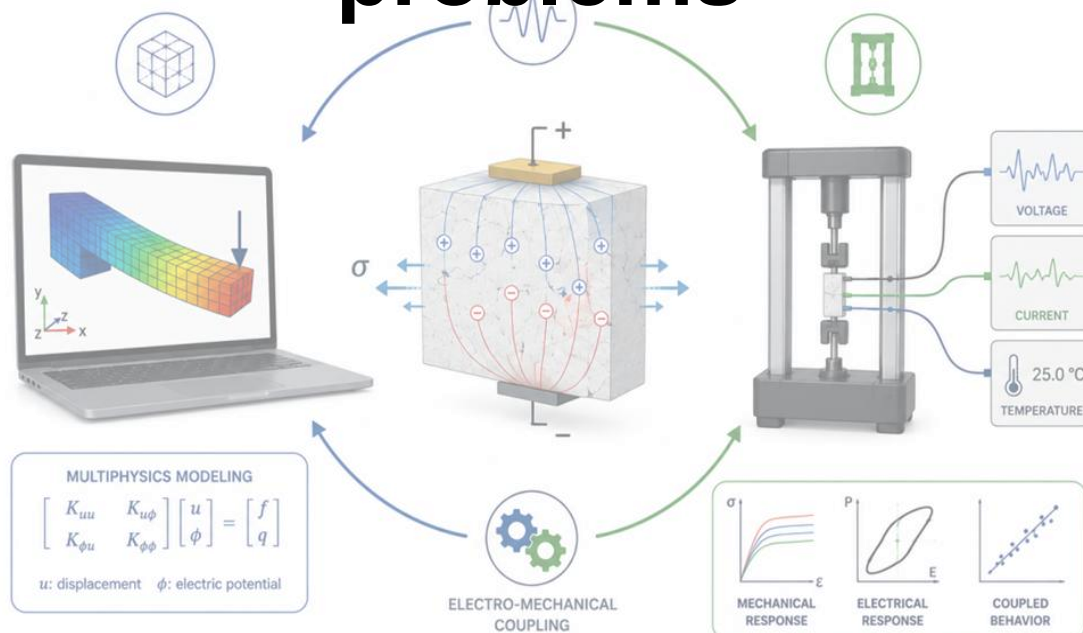


Workshop

Advancements in modeling and testing of mechanics-coupled problems



15th September 2026

Dept. of Civil & Environmental Engineering
Univ. of Florence
Via di S. Marta 3, 50139 Florence

Workshop program

			Session 1	chair: <i>Roberto Brighenti</i>		
	time		Authors	Title	presenter	email
1	9:30:00	9:50:00	Hamdi Ezzin, Silvia Monchetti, Roberto Brighenti	In vitro evaluation of a new multilayer energy harvesting device based on PVDF	Hamdi Ezzin	hamdi.ezzin@unifi.it
2	9:50:00	10:10:00	Marco Paggi, Hamed Zarei, Mohadeseh Fallah	Micro-mechanical testing of paper fracture and its stochastic network model	Marco Paggi	marco.paggi@imtlucca.it
3	10:10:00	10:30:00	Silvia Monchetti, Roberto Brighenti	Polymer-based piezoelectric energy harvesters: modeling and testing	Silvia Monchetti	silvia.monchetti@unifi.it
4	10:30:00	10:50:00	Lorenzo Bardella	A note on the electrochemo-poromechanics of ionomeric membranes	Lorenzo Bardella	lorenzo.bardella@unibs.it
	10:50:00	11:20:00	Coffee break			
			Session 2	chair: <i>Silvia Monchetti</i>		
	time		Authors	Title	presenter	email
1	11:20:00	11:40:00	Michele Brun, Giorgio Carta, Michael J. Nieves, Vincent Pagneux	Bridging the Discrete and Continuous: Edge Resonance in Structured Elastic Waveguides	Michele Brun	michele.brun@unica.it
2	11:40:00	12:00:00	Angelo Simone	Non-Conformal Modeling of Fiber Reinforcements	Angelo Simone	angelo.simone@unipd.it
3	12:00:00	12:20:00	Massimiliano Gei	Principle of mechanical-to-electrical energy conversion with soft dielectrics	Massimiliano Gei	massimiliano.gei@dia.units.it
4	12:20:00	12:40:00	Paoloni A., Parente L., Zuppi R. and Addressi D.	3D printed lattice metamaterials: effects of geometric defects	Daniela Addressi	daniela.addressi@uniroma1.it
	12:40:00	14:00:00	Lunch			

