ADMISSION AND ACCOMMODATION

The registration fee is:

- Euro 183,00 (Euro 150,00 + 22% Italian VAT taxes, where applicable) - lunches included.
- Euro 146,40 (Euro 120,00 + 22% Italian VAT taxes, where applicable) - lunches not included

Bank charges are not included.

The registration fee includes a complimentary bag, coffee breaks, social dinner and wi-fi internet access.

Participants must apply on-line by February 23, 2018, through our web site: http://www.cism.it/courses/E1802/.
A message of confirmation will be sent to accepted participants.
Information about travel and accommodation is available on our web site (http://www.cism.it/about/hotels/), or can be mailed upon request.

A limited number of rooms is available at our Guest House at the rate of Euro 30,00 per person/night
(mail to: foresteria@cism.it).

Applicants may cancel their course registration and receive a full refund by notifying CISM Secretariat in writing (by email to cism@cism.it) no later than two weeks before the beginning of the workshop.

If cancellation occurs less than two weeks before the beginning of the workshop, a Euro 50,00 handling fee will be charged. Incorrect payments are subject to Euro 50,00 handling fee.

Udine, Palazzo Del Torso, CISM location

For further information please contact:

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COMMON RESEARCH INTERESTS IN COMPUTATIONAL MECHANICS

1st GACM-GIMC workshop coordinated by

M. Kaliske
Technische Universität Dresden, Germany

S. Marfia
Università di Cassino e del Lazio Meridionale, Italy

A. Pandolfi
Politecnico di Milano, Italy

A. Reali
Università di Pavia, Italy

Udine February 28 - March 1 2018

COMMON RESEARCH INTERESTS IN COMPUTATIONAL MECHANICS

The German Association of Computational Mechanics (GACM) and the Italian Group of Computational Mechanics of the Italian Association of Theoretical and Applied Mechanics (GIMC-AIMETA) organize the First Joint GACM-GIMC workshop on "Common Research Interests in Computational Mechanics" with the aim to strengthen the collaboration between Italy and Germany in the broad field of Computational Mechanics.

We have invited scientists from both countries that in the past and in recent times have established common research activities. Invitees have been asked to present some recent work stemmed from the collaboration between the two countries.

Topics presented in the Workshop span from discretization approaches, damage and failure modeling, material modeling, computational micro-mechanics and bio-mechanics, and in general multi-physics and multi-scale methods.

The variety of themes and the prestige of the speakers render the workshop of great interest for researchers in Computational Mechanics, which are warmly invited to participate.

REGISTRATION and WELCOME

09:00 - 09:30

CONTENT

Wednseday, February 28

09.30 - 10.30   Session 1 - Chairman **Michael Kaliske**

Keynote Lecture - **Bernhard Schrefler** (Università di Padova)
Modeling drug delivery and efficiency in the tumor microenvironment

10.30 - 11.00   Coffee Break

11.00 - 13.00   Session 2 - Chairman **Alessandro Reali**

Otto von Estorff (TU Hamburg)
Computational Methods in Acoustics

Maria Laura De Bellis (Università del Salento)
Virtual element formulation for isotropic damage

Laura De Lorenzis (TU Braunschweig)
Phase-field modelling of fatigue fracture

Carolin Birk (Universität Duisburg-Essen)
Polygon elements based on the scaled boundary finite element method and potential applications

13.00 - 14.30   Lunch

14.30 - 16.00   Session 3 - Chairman **Marek Behr**

Carlo Callari (Università del Molise)
A new algorithm for the tracking of shear failure surfaces based on incompatible modes and strong discontinuity kinematics

Steffen Freitag (Ruhr-Universität Bochum)
Real-time predictions of uncertain settlements in mechanized tunneling

Paolo Valvo (Università di Pisa)
Stress analysis of wind turbine blades based on an extended shear formula

16.00 - 16.30   Coffee Break

16.30 - 18.00   Session 4 - Chairman **Sven Klinkel**

Marc-André Keip (Universität Stuttgart)
Modeling of magnetorheological elastomers across scales: from microstructure evolution to overall stability analysis

Stefano Mariani (Politecnico di Milano) Micromechanical characterization of polysilicon films through on-chip testing and Bayesian inverse modelling

Felix Fritzen (Universität Stuttgart)
Data-assisted computational homogenization using the RNEXP and open challenges

18.30 - 19.00   Discussion

20.00 - 23.00   Social Dinner

Thursday, March 1

08.30 - 10.00 Session 5 - Chairman **Wolfgang Wall**

Keynote Lecture - **Tim Ricken** (Universität Stuttgart)
Multiscale Simulation of Multiphase Materials

Ferdinando Auricchio (Università di Pavia)
3D printing: computational issues

10.00 - 10.30   Coffee Break

10.30 - 12.00   Session 6 - Chairman **Ines Wollny**

Stefan Löhnert (Leibniz Universität Hannover)
Simulating crack face contact and heat transfer across cracks using the XFEM

Lorenzo Sanavia (Università di Padova)
Modelling desiccation cracks in variably saturated porous media within the phase-field approach

Detlef Kuhl (Universität Kassel)
Higher Order Accurate Time Integration Schemes

12.00 - 13.30   Lunch

13.30 - 15.00   Session 7 - Chairman **Anna Pandolfi**

Michele Marino (Università di Roma Tor Vergata and Leibniz Univeritat Hannover)
Computational mechanical modelling of crimped fibers: a multiscale finite element formulation for flexible composites

Udo Nackenhorst (Leibniz Universität Hannover)
Computational Biomechanics of Bones

Giuseppe Vairo (Università di Roma Tor Vergata)
Chemo-mechano-biological modelling of soft tissues: the case of aortic tissues via a multiphysics and multiscale approach

15.00 - 15.30   Coffee Break

15.30 - 17.00   Session 8 - Chairman **Sonia Marfia**

Peter Betsch (Karlsruher Institut für Technologie)
GENERIC-based numerical methods for coupled thermomechanical problems

Fabian Duddeck (TU München)
Multi-fidelity optimization using physical and mathematical surrogates

Elio Sacco (Università di Cassino e del Lazio Meridionale)
Homogenization of nonlinear composites based on FTA approach

17.00 - 17.30   Workshop closure