

Program

Monday 31/03/2025

Session 1

9:00-9:30	dell'Isola F.: 2D generalized continuum modeling cornea changes of shapes induced by pathogenetical-process-related mechanical damage
9:30-10:00	Murcia Terranova L.: Third gradient one-dimensional continua: Examples and computational identification of system parameters via a best-fitting approach
10:00-10:30	Buchmann E.: Thermoelastic meta-structures for space instruments: structural architectures, analysis and design
10:30-11:00	Rosi G.: Elastic metamaterials: an opportunity for biomechanics
11:00-11:30	Break
11:30-12:00	Soize C.: Potentially useful probabilistic approaches to uncertainty quantification and statistical surrogate models for metamaterials design
12:00-12:30	La Valle G.: Particle-based materials: nonlocal elasticity, stochastic analysis, and wave propagation-based identification
12:30-13:00	Placidi L.: Geometrical and Material Nonlinear Effects in Granular Micromechanics: Effects of Grain-Pair Tangential Plasticity, Induced Anisotropy and Lennard-Jones type potential energy interaction
13:00-15:00	Lunch
15:00-15:30	Barchiesi E.: Solitary wave propagation in monolayered pantographic waveguides
15:30-16:00	McAvoy A.: Cosserat elasticity of multiscale fibrous metamaterials
16:00-16:30	Break
16:30-17:00	Szlachetka O.: Unified theory of heat conduction combining the Fourier and Cattaneo models within tolerance modelling in multilayer composites

Tuesday 01/04/2025

Session 2

9:00-9:30	Di Carlo G.: The long journey of craniofacial growth from classical theories to complexity hypothesis
9:30-10:00	Esposito R.: Maxillary expansion: biomechanical comparison of different treatment protocols
10:00-10:30	Staderini E.: Chemical, optical, and morphological properties of TPU and PET-G samples after thermoforming process and aging in artificial saliva: in vitro studies
10:30-11:00	Tepedino M.: Orthodontic tooth movement: A complex biomechanical phenomenon
11:00-11:30	Break
11:30-12:00	Ciavarella D.: Biomechanics in orthodontic treatment a new approach with LUMACA fixed appliance
12:00-12:30	Lupi E.: Custom Made implants in mandibular reconstruction
12:30-13:00	Bednarczyk E.: Investigation and advancement of cold spray coating technologies on biocompatible PA2201 base
13:00-15:00	Lunch
15:00-15:30	Brun M.: Edge Resonances in a triangular lattice waveguide
15:30-16:00	Hild F.: On multiscale DVC analyses to assess the hinge behavior in pantographic metamaterials
16:00-16:30	Break
16:30-17:00	Bagherifard S.: Implementing heterogeneity in lattice design
17:00-17:30	Valmalle M.: Mesoscale DVC Analyses and parameter calibration for BCC Lattice under compression
17:30-18:00	Bersani A.: Mathematical modeling of some intracellular and intercellular phenomena

Wednesday 02/04/2025

Session 3

9:00-10:0	Bigoni D.: Structures and solids without an elastic potential
10:00-10:30	Anil M.: Physical and Numerical Experiments with Chiral Granular Motif Metamaterials Conceived using Granular Micromechanics based Extended Micropolar Model
10:30-11:00	Eremeyev V.: On rotary inertia and microinertia in the case of beam-lattice metamaterials
11:00-11:30	Break
11:30-12:00	dell'Isola F.: to be announced
12:00-12:30	Claude B.: About duoskelion beam
12:30-13:00	Desmorat B.: On exotic linear materials: 2D elasticity and beyond
13:00-14:30	Lunch

Thursday 03/04/2025

Session 4

9:00-9:30	Fau A.: Random initial second-order damage tensor
9:30-10:00	Abali E.: Parameter determination in strain gradient elastodynamics
10:00-10:30	Piovano P.: Microscopic derivation of continuum theories for solid-state wetting and dewetting
10:30-11:00	Grillo A.: Methods of analytical mechanics in biomechanics and continua with defects and microstructure: a review of models and problems
11:00-11:30	Break
11:30-12:00	Martinez J.: Mechanical Cloaking of Halftoned Imagery
12:00-12:30	Tarantino G.: Metamaterials with Encoded Disorder
12:30-13:00	Rocco A.: Quantification of tensile damage mechanisms in random porous metamaterials via FEMU and integrated DVC
13:00-15:00	Lunch
15:00-15:30	Danas K.: Magnetorheological elastomers as soft re-programmable metamaterials
15:30-16:00	Yang B.: Elastodynamics of graphene with nonlinear higher order strain gradient effects
16:00-16:30	Break
16:30-17:00	Moschini S.: Kinematics of ZAPAB (Zigzagged Articulated Parallelograms with Articulated Braces) Mechanisms
17:00-17:30	Rapisarda C.: Beyond Classical Continua: Third-Gradient Effects on Wave Transmission in 1D Metamaterials

Friday 04/04/2025

Session 5

9:00-9:30	Ciallella A.: Model-Driven Digital Volume Correlation: Insights into Deformation of Architected Materials
9:30-10:00	De Santis C.: Coarse-to-fine vs fine-to-coarse graded through micro-mechanics-based strain gradient approach to brittle fracture
10:00-10:30	Koumako C.: On the static and dynamic behavior of 2D Discrete Cosserat Media
10:30-11:00	Rapisarda C.: A Kinematic Approach to Material Deformation: A Discrete Model for Efficient Fracture and Complex Phenomena Analysis
11:30-12:00	Venditti E.: to be announced
11:30-12:30	Brunch