



PROGRAMME 2023

www.cism.it

Rectors:
E. Guazzelli (Paris)
A. Soldati (Vienna)
W. A. Wall (Munich)

In 2023 the following Sessions will take place at the seat of CISM in Udine (Italy) and remotely

THE ALFRED KLUWICK SESSION

Fluid Mechanics of Planets and Stars

April 17 - 21

Invited Lecturers:
Isabelle Baraffe (Exeter, UK), Keaton J. Burns (Cambridge, MA, USA), Michael Le Bars (Marseille, France), Daniel Lecoanet (Evanston, IL, USA), Juan Pedro Mellado (Hamburg, Germany), Jérôme A. R. Noir (Zurich, Switzerland).

Coordinators: M. Le Bars, D. Lecoanet

Plastic Anisotropy and Damage from Single Crystal to Engineering Scale

May 22 - 26

Invited Lecturers:
Oana Cazacu (Shalimar, FL, USA), Odd Sture Hopperstad (Trondheim, Norway), Ricardo Lebensohn (Los Alamos, MN, USA), José A. Rodríguez Martínez (Madrid, Spain), Javier Segurado (Madrid, Spain), Stanisław Stupkiewicz (Warsaw, Poland).

Coordinators: O. Cazacu, J. A. Rodriguez-Martinez

Interfacial Flows - The Power and Beauty of Asymptotic Methods

June 5 - 9

Invited Lecturers:
Jens Eggers (Bristol, UK), Bernhard Scheichl (Vienna, Austria), Ory Schnitzer (London, UK), Jacco Snoeijer (Twente, The Netherlands), Howard A. Stone (Princeton, NJ, USA), Alexander N. Timokha (Kiev, Ukraine), Stephen Wilson (Glasgow, UK).

Coordinator: B. Scheichl

Nonlinear Electro- and Magneto-Mechanics: Theory, Computations, and Experiments

June 12 - 16

Invited Lecturers:
Kostas Danas (Palaiseau, France), Luis Dorfmann (Medford, MA, USA), Daniel Garcia-Gonzales (Madrid, Spain), Marc-André Keip (Stuttgart, Germany), Prashant Saxena (Glasgow, UK), Paul Steinman (Erlangen-Nuremberg, Germany).

Coordinators: P. Saxena, P. Steinmann

Wave Motion in Heterogenous Media: Analysis, Modeling and Design

June 19 - 23

Invited Lecturers:
Guillaume Bal (Chicago, IL, USA), Rémi Cornaggia (Paris, France), Richard Craster (London, UK), Bojan Guzina (Twin Cities, MN, USA), Dennis Kochmann (Zürich, Switzerland), Bruno Lombard (Marseille, France).

Coordinators: B. Guzina, B. Lombard

Liquid Interfaces, Drops and Sprays (LIDESP)

June 26 - 30

Invited Lecturers:
Alidad Amirfazli (Toronto, Canada), Volfango Bertola (Liverpool, UK), Marco Marengo (Brighton, UK), Alfredo Soldati (Vienna, Austria), Cameron Tropea (Darmstadt, Germany), Stéphane Zaleski (Paris, France).

Coordinators: A. Amirfazli, V. Bertola, M. Marego.

Physics of Granular Suspensions: Micromechanics of Geophysical Flow

8th CISM-AIMETA Advanced School

July 3 - 7

Invited Lecturers:
Pascale Aussillous (Marseille, France), Sivaramakrishnan Balachandar (Gainesville, FL, USA), Julien Chauchat

(Grenoble, France), Claudio di Prisco (Milan, Italy), Elisabeth Guazzelli (Paris, France), Laurent Lacaze (Toulouse, France), Marco Mazzuoli (Genoa, Italy), Dalila Vescovi (Milan, Italy).

Coordinators: L. Lacaze, M. Mazzuoli

Machine Learning for Fluid Mechanics

July 10 - 14

Invited Lecturers:
Steven L. Brunton (Seattle WA, USA), Andrea Ianiro (Madrid, Spain), Bernd R. Noack (Shenzhen, P.R. China), Themistokles Sapsis (Cambridge, MA, USA), Ricardo Vinuesa (Stockholm, Sweden), Xiaojing Wu (Xi'an, P.R. China).

Coordinators: S. L. Brunton, B. R. Noack

Variational Methods for Complex Materials and Processes

July 17 - 21

Invited Lecturers:
Laura De Lorenzis (Zurich, CH), Manuel Friedrich (Erlangen, Germany), Sanjay Govindjee (Berkeley, CA, USA), Klaus Hackl (Bochum, Germany), Dorothee Knees (Kassel, Germany), Laurent Stainier (Nantes, France).