			Session 3	chair: <i>Marco Paggi</i>		
	time		Authors	Title	presenter	email
1	14:00:00	14:20:00	Sonia Marfia, Denis Linardi, Elisabetta Monaldo	From experimental evidence to modelling of the mechanical response of 3D-printed materials	Sonia Marfia	sonia.marfia@uniroma3.it
2	14:20:00	14:40:00	Maria Lazari, Zechao Chen, Matteo Camporese, Chenyi Luo, Laura De Lorenzis, Ziad Sahlab, Lyesse Laloui, Lorenzo Sanavia	Multiphysics modelling of multiphase porous materials with application to landslides and desiccation cracks	Lorenzo Sanavia	lorenzo.sanavia@unipd.it
3	14:40:00	15:00:00	Giulio Lucci, Paola Nardinocchi, Stefano Turzi	Analysis of the spatial and material flow rules which govern remodeling in active gel discs	Paola Nardinocchi	paola.nardinocchi@uniroma1.it
4	15:00:00	15:20:00	Chiara Pepi, Vittorio Gusella, Mircea D. Grigoriu, Massimiliano Giofrè	Size effects on the mechanical behavior of single-layer graphene sheets with geometric defects: a probabilistic and machine learning assisted approach	Chiara Pepi	chiara.pepi@unipg.it
5	15:20:00	15:40:00	Nicolò Vaiana, Luciano Rosati	Recent Updates of the Vaiana-Rosati model of rate-independent hysteresis	Luciano Rosati	rosati@unina.it
6	15:40:00	16:00:00	Paolo Fisicaro, Lucia Lottici, Paolo S. Valvo	Position-based formulation for nonlinear finite element analysis	Paolo Sebastiano Valvo	paolo.sebastiano.valvo@unipi.it
	16:00:00	16:20:00	Closing of the workshop & discussion			
	16:20:00	17:00:00	Refreshment			

Venue

Aula Caminetto (ground floor, S. Marta building)

Dept. of Civil & Environmental Eng., Univ. of Florence
Via di S. Marta, 3 - 50139 Florence – Italy ([Google map](#))



Workshop Fees

Participation in the workshop is free

Coffee breaks are offered to all participants

About The Workshop

The workshop on ***Advancements in modeling and testing of mechanics-coupled problems*** is the closing event of the HORIZON-MSCA-PF project [NEW-TECH](#) (GA 101147327).

The general aim of the workshop is to gather researchers and PhDs, working on mechanics-coupled problems, to share their knowledge and experiences in this field.

Presentations addressing the following topics are particularly welcome:

- Response of materials and systems involving physics-, bio-, and chemo-mechanics coupling
- Active and responsive materials
- Bio-inspired materials and metamaterials
- Auxetics, origami, and kirigami metamaterials
- Mechanics of gels
- Piezoelectric materials
- Dielectric materials
- Highly deformable materials
- Shape memory materials

All materials are concerned, particularly: polymers, gels, biomaterials, ceramics, sintered materials, etc.

Beyond the scientific presentations, a discussion session to promote idea exchange and to propose new research directions will be organized in the afternoon.

Workshop organizers

Prof. Roberto Brighenti – Univ. of Florence, Italy

Prof. Silvia Monchetti – Univ. of Florence, Italy

Dr. Hamdi Ezzin – Univ. of Florence, Italy

Registration

For info please send an email either to:

Prof. Roberto Brighenti: roberto.brighenti@unifi.it

Prof. Silvia Monchetti: silvia.monchetti@unifi.it