

# PROGRAMME 2016

Rectors:

E. Guazzelli (Marseille)

F. Pfeiffer (Munich)

F.G. Rammerstorfer (Vienna)

In 2016 the following Sessions of the International Centre for Mechanical Sciences (CISM) will take place at the seat of CISM in Udine (Italy)

## The Horst H.E. Leipholtz Session

### Small Scale Modeling and Simulation of Turbulent Multi-phase Flows

May 16 - 20

Invited Lecturers:

Sivaramakrishnan Balachandar (Gainesville, FL, USA), Jean-Luc Estivalèzes (Toulouse, France), Djamel Lakehal (Zurich, Switzerland), Ruben Scardovelli (Bologna, Italy), Stéphane Vincent (Marne-La-Vallée, France).

Coordinators:

J-L. Estivalèzes and S. Vincent

### Computational Acoustics

May 23 - 27

Invited Lecturers:

Gary Cohen (Palaiseau, France), Dan Givoli (Tel Aviv, Israel), Manfred Kaltenbacher (Vienna, Austria), Ulrich Langer/Martin Neumüller (Linz, Austria), Steffen Marburg (Munich, Germany), Claus Dieter Munz (Stuttgart, Germany).

Coordinator:

M. Kaltenbacher

### Visco-plastic Fluids: from Theory to Application

May 30 - June 3

Invited Lecturers:

Neil Balmforth (Vancouver, Canada), Ian Frigaard (Vancouver, Canada), Sarah Hormozi (Athens, OH, USA), Guillaume Ovarlez (Bordeaux, France), Anthony Wachs (Vancouver, Canada), Ian Wilson (Cambridge, UK).

Coordinators:

S. Hormozi and G. Ovarlez

### Fabric Tensors - Measures of Porous or Granular Material Anisotropy

June 6 - 10

Invited Lecturers:

Luis Cardoso (New York, USA), Stephen C. Cowin (New York, USA), Massimiliano Fraldi (Napoli, Italy), Stefan Luding (Twente, The Netherlands), Rodrigo Moreno (Stockholm, Sweden), Philippe Zysset (Bern, Switzerland).

Coordinators:

L. Cardoso and S.C. Cowin

### Global Nonlinear Dynamics for Engineering Design and System Safety

CISM-AIMETA Advanced School

June 13 - 17

Invited Lecturers:

Paulo Goncalves (Rio de Janeiro, Brazil), Stefano Lenci (Ancona, Italy), Giuseppe Rega (Roma, Italy), Jian-Qiao Sun (Merced, CA, USA), Michael Thompson (Cambridge, UK), Mohammad Younis (Thuwal, Saudi Arabia and Binghamton, NY, USA).

Coordinators:

S. Lenci and G. Rega

### Computational Fluid-Structure Interaction

CISM-ECCOMAS International Summer School

June 27 - July 1

Invited Lecturers:

Santiago Badia (Barcelona, Spain), Charbel Farhat (Stanford, CA, USA), Jean-Frédéric Gerbeau (Paris, France), Roger Ohayon (Paris, France), Wolfgang A. Wall (Munich, Germany).

Coordinators:

C. Farhat and W. A. Wall

## Biological and Bio-inspired Fluid Mechanics

22th CISM-IUTAM International Summer School

July 4 - 8

Invited Lecturers:

Christophe Clanet (Palaiseau, France), Christophe Eloy (Marseille, France), Eric Lauga (Cambridge, UK), Geoff Spedding (Los Angeles, CA, USA), Holger Stark (Berlin, Germany), Petia M. Vlahovska (Providence, RI, USA).

Coordinators:

E. Lauga and C. Eloy

## The Role of Mechanics in the Study of Lipid Bilayers

July 11 - 15

Invited Lecturers:

Marino Arroyo (Barcelona, Spain), Luca Deseri (Trento, Italy), Markus Deserno (Pittsburgh, PA, USA), Jemal Guven (Mexico City, Mexico), Timothy J. Healey (Ithaca, NY, USA), David Steigmann (Berkeley, CA, USA).

Coordinator:

D. Steigmann

## Wall-Bounded Turbulence

July 18 - 22

Invited Lecturers:

Javier Jimenez (Madrid, Spain), Ivan Marusic (Melbourne, Australia), Beverley McKeon (Pasadena, CA, USA), Paolo Orlandi (Roma, Italy), Sergio Pirozzoli (Roma, Italy), Alexander J. Smits (Princeton, NJ, USA).

Coordinator:

S. Pirozzoli

## Multiscale Modeling of Flowing Soft Matter and Polymer Systems

July 25 - 29

Invited Lecturers:

Michael Allen (Bristol, UK), Paola Carbone (Manchester, UK), Daniele Marchisio (Torino, Italy), Ignacio Pagonabarraga (Barcelona, Spain), Jason Reese (Edinburgh, UK), Alessandro Troisi (Coventry, UK).

Coordinators:

P. Carbone and D. Marchisio

## The Alexandre Favre Session

### Mechanics and Physics of Fracture: Multi-scale Modeling of the Failure Behaviour of Solids

September 26 - 30

Invited Lecturers:

François Barthelat (Montreal, Canada), Jay Fineberg (Jerusalem, Israel), Jean-Baptiste Leblond (Paris, France), Alan Needleman (Denton, TX, USA), Laurent Ponson (Paris, France), Krishnaswamy Ravi-Chandar (Austin, TX, USA).

Coordinator:

L. Ponson

### Computational Contact and Interface Mechanics

October 3 - 7

Invited Lecturers:

Marc Geers (Eindhoven, The Netherlands), Jean-François Molinari (Lausanne, Switzerland), Alexander Popp (Munich, Germany), Stanislaw Stupkiewicz (Warsaw, Poland), Peter Wriggers (Hannover, Germany), Tarek Zohdi (Berkeley, CA, USA).

Coordinators:

A. Popp and P. Wriggers

## International Advanced Professional Training

### Vehicle Dynamics of Modern Passenger Cars

August 29 - September 2

Invited Lecturers:

Igo Besselink (Eindhoven, The Netherlands), Timothy Gordon (Lincoln, UK), Davor Hrovat (Dearborn, MI, USA), Peter Lugner (Vienna, Austria), Masao Nagai (Tokyo, Japan), Georg Rill (Regensburg, Germany).

Coordinator:

P. Lugner

### Time-periodic Systems: Theory and Application

September 5 - 9

Invited Lecturers:

Jan Awrejcewicz (Lodz, Poland), Fadi Donhal (Baden, Switzerland), Alexander Fidlin (Karlsruhe, Germany), Richard Rand (Ithaca, NY, USA), Subhash Sinha (Auburn, AL, USA), Jon Juel Thomsen (Bygning, Denmark).

Coordinators:

F. Donhal and R. Rand

## Meetings and Events

### CISM – Marie Curie Graduate School on Smart Structure for Vibro – Acoustic Control

Udine, April 18 - 21

Co-Chairs:

Wim Desmet (Belgium), Paolo Gardonio (Italy) and Bert Pluymers (Belgium)

### ROMANSY 2016, 21<sup>st</sup> CISM-IFTOMM Symposium on Theory and Practice of Robots and Manipulators

Udine, June 20 - 23

Co-Chairs:

Vincenzo Parenti Castelli (Italy) and Werner Schiehlen (Germany)

## 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 2016 Course Booklet can be downloaded from [www.cism.it/courses/](http://www.cism.it/courses/)

