

# PROGRAMME 2015

In memory of  
Antonio Venicio Turello, President of CISM from 1969 to 2013

Rectors:

E. Guazzelli (Marseille)

F. Pfeiffer (Munich)

F.G. Rammerstorfer (Vienna)

In 2015 the following Sessions of the International Centre for Mechanical Sciences (CISM) will take place at the seat of CISM in Udine (Italy)

## The Frans T.M. Nieuwstadt Session

### Interaction of Microscopic Structures and Organisms with Fluid Flows

May 25 - 29

*Invited Lecturers:*

Basile Audoly (Paris, France), Kenneth Breuer (Providence, RI, USA), Darren Crowdy (London, UK), Anke Lindner (Paris, France), Michael Shelley (New York, NY, USA), Howard Stone (Princeton, NJ, USA).

*Coordinators:*

O. Du Roure, M. Shelley.

### Dynamics of Bubbly Flows

June 8 - 12

*Invited Lecturers:*

Dieter Bothe (Darmstadt, Germany), Chao Sun (Twente, The Netherlands), Jacques Magnaudet (Toulouse, France), Andrea Prosperetti (Baltimore, MD, USA), Frédéric Risso (Toulouse, France), Shu Takagi (Tokyo, Japan), Roberto Zenit (Ciudad de México, Mexico).

*Coordinators:*

F. Risso, C. Sun.

### Bone Cell and Tissue Mechanics

June 22 - 26

*Invited Lecturers:*

Georg Duda (Berlin, Germany), Peter Fratzl (Potsdam, Germany), Jenneke Klein-Nulend (Amsterdam, The Netherlands), Ralph Müller (Zürich, Switzerland), Bert van Rietbergen (Eindhoven, The Netherlands), Tim Skerry (Sheffield, UK).

*Coordinator:*

B. van Rietbergen.

### Mixing and Dispersion in Flows Dominated by Rotation and Buoyancy

July 6 - 10

*Invited Lecturers:*

Damien Bouffard (Lausanne, Switzerland), Mickael Bourgoin (Grenoble, France), Herman Clercx (Eindhoven, The Netherlands), GertJan van Heijst (Eindhoven, The Netherlands), Paul Linden (Cambridge, UK), Eckart Meiburg (Santa Barbara, CA, USA), James Riley (Seattle, WA, USA).

*Coordinators:*

H. Clercx, G.J. van Heijst.

### Mechanics of Liquid and Solid Foams

July 13 - 17

*Invited Lecturers:*

Stavros Gaitanaros (Cambridge, MA, USA), Sascha Hilgenfeldt (Urbana-Champaign, IL, USA), Reinhard Höhler (Paris, France), Andrew Kraynik (Albuquerque, NM, USA and Erlangen, Germany), Stelios Kyriakides (Austin, TX, USA), Patrick Onck (Groningen, The Netherlands).

*Coordinators:*

A. Kraynik, S. Kyriakides.

## The Art of Modeling Mechanical Systems

July 27 - 31

CISM-AIMETA Advanced School

Course sponsored by AIMETA and GAMM

*Invited Lecturers:*

Hartmut Bremer (Linz, Austria), Friedrich Pfeiffer (Munich, Germany), Michel Raous (Marseille, France), Ahmed Shabana (Chicago, IL, USA), Steven Shaw (East Lansing, MI, USA), Peter Wriggers (Hannover, Germany).

*Coordinators:*

F. Pfeiffer, H. Bremer.

## The Piero Villaggio Session

### Similarity, Symmetry and Group Theoretical Methods in Mechanics

September 7 - 11

*Invited Lecturers:*

George Bluman (Vancouver, BC, Canada), Jean-François Ganghoffer (Nancy, France), Ivailo Mladenov (Sofia, Bulgaria), Andreas Müller (Shanghai, China), Jan J. Slawianowski (Warsaw, Poland), Martin Oberlack (Darmstadt, Germany).

*Coordinators:*

J-F. Ganghoffer, I. Mladenov.

### Particles in Wall-Bounded Turbulent Flows: Deposition, Re-Suspension and Agglomeration

September 14 - 18

Course sponsored by EDF

*Invited Lecturers:*

Jean-Pierre Minier (Chatou, France), Jacek Pozorski (Gdansk, Poland), Christophe Henry (Gdansk, Poland), Fredrik Lundell (Stockholm, Sweden), Cristian Marchioli (Udine, Italy), René van Hout (Haifa, Israel), Greg Voth (Middletown, CN, USA).

*Coordinators:*

J-P. Minier, J. Pozorski.

### Modelling, Simulation and Characterization of Multi-Scale Heterogeneous Materials

September 28 - October 2

CISM-ECCOMAS International Summer School

*Invited Lecturers:*

Stéphane Bordas (Luxembourg, Luxembourg and Cardiff, UK), Daniel Dias-da-Costa (Sydney, Australia and Coimbra, Portugal), Timon Rabczuk (Weimar, Germany), Pierre Kerfriden (Cardiff, UK), Fabrice Pierron (Southampton, UK), Pascal Lava (Leuven, Belgium).

*Coordinators:*

D. Dias-da-Costa, S. Bordas.

### Material Parameter Identification and Inverse Problems in Soft Tissue Biomechanics

October 12 - 16

*Invited Lecturers:*

Stéphane Avril (Saint-Etienne, France), Sam Evans (Cardiff, UK), Christian Gasser (Stockholm, Sweden), Cees Oomens (Eindhoven, The Netherlands), Hazel Screen (London, UK), Jeff Weiss (Salt Lake City, UT, USA).

*Coordinators:*

S. Avril, S. Evans.

## International Advanced Professional Training

### CO<sub>2</sub> Capture Technologies to Mitigate Climate Change

July 20 - 24

*Invited Lecturers:*

Paul S. Fennell (London, UK), Fausto Gallucci (Eindhoven, The Netherlands), Niall MacDowell (London, UK), Matteo C. Romano (Milano, Italy), Luis M. Romeo (Zaragoza, Spain), Jose-Manuel Valverde (Seville, Spain).

*Coordinator:*

J-M. Valverde.

## 21<sup>th</sup> CISM-IUTAM International Summer School

### Measurement, Analysis and Passive Control of Thermoacoustic Oscillations

June 29 - July 3

*Invited Lecturers:*

Matthew Juniper (Cambridge, UK), Tim C. Liewwen (Atlanta, GA, USA), Thierry Schuller (Paris, France), Wolfgang Polifke (Munich, Germany), Raman I. Sujith (Madras, India), Bruno Schuermans (Baden, Switzerland).

*Coordinator:*

M. Juniper.

## National Advanced Professional Training

National Advanced Professional Training (APT) in the fields of Structural and Geotechnical Engineering, Surveying, Environmental, Bioengineering and Industrial Engineering will be given in Italian. For all activities and meetings, please refer to our website.

### Admission to Courses

Applications should reach CISM Secretariat no later than one month before the course. Name, degree, current address and course to be attended should be specified.

A limited number of academic participants, not supported by their own institutions, can be granted board and/or lodging upon application. Application for support must reach CISM Secretariat no later than two months before the course.

Detailed programmes, admission rules and on-line forms are available from the website.

The 2015 Course Booklet can be downloaded from [www.cism.it/courses/](http://www.cism.it/courses/)

