

23rd ALERT 2012 Workshop

Session 1 (Monday, October 1st)

Micromechanics and critical steady states in geomaterials

Coordinators: Yannis Dafalias (UC Davis), Bruno Chareyre (3SR Grenoble INP)

Morning Session

Real Experiments

The Effect of Fibre Reinforcement on the Mechanical Behaviour of Granular Materials

Olufemi Ajayi¹, Jeff Priest¹, Louis Le Pen¹, Antonis Zervos¹

1: University of Southampton, UK

Experimental Micro-Mechanics: Following sand deformation in 3D

Edward Andò¹, Cino Viggiani¹, Stephen Hall¹, Jacques Desrues¹, Pierre Besuelle¹

1: 3SR, Grenoble, France

An experimental assessment of displacement fluctuations in a 2D granular material subjected to shear

Vincent Richefeu¹, Gaël Combe¹, Gioacchino Viggiani¹

1: 3SR, Grenoble, France

Heterogeneity and soil element testing

David Muir Wood¹

1: University of Dundee, United Kingdom

Coffe Break

Numerical experiments

Invited Presentation

Stress and microstructure in general 3D deviatoric straining of granular media

Colin Thornton¹

1: University of Birmingham, UK.

Asymptotic behaviour of granular materials investigated using discrete element model

David Mašín¹

1: Charles University in Prague, Czech Rep.

Fabric evolution and geometrical interpretation of the critical state

Farhang Radjai¹, Stéphane Roux²

1: Université Montpellier 2, France; 2: LMT-Cachan, France

Critical states and stress-dilatancy relations in model granular materials: DEM studies

Emilien Azéma¹, Jean-Noël Roux², Farhang Radjai¹

1: LMGC, université Montpellier II, France; 2: Laboratoire Navier, Champs-sur-Marne, France

LUNCH

Afternoon session

Constitutive modeling

Invited Presentation

Some basic questions about critical state in granular materials

Bernard Cambou¹, E. Vincens¹, H. Magoaric¹

1: LTDS, Ecole Centrale Lyon, France

Coupling breakage and capillary effects in constitutive models for granular soils

Giuseppe Buscarera¹, Itai Einav²

1: Northwestern University, ,2: The University of Sydney, Australia

From solid to granular gases: the steady state for sands

Vescovi Dalila¹, di Prisco Claudio¹, Berzi Diego¹

1: Politecnico di Milano, Italy

The effect of granular temperature on the stress measured at the steady state

Eleni Gerolymatou¹, Theodoros Triantafyllidis¹, Claudio di Prisco²

1: Karlsruhe Institute for Technology, Germany; 2: Politecnico di Milano, Italy

Coffe Break

Boundary value problems

Continuum modelling of interfacial localisation in the cylinder shear test

Papanicolopoulos Stefanos-Aldo¹, Vairaktaris Emmanouil¹

1: National Technical University of Athens, Greece

Steady state of solid-grain interfaces during simulated CPT

Marcos Arroyo¹, Joanna Butlanska¹, Antonio Gens¹, O'Sullivan Catherine²

1: Universitat Politècnica de Catalunya, Spain; 2: Imperial College London, UK