

Workshop GdRI Geomech 2019

January 28-29, 2019

“Petit Amphithéâtre” UFR-MIM
Metz technopole

Program

*Micromechanical behaviour and scale transition
in porous media and particulate system*



*Hosted by Université de Lorraine – LEM3
Organized in collaboration with the local GeoMech team*

GdRI GeoMech heads

Olivier MILLET

Université de La Rochelle, LaSIE, UMR CNRS 7356, La Rochelle

François NICOT

IRSTEA, Grenoble

MONDAY JANUARY 28, 2019	
10:00 am to 11:00 am	Breakfast and opening session
11:00 am to 11:50 am	Multi-scale instabilities of thin sheets Michel POTIER-FERRY <i>LEM3, Université de Lorraine</i>
11:50 am to 12:20 pm	Recent Micromechanical Results on Poroplasticity of Geomaterials Djimédo KONDO <i>IJLRDA, Université Paris 6</i>
12:20 pm to 02:30 pm	Lunch
02:30 pm to 03:00 pm	An RVE-based multiscale description of granular media with micro-kinetics Stéphane BONELLI <i>Recover Irstea</i>
03:00 pm to 03:30 pm	A Discrete Approach to Stress Induced Permeability Changes in Argillaceous Rocks Luc SCHOLTES <i>GeoRessources, Université de Lorraine</i>
03:30 pm to 04:00 pm	Pendular capillary bridges between non-perfectly wettable spherical particles Chaofa ZHAO <i>LaSIE, Université de La Rochelle</i>
04:00 pm to 04:15 pm	Refreshment & Coffee
04:15 pm to 04:45 pm	A Reduced Order Model for Diffusion in Porous Media Antoine MOREAU <i>LaSIE, UMR CNRS 7356, Université de La Rochelle</i>
04:45 pm to 05:15 pm	Micromechanical modelling of damage from cement paste scale to mortar scale Abderrahmane RHARDANE <i>GeM, Ecole Centrale de Nantes</i>
05:15 pm to 05:45 pm	Upscaling diffusion transfer coupled to heterogeneous chemical reaction in porous media Khaled BOURBATACHE <i>LGCGM, INSA de Rennes</i>
05:45 pm to 06:15 pm	3D print of ceramic pieces: numerical modeling of dry process Hamza HADDAD <i>LTI, Université de Picardie</i>
07:30 pm	Banquet Dinner Saint-Pierre-Aux-Nonnains - Historical city of Metz – Quartier de la Citadelle-Metz

TUESDAY, JANUARY 29, 2019

09:00 am to 09:50 am

Multiscale poromechanics of wet cement paste

Roland JM PELLENG

The joint MIT - CMRS - AMU laboratory, UMI3466, MIT, Cambridge, MA, US

09:50 am to 10:40 am

Mixture theory-based gradient poroelasticity. A retrospective view on selected topics

Emilio BARCHIESI

Memocs Università dell'Aquila and Università di Roma "La Sapienza", Italy

10:40 am to 11:00 am

Homogenization à la Cosserat for grains assemblies

Ivan GIORGIO

International Research Center for the Mathematics and Mechanics of Complex Systems, Italy

11:00 am to 11:15 am

Coffee break

11:15 am to 11:45 am

A nonlinear Lagrangian particle model for grains assemblies including grain relative rotations

Francesco DELL'ISOLA

MemocsUniversitàdell'Aquila and Università di Roma "La Sapienza", Italy

11:45 am to 12:15 pm

Dilatancy behaviour in remoulded clays and microscopic mechanisms

Mohamad JRAD

LEM3, Université de Lorraine

12:15 pm to 12:45 pm

Experimental analyses of cracks Formation and propagation in the remoulded clays on drying path

Lamine IGHIL-AMEUR

Cerema

12:45 pm to 02:30 pm

Lunch

02:30 pm to 03:00 pm

Effective properties of oolitic rocks with micro and meso pores. Application to limestones

Albert GIRAUD

GeoRessources, Université de Lorraine

03:00 pm to 03:30 pm

A micromechanical approach based on Fourier transforms and continuum dislocation mechanics to simulate grain size effects in polycrystals

Stéphane BERBENNI

CNRS, LEM3, Université de Lorraine

03:30 pm

Closing of the GdRI GeoMech 2019 Workshop