

# 26<sup>th</sup> ALERT Doctoral School 2015: Coupled and multiphysics phenomena

01 October		02 October		03 October	
	Couplings in multiphysics phenomena (including experimental aspects)		Mathematical and numerical modelling		Numerical modelling through advanced applications
9:00-10:30	<b>Opening:</b> school organizers. <b>Jacques Huyghe</b> (TU Eindhoven): Physical chemistry of porous media. Swelling of clays and gels.		<b>William Gray</b> (University of North Carolina): Thermodynamically constrained averaging theory to model the coupled behaviour of multiphase porous materials.		<b>Bernhard Schrefler</b> (University of Padova): Hydraulic fracture
10:30-11:00	Coffee break		Coffee break		Coffee break
11:00-12:30	<b>Jacques Huyghe</b> (TU Eindhoven): Fractured rocks, fracturing rocks, blood perfusion and multiscale. Theory of mixtures, poromechanics and finite deformation.		<b>William Gray</b> (University of North Carolina): Thermodynamically constrained averaging theory to model the coupled behaviour of multiphase porous materials.		<b>Lorenzo Sanavia</b> (University of Padova): Finite element analysis of non-isothermal multiphase porous media in dynamics.
12:30-14:00	LUNCH		LUNCH		LUNCH
14:00-15:30	<b>Pierre Delage</b> (Ecole des Ponts ParisTech, Navier/CERMES): Thermo-hydro-mechanical testing of geomaterials.		<b>Manuel Pastor</b> (UP Madrid): Constitutive modelling of coupled problems with Generalized Plasticity. The role of dilatancy.		<b>Frederic Collin</b> (Université de Liège): Numerical modelling of a Municipal Waste Disposal as a Bio-Chemo-Thermo-hydro-Mechanical problem.
15:30-16:00	Coffee break		Coffee break		Coffee break
16:00-17:30	<b>Pierre Delage</b> (Ecole des Ponts ParisTech, Navier/CERMES): Thermo-hydro-mechanical testing of geomaterials.		<b>Manuel Pastor</b> (UP Madrid): Introduction to numerical modelling of coupled phenomena in geomechanics.		Closure

