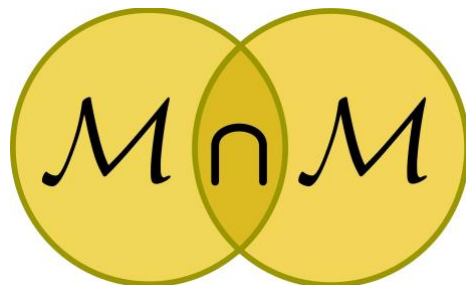




**Joint MEMOCS Workshop on
Models of Complex Materials and Systems
20-23 June 2019, Arpino, Italy**

Venue: Hotel Il Cavaliere D'Arpino, via della Vittoria Colonna 21, Arpino

Organized by
CNRS Federation of Paris Mechanics Labs
&
International Research Center M&MoCS, University of L'Aquila



Thursday 20 June

09:00-9:30	<i>Registration Session</i>	
9:30-10:00	Welcome words	Francesco dell'Isola (M&MoCS, Università degli Studi de L'Aquila)
10:00-10:30	Topology optimization of planar pantographic structures	Boris Desmorat (Institut Jean Le Rond d'Alembert, France)
10:30-11:00	<i>Coffee break</i>	
11:00-11:30	Violations of Second Law of Thermodynamics vis-à-vis Continuum Mechanics	Martin Ostoja Starzewski (University of Illinois, USA)
11:30-12:00	Mathematical models of auxetic materials via fractional calculus approach	Marina Shitikova (Voronezh State University, Russia)
12:00-12:30	New aspects of the trabecular bone remodeling regulatory model resulting from the shape optimization studies	Michal Nowak (Poznan University of Technology, Poland)
12:30-14:00	<i>Lunch</i>	
14:00-14:30	Correspondence theorems for the generalized media models with defects and gradient models and dependence of gradient elastic material constants on a field of defects	Sergey Lurie (Institute of Applied Mechanics of the Russian Academy of Sciences, Moscow)
14:30-15:00	Vibration mitigation through analogous piezoelectric coupling	Boris Lossouarn (LMSSC), (Cnam), Paris, France)
15:00-15:30	On flow rules of the plastic slip at a grain boundary obtained by invariance considerations	Andreas Prahs (Karlsruhe Institute of Technology (KIT), Karlsruhe, Germany)
15:30-16:00	Asymptotic solutions of second order equations with holomorphic coefficients	Maria Korovina & Vladimir Smirnov (Lomonosov Moscow State University & Moscow Aviation Institute (NRU), Russia)
16:00-16:30	<i>Coffee break</i>	

16:30-20:00

Thematic discussions

20:00-22:00

Dinner

Friday 21 June

09:00-9:30	Tailoring 3d buckling in microscale	Zacharias Vangelatos (University of California, Berkeley, USA)
9:30-10:00	Homogenization of permeo-elastic materials application to acoustics	Claude Boutin (Ecole Nationale des Travaux Publics de l'Etat, Université de Lyon, France)
10:00-10:30	Wave propagation in a cracked solid	Ioan R. Ionescu (LSPM, University Paris 13, France)
10:30-11:00	<i>Coffee break</i>	
11:00-11:30	Discrete homogenization of lattice structured continua	Massimo Cuomo (Università degli Studi di Catania, Italy)
11:30-12:00	Flocking rules governing swarm robot as tool to describe continuum deformation	Ramiro dell'Erba (ENEA, Italy)
12:00-12:30	Pantograph: measurement of small rotational moments as experienced by the pivots	Antonina Trippel (University of Freiburg/ INATECH, Germany)
12:30-14:00	<i>Lunch</i>	
14:00-14:30	Inquiring material properties at high rates of strain: challenges & solutions	G. C. Ganzenmüller (Albert-Ludwigs Universität Freiburg, INATECH, Germany)
14:30-15:00	Influence of randomness in topology and geometry on the stiffness of different networks generated from the same graph	Uwe Mühlich (Universiteit Antwerpen/ Faculty of Applied Engineering, Belgium)
15:00-15:30	Band-gap dynamics of Tensegrity Mass-Spring Chains	Ada Amendola (Università degli Studi di Salerno, Italy)
15:30-16:00	Solitary Wave Dynamics of Tensegrity Metamaterials	Ferdinando Fraternali (Università degli Studi di Salerno, Italy)

16:00-16:30

On the three-dimensional pantographic Structures and the well-posedness of corresponding boundary-value problems

Victor Eremeyev
(Gdańsk University of Technology,
Poland)

16:30-17:00

Coffee break

17:00-20:00

Excursion

20:00-22:00

Banquet

Saturday 22 June

09:00-9:20	A Green operator-based elastic modeling for two-phase pantographic-inspired bi-continuous materials	Mario Spagnuolo (Université Paris 13 Nord, France)
9:30-10:00	Derivation of stress gradient theory for membranes from three-dimensional linear elasticity	Pierre Seppecher (Université de Toulon, France)
10:00-10:30	On the use of FE-based DIC to measure the kinematics of metamaterials at different scales	François Hild (Ecole normale supérieure de Cachan ENS Cachan, France)
10:30-11:00	<i>Coffee break</i>	
11:00-11:30	Application of Micromorphic Model based Upon Granular Micromechanics	Anil Misra (Kansas University, USA)
11:30-12:00	FE verification of Chiral metamaterial design using granular micro-mechanics	Michele De Angelo (Università degli Studi dell'Aquila, Italy)
12:00-12:30	Damage evolution of second gradient effective elastic moduli of heterogeneous granular materials with numerical simulations	Luca Placidi (Università Telematica Uninettuno, Italy)
12:30-14:00	<i>Lunch</i>	
14:00-14:30	To be announced	M. Erden Yildizdag (M&MoCS, University of L'Aquila, Italy)
14:30-15:00	On Problem of Eigenvalues of Material Properties Tensors and Velocities of Wave Propagation in the Structures	M. Nikabadze, H.Matevossian, A. Ulukhanian (Russian Academy of Sciences, Mocow, Russia)
15:30-19:30	<i>Thematic discussions and Excurtion</i>	

20:00-22:00

Dinner

Sunday 23 June

9:00-9:30	Some complementary topics in the theory of bi-pantographic fabrics	Emilio Barchiesi (Università degli Studi di Roma La Sapienza, Italy)
9:30-9:45	Boundary-element solution for a problem of a cavity in poroviscoelastic media under internal pressure	Tatiana Iuzhina (Mechanics, National Research Lobachevsky State University of Nizhni, Novgorod, Russia)
9:45-10:00	Numerical analysis of permeability coefficient influence on dynamic responses in poroviscoelastic solids using bem	Aleksander Ipatov (Mechanics, National Research Lobachevsky State University of Nizhni, Russia)
10:30-12:45	<i>Thematic discussions and Brunch</i>	
13:00	Departure for Roma Fiumicino Airport	