Université Mohamed Khider Biskra

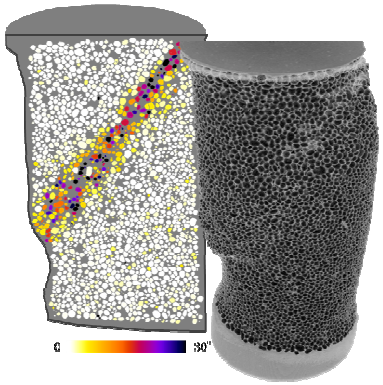
Faculté des Sciences et de la Technologie

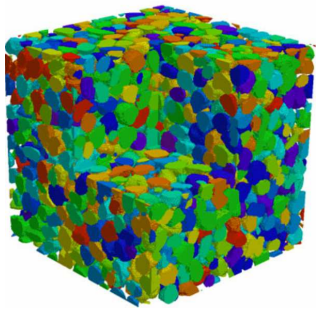
Le Département Génie Civil et Hydraulique et le Laboratoire de Recherche en Génie Civil

organisent :

Journées d'étude

Méthodes expérimentales avancées en Géomécanique





Présentées par:

Pr. Cino VIGGIANI[1]

Dr. Abdelali DADDA[2]

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9, 10 et 13 Mai 2018

Mot de Pr. Cino Viggiani

This series of lectures will introduce the application of full-field measurements, which is a rapidly growing subject in experimental mechanics, to geomechanics, with special emphasis on the study of strain localization. While geomechanics was certainly pioneering some aspects of full-field measurements some forty years ago, it seems that more recently we are lagging behind our colleagues in solid mechanics - who use such techniques for "simple" materials such as metals and metallic alloys. However, materials such as sand, clay, sandstone, granite, etc., are the quintessential heterogeneous, multi-scale materials. Through these lectures, I aim to make the point that a wider use of full-field measurement in laboratory geomechanics not only is possible (and exciting), but also it is the only way to significantly advance our understanding of the mechanics of soils and rocks, especially in the hot topics of strain localization and fracture. A selection of examples from my own experience with both soils and rocks will be presented to illustrate the variety of methods available and the kind of information these methods provide. It is important to note that I have deliberately chosen to present examples only from my personal experience. Obviously, in so doing, I do not pretend that these are necessarily the best or the most advanced examples available, they are just those that I know the best.

Cino Viggiani

Programme

09 Mai 2018 (Pr. Cino Viggiani)	
08h45 - 09h00	Ouverture
09h00 - 10h30	Full-field methods in geomechanics
10h30 - 10h45	Pause café
10h45 - 12h00	Full-field methods in geomechanics
12h00 - 14h00	Pause déjeuner
14h00 - 16h00	X-rays and neutrons for geomechanics

Programme (suite)

10 Mai 2018 (Pr. Cino Viggiani)	
08h30 - 10h00	X-rays and neutrons for geomechanics
10h00 - 10h15	Pause café
10h15 - 11h15	Renforcement des sols par bio-cimentation : étude mécanique et microstructurale. Présenté par Dr. Abdelali Dadda
11h15 - 12h15	Séminaire interne des doctorants : étude de l'effet de l'endommagement des grains sur le fluage des matériaux granulaire sous fortes contrainte. Présenté par Mr. Seyf Eddine Messioud
12h15 - 14h00	Pause déjeuner
14h00 - 16h00	2D and 3D Digital Image Correlation
16h00 - 17h00	Présentation des Posters
13 Mai 2018 (Dr. Abdelali Dadda)	
08h30 - 10h00	Traitement d'images et détermination du VER pour un volume 3D
10h00 - 10h15	Pause café
10h15 - 12h00	Evaluation des propriétés microstructurales moyennes
12h00 - 14h00	Pause déjeuner
14h00 - 16h00	Evaluation des propriétés de contacts

Comité d'organisation

Dr. Sadok Feia, Dr. Bachir Taallah, Dr. Abdelhak Mabrouki, Dr. Djamel Benmeddour, Dr. Rachid Masmoudi