBioMe 2017 include:

- Mechnobiological regulation comprising molecular, cellular, tissue, and organ levels;
- Multiscale mechanics of biological tissues;
- Multiscale biofluid mechanics and mass transport;
- Biomolecular motors and force generation;
- Tissue engineering, with emphasis on tissue regeneration.

Call for Abstracts

Prospective authors are kindly invited to submit a one-page abstract related to the conference topics through the conference online system by June 15, 2017. The template is available for download at the conference webpage <http://multibiome2017.conf.tuwien.ac.at>.

Keynote Lecturers

The following distinguished colleagues have agreed to deliver a Keynote Lecture at MultiBioMe 2017:

- Liesbet GERIS (University of Liege, Belgium)
- Hanna ISAKSSON (Lund University, Sweden)
- Rob KRAMS (Imperial College London, UK)
- Mohammad MOFRAD (University of California, Berkeley, USA)

ECCOMAS and ESB Support

MultiBioMe 2017 is a Thematic Conference of the European Community in Computational Methods in Applied Mechanics Sciences (ECCOMAS).

www.eccomas.org

Furthermore, MultiBioMe 2017 is endorsed by the European Society of Biomechanics (ESB).

<http://esbbiomech.org>

Conference Organizers

Abdul I. BARAKAT

École Polytechnique, France
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Stefan SCHEINER

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Institute for Mechanics of Materials and Structures



Suvranu DE

Rensselaer Polytechnic Institute, USA
Department of Mechanical, Aerospace and Nuclear
Engineering and Department of Biomedical Engineering



Scientific Advisory Committee

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