

## Scientific Committee

- R. Smallwood, UK
- T. Adachi, Japan
- H. Weinans, Netherlands
- R. Müller, Switzerland
- M. Viceconti (ISC), UK
- D. Pioletti, Switzerland
- D. Lauffenburger, USA
- J. Di Paolo, Argentina
- J. Galle, Germany
- L. Rakatomanana, France
- H. van Oosterwyck, Belgium
- E. Soudah, Spain
- A. Petrella, USA
- M. Oshima, Japan
- P. Hunter, New Zealand
- P. Gomis, Spain
- C. Chen, USA
- J.L. Coatrieux (ISC), France
- H. Rodrigues (ISC), Portugal
- M. Cerrrolaza (ISC), Venezuela
- M. Doblare (ISC), Spain
- J.M. Garcia Aznar, Spain
- P. Fernandes, Portugal
- E. Kuhl, USA
- F. Auricchio, Italy
- E. Rank, Germany
- S. Oller, Spain
- Y. Morsi, Australia
- C. Hellmich, Austria
- R. Kamm, USA
- K. Ito, The Netherlands
- D. Noble, UK
- Z. Yosibash, Israel
- G. Holzapfel, Austria
- M.C. Ho Ba To, France
- C. Gasser, Sweden
- M. Sacks, USA
- B. Castañeda, Perú
- D. Garzón, Colombia
- P. Prendergast, Ireland
- J. Vander Sloten, Belgium
- R. Hose, UK
- R. Thomas, France
- D. Lacroix, Spain
- N. Nuño, Canada
- H. van Lenthe (ISC), Belgium

## Location

The Conference will take place at UPC (Technical University of Catalonia)

## IACM Support

ICCB'2015 is a Special Interest Conference of the International Association of Computational Mechanics (IACM)

[www.iacm.info](http://www.iacm.info)



## Conference Topics

### Main topics

- New numerical methods and computational modeling in: Biomechanics, Biofluids, Biomaterials, Biosensors
- Imaging, instrumentation and sensors for model generation and identification
- Experimental methods for models validation
- Information Technology applications to computational bioengineering
- Subject-specific and population-based modeling methods
- Predictive models in: Body, organ, tissue, and cell biomechanics, Metabolism and adaptation, Neurosciences and cognitive / perceptual behavior, Biomolecular and subcellular engineering and Multiscale modeling theory and practice
- Applications to diagnosis, prognosis, treatment, monitoring and rehabilitation
- Data management and modeling tools
- Probabilistic and optimization methods in bioengineering
- Analysis and design of advanced biomedical devices
- Identification of new methods for integrating fabrication technologies with analysis of implants
- Multiscale modeling and integrative research
- Software developments
- Design of implants and advanced orthopedics
- Multiphysics modeling
- Advanced models for cardiovascular applications

## Local Organizing Committee

Miguel Cerrrolaza (Conference chair)  
Sergio Oller (Conference vice-chair)  
Pedro Gomis (UPC)  
Eduardo Soudah (CIMNE)  
Ester Comellas (CIMNE)

## ICCB Steering Committee

**Miguel Cerrrolaza**  
International Center for Numerical Methods in Engineering, Spain

**Jean-Louis Coatrieux**  
Université de Rennes, France

**Manuel Doblare**  
Universidad de Zaragoza, Spain

**Helder Rodrigues**  
IST-TU Lisbon, Portugal

**Harry van Lenthe**  
KU Leuven, Belgium

**Marco Viceconti**  
University of Sheffield, UK



SPECIAL INTEREST CONFERENCE

# ICCB 2015

## VI International Conference on Computational Bioengineering

14-16 September, Barcelona, Spain



<http://congress.cimne.com/ICCB2015>

## Registration Fees

Registration fees are expressed in Euro. Early registration applicable if paid before June 1, 2015.

	Early Fees If paid before April 30 2015	Late Fees If paid on or after April 30 2015
Regular registration	450 €	540 €
Students registration	300 €	360 €

IACM members will have a 5% deduction on the delegates fees. To apply, please contact the conference secretariat.

