

IRN GEOMECH

Multi-Physics and Multiscale Couplings in Geo-environmental Mechanics

Annual Seminar

La Rochelle, 24-26 June 2024

Program

Monday June, 24th

10h00-11h30	Arrival – Welcome coffee	
11h30-11h45	Welcome message	Olivier & François
11h45-12h30	Introduction keynote	Félix Darve, L3SR
12h30-14h00	<i>Lunch (Résidence Lafayette)</i>	
14h00-15h00	Modelling capillarity	Olivier Millet, LaSIE
15h00-15h30	DEM-LBM simulations	Nabil Younes, LaSIE-LMGC
15h30-16h00	Characterization of liquid-solid interfaces using molecular dynamics	Jérôme Claverie, GEM
16h00-16h30	<i>Coffee Break</i>	
16h30-17h00	Compaction dynamics in brittle porous media	David Riley, GeM
17h00-17h30	Geomechanics and Control Theory: Application to earthquake control	Diego Gutierrez Oribio, GeM
17h30-18h00	Multiscale investigation of bonded granular materials	Zeyong Liu, USMB
18h00-19h00	Discussions and Working groups	
20h00-22h00	<i>Dinner (Résidence Lafayette)</i>	

Tuesday June, 25th

09h00-09h30	Can concepts of micromechanics be applied to pore to permeability mean field homogenization	François Bignonnet, GeM
09h30-10h00	Homogenization in partially saturated granular materials	Raphaël Bouchard, LaSIE
10h00-10h30	Viscous regularization in dynamical problems does not stop strain	Alexandros Stathas, GeM
10h30-11h00	<i>Coffee Break</i>	
11h00-11h30	Micromechanics of fine grain infiltration in coarse grain sands	Fan Chen, INRAE/USMB
11h30-12h00	A DEM-suited parallelization scheme on distributed memory computers	Francesco Froiio, LTDS
12h00-12h30	DEM simulation and Machine learning from meso-scale perspective	Aoxin Li, INRAE/USMB
12h00-14h00	<i>Lunch (Résidence Lafayette)</i>	
14h00-14h30	Study of two-phase gas/water flow in the Porous Transport Layer (PTL) of a PEM Electrolyzer	Tien Dung Le, LEMTA
14h30-15h00	Configurational reactions driven mechanical behaviors of granular material	Mingchun Lin, USMB
15h00-16h00	Configurational mechanics of granular materials	François Nicot, USMB
16h00-16h30	<i>Coffee Break</i>	
16h30-17h00	Journées <i>Climat science société</i> (Nantes 28-29 mars 2024) - bilan et perspectives	
17h00-18h00	What prospects for IRN GeoMech after 2025?	
20h00-22h30	<i>Dinner (in La Rochelle inner city)</i>	

Wednesday June, 26th

09h00-09h30	Experimental characterization of clays	Mahdia Hattab, LEM3
09h30-10h00	How to treat real images by periodic homogenization	Khaled Bourbatache, LGCGM
10h00-10h30	Consideration of electrical potentials in the mechanical modeling of clay based on the H model cell	Mengyu Na, LEM3
10h30-11h00	<i>Coffee Break</i>	
11h00-11h30	Modeling the impact of internal soil erosion on engineering structures	Pierre-Yves Hicher, GeM
11h30-12h00	Multi-scale Modeling of Permeability Evolution of Granular Soils in an Internal Erosion Context	Mohamed El Shamieh, GeM
12h00-12h30	Conclusions and outlook	
12h30-14h00	<i>Lunch (Résidence Lafayette)</i>	
14h00-15h00	Discussion and Networking	
15h00	<i>End of meeting</i>	