



Bilateral French-Italy Workshop
Computational methods and scale
transition for geomaterials

Organized by

GdRI GeoMech & MEMOCS

Arpino, Italy, 20-22 May 2019

Monday 20 May

17:00-17:20	Welcome words	
17:20-18:20	KEYNOTE Strain mechanisms in particulate media– Experimental approaches	M. Hattab, LEM3, Metz
18:20-18:50	Multiscale characterization of effective conductivity of random heterogeneous porous media: multiple versus single realization approaches	B. Noetinger, IFPEN, Paris, France
18:50-19:20	Strain gradient damage and fracture mechanics for granular heterogeneous materials	L. Placidi, ITUU, Italy
19:20-19:50	Some results about multiscale modeling of ultrasonic shot peening based on combined analysis DEM-FEM	C. Nougier, LTDS, ECL, France
20:00-22:00	<i>Dinner</i>	

Tuesday 21 May

09:00-10:00	KEYNOTE A modern view of instability and failure in granular media	F. Darve, 3SR Grenoble, France
10:00-10:30	Discrete and continuum approaches of failure in materials	F. Nicot, Irstea Grenoble, France
10:30-11:00	<i>Coffee break</i>	
11:00-11:30	A bi-dimensional nonlinear Biot-Cosserat model for a medium with grain assemblies immersed in a solid matrix	Y. Giorgio, Università degli Studi di Roma La Sapienza, Italy
11:30-12:00	Assessing interparticle contact forces from experiments on 2D granular media	M. Tolomeo, 3SR, Grenoble, France
12:00-12:30	Towards a Level Set Discrete Element Method in YADE for a generic shape description	J. Duriez, Irstea Aix, France
12:30-14:00	<i>Lunch</i>	
14:00-14:30	Numerical modeling of cohesive and submerged granular discharge using lattice Boltzmann and discrete element method	Fan Jianhua, French Geological Survey (BRGM), IRSTEA, France
14:30-15:00	Material and structural softening from mesoscale perspectives	A. Wautier, Irstea Aix, France
15:00-15:30	Recent results on the micromechanical modeling of backward piping erosion	F. Froiio, ECL, France
15:30-16:00	Some remarkable initial boundary value problems for 1D higher order saturated porous media	E. Barchiesi, M&MoCS, Università degli Studi dell'Aquila, Italy
16:00-16:30	Wave dispersion in a certain class of microstructured solids and a related synthesis problem	E. Yildizdag, M&MoCS, Università degli Studi dell'Aquila, Italy
16:30-17:00	<i>Coffee break</i>	
17:00-20:00	Thematic discussions + excursion	
20:00-22:00	<i>Banquet</i>	

Wednesday 22 May

9:00-10:00	KEYNOTE A Hencky type discrete nonlinear model for a planar assembly of grains. Difficulties in finding homogenised models and possible solutions.	F. Dell Isola , M&MoCS, Italy
10:00-11:00	KEYNOTE How to find the homogenised generalised continuum starting from a discrete system of extensional springs: the linear case.	P. Seppecher, Toulon University, France
11:00-11:30	<i>Coffee break</i>	
11:30-12:00	Some discrete models for planar systems of springs: some technical solutions for numerical simulations based on Riks arc-length method.	E. Turco, Università di Sassari, Italy
12:00-13:30	<i>Lunch</i>	
13:30	Departure for Roma Fiumicino airport	