Coordinators: K. Hackl, D. Knees

Microphysics of Atmospheric Clouds

July 24 - 28

Invited Lecturers:
Annica Ekman (Stockholm, Sweden), Kalli Furtado (Exeter, UK), Wojciech W. Grabowski (Boulder, CO, USA), Fabian Hoffmann (Munich, Germany), Szymon Malinowski (Warsaw, Poland), Annette Miltenberge (Mainz, Germany), Annika Oertel (Karlsruhe, Germany), Daniela Tordella (Torino, Italy).

Coordinator: D. Tordella

THE MORTON GURTIN SESSION

Vehicle Dynamics, Control and Design

9th CISM-AIMETA Advanced School

September 4 - 8

Invited Lecturers:
Ricardo de Castro (Merced, CA, USA), Basilio Lenzo (Padua, Italy), Mathias Lidberg (Gothenburg, Sweden), Frank Naets (Leuven, Belgium), Gabor Orosz (Ann Arbor, MI, USA), Carlo Rottenbacher (Pavia, Italy).

Coordinators: B. Lenzo, F. Naets

Lagrangian Approaches to Multiphysics Two-Phase Flows

September 11 - 15

Invited Lecturers:
Pep Español (Madrid, Spain), Jochen Fröhlich (Dresden, Germany), Christophe Henry (Valbonne, France), David Le Touzé (Nantes, France), Alex Liberzon (Tel Aviv, Israel), Jacek Pozorski (Gdansk, Poland).

Coordinators: C. Henry, J. Pozorski

Scientific Machine Learning in Design Optimization

8th CISM-ECCOMAS Advanced School

September 18 - 22

Invited Lecturers:
Stefanie Elgeti (Vienna, Austria), Elie Hachem (Sophia Antipolis, France), Matthias Möller (Delft, The Netherlands), Paris Perdikaris (Philadelphia, PA, USA), Gianluigi Rozza (Trieste, Italy), Sebastian Schöps (Darmstadt, Germany).

Coordinators: S. Elgeti, M. Möller

Batteries - Basic Principles, Experimental Investigations and Modeling across Scales

September 25 - 29

Invited Lecturers:
Oleg Borodin (Adelphi, MD, USA), David Howey (Oxford, UK), Jürgen Janek (Gießen, Germany), Arnulf Latz (Ulm, Germany), Yue Qi (Providence, RI, USA), Wolfgang A. Wall (Munich, Germany).

Guest Lecturers:
Long-Qing Chen (State College, PA, USA), Edwin Knobbe (Munich, Germany)

Coordinators: A. Latz, W. A. Wall

Landslides Mechanics: from Complex Granular Behaviour to Field-Scale Flows

October 2 - 6

Invited Lecturers:
Nico Gray (Manchester, UK), Elisabeth Guazzelli (Paris, France), Roland Kaitna (Vienna, Austria), Anne Mangeney (Paris, France), Prabhu Nott (Bangalore, India), Dave Petley (Sheffield, UK), Olivier Pouliquen (Marseille, France), Fahrang Radjai (Montpellier, F).

Coordinators: R. Kaitna, A. Mangeney

Model Order Reduction for Design, Analysis and Control of Nonlinear Vibratory Systems

October 9 - 13

Invited Lecturers:
Attilio Frangi (Milan, Italy), Malte Krack (Stuttgart, Germany), Walter Lacarbonara (Rome, Italy), Olivier Thomas (Lille, France), Cyril Touzé (Palaiseau, France), David Wagg (Sheffield, UK).

Coordinators: A. Frangi, C. Touzé

Virtual Elements for Problems in Mechanics

October 16 - 20

Invited Lecturers:
Edoardo Artioli (Rome, Italy), Lourenco Beirao da Veiga (Milan, Italy), Jože Korelc (Ljubljana, Slovenia), Alessandro Russo (Milan, Italy), Sukumar Natarajan (Davis, CA, USA), Peter Wriggers (Hannover, Germany).

Coordinators: L. Beirao da Veiga, P. Wriggers

Delays and Structures in Dynamical Systems: Modeling, Analysis and Numerical Methods

November 20 - 24

Invited Lecturers:
Odo Diekmann (Utrecht, The Netherlands), Tony Humphries (West Montreal, Canada), Davide Liessi (Udine, Italy), Zachary McCarthy (Toronto, Canada), Stefano Maset (Trieste, Italy), Shigui Ruan (Coral Gables, FL, USA), Francesca Scarabel (Leeds, UK), Rossana Vermiglio (Udine, Italy).

Coordinators: D. Breda (Udine, I), J. Wu (Toronto, Canada)

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.
Related information is available on www.cism.it.

Admission to Courses

Detailed programmes, admission rules and on-line application forms are available on www.cism.it.

