GDRI GeoMech Workshop on

Advanced modelling in particulate and cohesive materials

Organized by

GDRI GeoMech & ECL–LTDS

Lyon, France, 22-23 January 2018

Monday 22 January

10h30-11h00	***Registration and coffee***	
11h00-11h10	Welcome foreword	J.-P. Bertoglio, O. Millet, F. Nicot
11h10-12h00	**KEYNOTE** **The upscaling approach in granular materials: *40 years of questions***	B. Cambou (LTDS)
12h00-12h25	Anisotropy and heterogeneity of internal structures in granular materials	J. Liu (IRSTEA)
12h25-12h50	Using DEM to model breakable grains under uniaxial compression	F. Nader (GeoMaS)
12h50-14h00	***Lunch***	
14h00-14h25	Fabric response to strain probing in isotropic granular materials	N.P. Kruyt (Univ. Twente)
14h25-14h50	Quantitative prediction of discrete element models on complex loading paths	L. Sibille (3SR)
14h50-15h15	A (nearly) complete numerical picture of grains immersed in one or more fluids	B. Chareyre (3SR)
15h15-15h40	Suffusion micromechanics: accounting for fluid/grains interactions	A. Wautier (IRSTEA)
15h40-16h05	***Coffee break***	
16h05-16h30	FDM based 1D internal erosion analysis from single to multi-layers with random field	J. Yang (GeM)
16h30-16h55	Use of a particle model for studying coupled phenomena in the near well area for geothermal applications	A. Blaisonneau (BRGM)
16h55-17h20	On the role of pore pressure in dynamic instabilities of saturated model granular materials	T. Doanh (LTDS)
17h20-17h45	**Thematic discussion**	F. Nicot, O. Millet
20h30-23h00	***Banquet***	

Tuesday 23 January

09h00-09h50	**KEYNOTE** **The modelling of mechanical degradation in quasi-brittle systems : between the continuous and discontinuous standpoints**	N. Möes (ECN-GeM)
09h50-10h15	Acoustic emission analysis of damage process in coubourg limestone	F. Grondin (GeM)
10h15-10h40	A variational scheme for damaged elasto-plastic springs and application to granular micromechanics of cohesive materials	L. Placidi (Univ. Nettuno)
10h40-11h05	***Coffee break***	
11h05-11h30	Towards the design of an enriched concrete with enhanced dissipation performances	I. Giorgio (Univ. Sapienza)
11h30-11h55	Mesoscale numerical investigation of aggregate size effect in concrete by discrete element method.	R. Zhu (GeM)
11h55-12h20	Introduction of development platform for constitutive modelling of soils	Z. Yin (GeM)
12h20-14h00	***Lunch***	
14h00-14h25	*Title to be confirmed*	J. Desrues (3SR)
14h25-14h50	*To be confirmed*	F. Dedecker / S. Emam (ITASCA)
14h50-15h15	Modeling the collapse of a cohesive soil layer induced by an underneath cavity	L.-H. Luu (IRSTEA)
15h15-16h00	**CLOSING DISCUSSION**	F. Nicot, O. Millet