Registration fees include: Conference proceedings, attendance at all scientific sessions, coffee breaks, and reception.

**Final acceptance** is contingent upon payment of the registration fee by the presenting author during the advance period.

**Student registration:** Student rate attendees must send by fax (0034 93 205 83 47) or e-mail to the Conference Secretariat, a letter from their Department Head/Chair stating that the attendee is a full time student.

**Payment confirmation Notifications** will be sent to your email address, once your payment is processed successfully. For on-line payment, please print the confirmation of the bank. No other confirmation will be sent.

**Refund policy:** Non-author registrants who cannot attend, and do not send a substitute, will receive a refund on their registration fee with a cancellation fee of 100 Euro if the refund request is received in writing by July 30, 2015. Registrants are liable for their full fees after that date (i.e., NO Refund will be made).

**There will be no refund to the author registrants.**

## Important Dates

Deadline for Minisymposia proposals      October 15, 2014

Deadline for submitting a one page abstract      January 31, 2015

Acceptance of the contributions      March 15, 2015

Deadline for submitting the full paper (not mandatory), final acceptance and early payment (mandatory for authors presenting papers), on April, 30 2015.

## Conference Secretariat

International Center for Numerical Methods in Engineering (CIMNE)  
Building C3 - "Zona Comercial"  
Jordi Girona, 1-3, 08034 Barcelona, Spain  
Phone +34 93 405 46 96 Fax +34 93 205 83 47  
email: [iccb2015@cimne.upc.edu](mailto:iccb2015@cimne.upc.edu)  
<http://congress.cimne.com/ICCB2015>

## About

The International Conference on Computational Bioengineering is a conference series initiated in Spain in 2003. Originally conceived by Manuel Doblare, Helder Rodrigues, and Miguel Cerralaza, the series is now steered by an international scientific committee that include also Jean-Louis Coatrieux, Harry van Lenthe, and Marco Viceconti.

The conference series is up to its fifth edition:

- The First issue was held in Zaragoza (Spain), on September 24-26, 2003, organised by Manuel Doblare.
- The Second issue was held in Lisboa (Portugal), on September 14-16, 2005, organised by Helder Rodrigues.
- The Third issue was held in Island of Margarita (Venezuela), on September 17-19, 2007, organised by Miguel Cerralaza.
- The Fourth issue was held in Bertinoro (Italy), on September 16-18, 2009, organised by Marco Viceconti.
- The Fifth issue was held in Leuven (Belgium) on September 11-13, 2013, organised by Harry van Lenthe and Hans Van Oosterwyck.
- The Sixth issue will be held in Barcelona (Spain) on September 14-16, 2015, organised by Miguel Cerralaza and Sergio Oller.

ICCB conferences usually have 150-200 participants, and are designed to favour as much as possible the informal networking between researchers in addition to the exchanges in the scientific sessions.

Beautiful locations, great food, an easy-going atmosphere are the landmark features of these events, which contribute to create a social environment that favours the development of collaborations and exchanges.

## Confirmed Plenary Lecturers

**Joerg Galle**

*Leipzig University, Germany*

Multi-scale modeling of epigenetic regulation of stem cells

**Christian Gasser**

*Royal Institute of Technology, Sweden*

The relevance of vascular biomechanics simulations in the clinical decision making process. Case study abdominal aortic aneurysm (AAA) repair indication

**Natalia Nuño**

*École de Technologie Supérieure, Canada*

Numerical modeling of porous metallic materials for orthopedic applications

**Marie Oshima**

*University of Tokyo, Japan*

A computational study of the effects of carotid artery surgery on cerebral circulation

**Aleksander Popel**

*John Hopkins University, USA*

Systems biology of angiogenesis and lymphangiogenesis in health and disease

**Sandra Shefelbine**

*Northeastern University, USA*

Using computation models to explore skeletal adaptation

**Nicolas Smith**

*King's College London, UK*

Can a clinician learn anything from a computational model of the heart?

**Jos Van Der Sloten**

*KU Leuven (University of Leuven), Belgium*

Patient-specific implant design: image information and musculoskeletal modeling

