

## RECENT ADVANCES IN MECHANICS AND MATHEMATICS OF MATERIALS

4th International Meeting of Young Researchers

Rome, February 21<sup>st</sup>-22<sup>nd</sup> 2024 - Faculty of Civil and Industrial Engineering - Room 17

## **Keynote Lectures**

Antonio DE SIMONE Scuola Superiore Sant'Anna (Italy) Morphing and shape control, with applications to biological and bio-inspired motility Vikram DESHPANDE University of Cambridge (UK) 3D observations drive a new paradigm in rubber elasticity Michel JABBOUR École Polytechnique (France) Crystal Growth: Surface Evolution and Stability

## **Speakers**

Barbora BENEŠOVÁ (Czech Republic) Non-interpenetration in thin films

Harold BERJAMIN (Ireland) On the dynamics of soft magnetoelastic composites

**Emanuela Bosco (the Netherlands)** A chemo-mechanical model to predict the aging and degradation of historical paintings

Noy Cohen (Israel) Exploiting geometric incompatibilities to induce twist in tubular structures

**Alexander ERLICH (France)** Mechanical feedback and incompatibility in size regulation

**Stavros GAITANAROS (USA)** Shock dynamics of architected materials

**Pavel GALICH (Israel)** Phononic crystals inspired by the wallpaper groups

**Laurent GUIN (France)** Effect of stress on the electrochemical response of silicon electrodes

**Martin Horak (Czech Republic)** Beam lattice metamaterials with internal contact

Dipartimento di Ingegneria Strutturale e Geotecnica



## Organizers

Jacopo CIAMBELLA - Antonino FAVATA





**Ajeet KUMAR (India)** An electroelastic Kirchhoff rod theory incorporating free space electric energy

**Alessandro LERONNI (UK)** Osmotic pressure: how to account for it in chemo-mechanical theories?

**Ornella MATTEI (USA)** Bounds on the time response of viscoelastic composites

**Eoin McEvoy (Ireland)** Mechanobiology of stress-dependent cell and tumour growth

Siddharta Harsha Ommi (France) Modeling of drying-induced complex fracture initiation in granular geomaterials

**Marco PENSALFINI (Spain)** Modeling the contribution of intermediate filaments to load bearing in stretched epithelia

Marco PICCHI SCARDAONI (Italy) Bending of tape spring devices

Souyahl SADIK (Denmark) Nonlinear Anisotropic Viscoelasticity

Marco SALVALAGLIO (Germany) Elasticity and plasticity at the mesoscale by phase field crystal modeling

